

Australia's plantation forestry:

Securing the opportunities for a sustainable, low carbon economy

Submission of the Forest Growers' CEO Forum of Australia

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Australia's carbon storage and wood supply face a crisis

Australia is fast approaching a crisis in domestic wood and forest products supply that could limit the country's ability to achieve a low carbon future. Already, there is stress on existing wood supply and a demonstrable and growing deficit of wood and timber products to meet domestic building, construction and manufacturing demand.

Every time an alternative building product or imported wood product is used because Australia cannot meet the demand, our potential storage of carbon in our buildings and other products is reduced.

There is an impression that Australia has abundant wood resources available to meet its domestic needs. This is unfortunately not the case. In practice, little of Australia's forested land mass is available to meet domestic needs. Australia's forestry plantations currently occupy less than half of one per cent of the nation's agricultural land. This is unsurprising in the context of Australia having cleared around 100 million hectares since early settlement and having established around 2 million hectares of plantations and only half of which is to supply our ever growing need for wood and timber products.¹

However, demand for wood and timber products and for paper has been increasing. This trend is expected to continue.

Supply is under pressure for several reasons.

Investment returns are inadequate to sustain re-planting and new plantation establishment in many cases. This is driven by the prices being paid for logs being reduced because of the availability over the long term of low-cost, energy and emissions intensive alternative products.

Australia has significant wood resources in its native forests. Unfortunately, less and less of this resource is available for harvest as changing community expectations and land use considerations close off access to much of the otherwise available supply.²

Bushfires, droughts and cyclones have all played their part in reducing available wood supply, not only in native forests but also in plantation forests, just as they are highly disruptive for many other land uses.

Solutions that can provide for both wood and carbon needs are within our grasp. Any solutions must encompass several related needs.

Improving the value of wood products in Australia is necessary to maintain and expand the national plantation forestry estate. The substantial, national co-benefit of the carbon sequestered in plantation forests and stored in wood products provides a means to improve wood product values.

¹ Forests and Wood Products Australia (2011) Review of Policies and Investment Models to support continued Plantation Investment in Australia.

² In respect of this matter, we refer the inquiry to the submission of the National Association of Forest Industries.

Carbon sequestration in plantation forests and carbon storage in wood products should be recognised through a scheme of offsets able to be transacted in both voluntary markets and within any compliance based scheme that also prices the emissions associated with alternative building products.

Specific measures for reforestation are required because the proposed Carbon Farming Initiative (CFI) is inadequate in these respects. The CFI is not a proxy for integrated policy measures targeted towards plantation forestry that include an economic value being placed on carbon storage and a price being applied to emissions.

Incentives for on-farm plantation forestry that increases the participation of farmers in growing plantations are important and will also assist in improving community understanding and support for land use for plantation forestry.

Why a crisis is imminent

Demand for wood and timber from plantation forestry is increasing

Declining and uncertain supply from native forests and changing construction and manufacturing patterns are important drivers of demand for wood and timber from plantation forests.

Domestic demand for wood products is growing ahead of the rate of population expansion.³ In particular, there is growing demand from domestic wood products manufacturers who are struggling to gain and maintain economies of scale that are vital for them to be internationally competitive and sustainable.

Plantation forests currently provide 70% of Australia's domestically produced wood products and native forests just 30%.⁴

The primary emphasis of renewed effort to expand the national plantation forestry estate should be on long rotation plantation forests that can supply domestic wood products demand, while not excluding shorter rotations established exclusively for pulpwood production, especially where linked to domestic pulp and paper manufacturing facilities.

This emphasis on long rotation plantations is critical to supplying the value chain of the entire forestry and wood products sector. As the following diagram demonstrates, from plantation forestry estates, it is possible to supply:

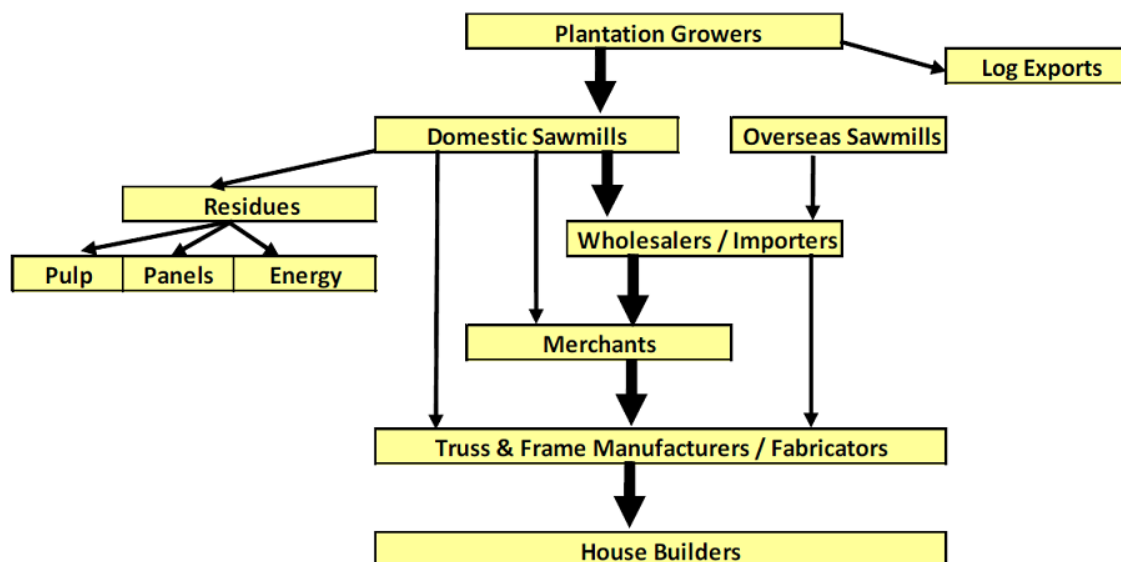
- higher value sawn timber to sawmills and engineered wood products mills, the product of which is then transferred to truss and frame and some other manufacturers, to wholesalers and to retail merchants

³ Forests and Wood Products Australia (2011) Review of Policies and Investment Models to support continued Plantation Investment in Australia.

⁴ ABARE (2010) Australian Forests and Wood Products, March and June Quarters 2010
<http://www.abare.gov.au/publications.html/>

- lower value residues to pulp mills, panel products mills and for use in renewable and carbon neutral energy generation, including for use in the manufacturing plants themselves.

Figure 1 – Wood flows from plantation forests



Source: *Forests and Wood Products Australia (2011), Review of Policies and Investment Models to support continued Plantation Investment in Australia.*

Existing plantations are insufficient to meet Australia's domestic needs

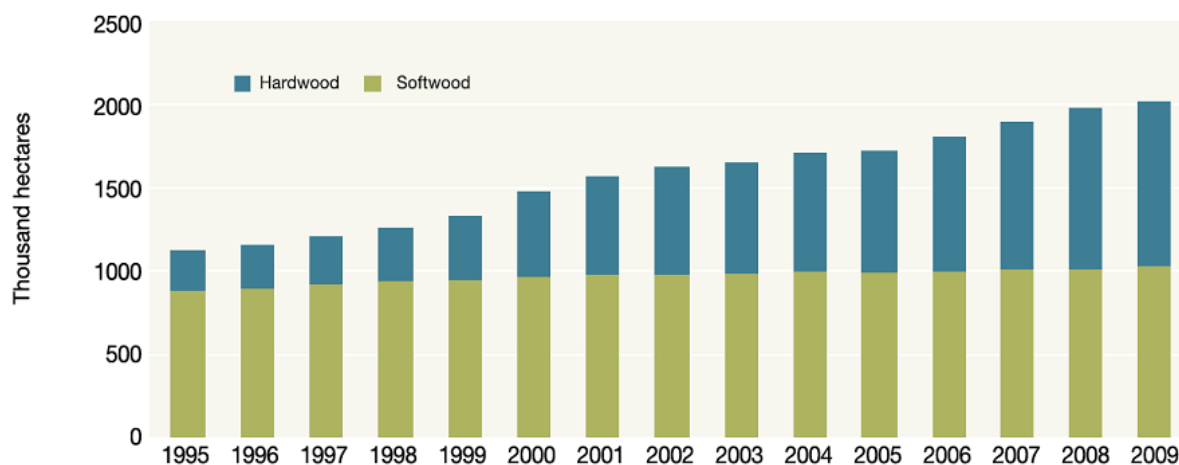
Although the area of Australia's land mass under plantation forestry has doubled in the last 15 years to approximately 2 million hectares, existing plantations cannot supply the current or future demand for timber and wood products.

Only around 1 million hectares of forestry plantations are in longer rotations, suitable for structural timber products used in building, construction and manufacturing.⁵

The vast majority of the expansion of the last 15 years has been in short rotation species and management regimes where the product is predominantly woodchips and the markets are largely export for pulp production. As can be seen in the following chart, very little of the expansion has been in longer rotation species and management regimes able to meet domestic wood product needs.

⁵ Bureau of Rural Sciences (2010) Australia's Plantations: 2010 Inventory Update

Figure 2 – Total plantation area (softwood = long rotation, hardwood = short rotation), 1995 - 2009



Source: BRS (2010) Australia's Plantations 2010 Inventory Update

Many existing plantations will not be replanted under current policies

Industry estimates that as much as 400,000 hectares of the plantation forestry estate will not be replanted after current rotations are harvested. The majority of this reduction in the plantation forestry estate will come from the approximately 1 million hectares of short rotation plantations established over the last 15 years.

There are several reasons much of the plantation forestry estate will not be replanted.

Under current policy settings, investment returns from plantation forestry are sub-optimal. This has arisen because the price for wood and timber is unsustainably low, having fallen in real terms over the medium to long term.⁶ This situation has been impacted upon by prices for alternative building products not reflecting the cost of their emissions and the prices achieved for wood and timber products not recognising or valuing their role in carbon sequestration and storage.

In that context, reasonable investment returns are difficult to achieve, meaning that key input costs have shifted over the medium term to become too high to sustain most plantation forestry on either short or long rotations.⁷

This has itself been caused by several factors, including a noticeable lack of adequate policy settings providing support for renewable and carbon positive products such as those made from wood. Also relevant are increased demand for agricultural land, increasing social and community pressures on

⁶ KPMG (2011), Australian Pine Log Price Index (Stumpage), December 2010

⁷ Forests and Wood Products Australia (2011), Review of Policies and Investment Models to support continued Plantation Investment in Australia.

land uses, the very limited amount of suitable land held and able to be released by State and Commonwealth governments and in some cases, unsatisfactory land selection decisions.

Currently, few Managed Investment Scheme (MIS) products are being offered and retail investors are unlikely to channel funds in any significant volumes into MIS until the reputation and governance of the sector has improved and operating conditions have stabilised.

Even with ongoing domestic and international interest from institutional investors, under the current conditions and policy settings, especially in the absence of a robust and reliable carbon price signal, there is currently little prospect of much of the land currently under short rotation plantation forestry being shifted across to longer rotations.

The result of these factors will be deforestation and conversion to agriculture of significant portions of the plantation forestry estate and the loss of a key carbon sequestration and storage and wood supply opportunity.

Plantation deforestation will have serious, negative impacts

The deforestation of large portions of the plantation forestry estate and its conversion to agriculture will have the following broad and negative impacts:

- Reduction in the amount of carbon dioxide stored in plantation forests, with a substantial impact on the national carbon account. On simple and conservative estimates that reflect the relatively recent establishment of the majority of the plantations, around 21 million tonnes of carbon dioxide is stored in Australia's plantations established since 1990.⁸ A 40% reduction in that planted area would therefore result in a loss to the national carbon account of 8.4 million tonnes of carbon dioxide
- Missing a major opportunity to maximise future carbon sequestration through maintenance and expansion of the plantation forestry estate
- Permanent loss of opportunities to improve economies of scale, returns and investment incentives for plantation forest growers
- Significant decline in forest products manufacturing, with severe impact on regional employment and incomes and a decline in self-sufficiency of supply of wood products. It is important to note that the employment and income diversification provided by forest industries in many regional areas provides a form of economic drought proofing for regional communities
- Increased reliance on imported wood products or emissions intensive alternatives for construction and building materials
- Loss of substantial water quality, soil conservation, biodiversity and other environmental benefits

⁸ Department of Climate Change (2006) Forestry Sector Greenhouse Gas Emissions Projections 2006

- Expansion in the balance of payments deficit for wood products and pulp and paper and expanding the prospects for and the prospect of undesirable trade in the form of illegally logged and uncertified product.

None of these outcomes would be in the national interest.

Australia's national interest requires maintaining and expanding the plantation forestry estate

There has never been a better time or a greater need in Australia's history to maintain, rationalise and where appropriate, consolidate and expand the national plantation forestry estate to emphasise long rotations for wood production.

Plantation forestry provides significant parallel benefits to Australia's environment, economy and regional communities.

Plantation forestry and its products are carbon positive

Australia's interest in meeting its international greenhouse gas emissions commitments and moving to a low carbon economy can be advanced by an expansion of the plantation forest estate.

Unique in industry sectors, only forestry makes a positive contribution to Australia's total emissions. It is alone in having a role in storing the future's emissions.

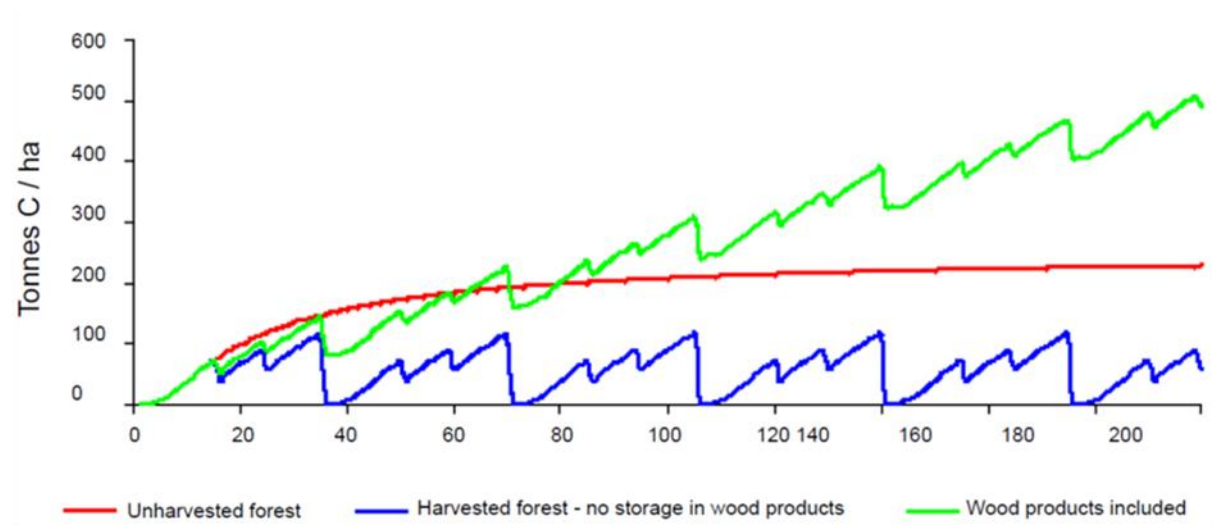
Currently, on simple and conservative estimates that reflect the relatively recent establishment of the majority of the plantations, Australia's plantation forests established after 1990 store around 21 million tonnes of carbon dioxide.⁹ As trees grow, the carbon dioxide stored in the plantation estate will also grow.

Plantation forests that are re-planted after harvest and from which the major products are long lived (for example, houses and other buildings) continue to store carbon long into the future. The carbon storage far exceeds any emissions associated with production.

Thus, as the following diagram demonstrates, plantation forests that are continually re-planted after harvest are the cause of more and more carbon being sequestered and stored.

⁹ Department of Climate Change (2006), Forestry Sector Greenhouse Gas Emissions Projections 2006.

Figure 3 – Carbon storage in harvested and unharvested forests



Source: FWPRDC and CRC for Greenhouse Accounting (2006)

Put simply, tree growth is carbon sequestration and timber and wood products use is long term carbon storage.

All other common building products such as concrete, steel, aluminium and glass are high in emissions because they require massive amounts of emissions intensive energy in production and they store no carbon.

Further, renewable energy from plantation forests is a carbon neutral form of energy, eligible for limited Renewable Energy Credits (RECs) under the Large Scale Renewable Energy Target.¹⁰ Some plantation forests may be grown for energy purposes alone, but one of the significant by-products that can be derived from plantation forest and timber, wood and paper products manufacturing residues (including from thinnings undertaken as part of the management regime) is carbon neutral energy.

Commercial plantation forestry can deliver on-farm and landscape benefits

No single land use can deliver as many environmental services as growing trees, especially when integrated with predominantly cleared landscapes. For instance, trees help make farms drought proof by providing fodder and sheltering stock and crops. Trees can protect waterways, improve water quality and moderate the impact of flooding. Trees provide habitat, especially where trees have previously been cleared for agriculture and the deep rooted nature of trees manages saline water tables and can stop salt from entering freshwater systems.

¹⁰ Office of the Renewable Energy Regulator (2011) Information about the Large Scale Renewable Energy Target <http://www.orer.gov.au/publications/lret-sres-basics.html>

Like plantation forest companies, farmers are interested in commercial crops and financial returns to support their livelihoods and share objectives with respect to sustainability and land stewardship.¹¹ Trees are a natural part of effective, integrated farm management and diversified income streams.

Plantation forest carbon has an economic value

There are opportunities for plantation forests to play a major role in sequestering and storing carbon and in meeting Australia's wood products demand. Harnessing those opportunities requires maintenance of the existing plantation forestry estate, including on farms and for the estate to be rationalised over time to the longer rotations required for structural wood and timber products. Opportunities exist to expand plantation forestry to its integrated landscape potential. For this to be achieved, policy settings must provide adequate incentives, including for farmers and other land owners.

Unfortunately, the current design of the proposed Carbon Farming Initiative (CFI) does not provide a satisfactory incentives framework for plantation forestry.

This is because of the proposed rules of 'additionality' and especially 'permanence'.

Determining whether an on-farm plantation forest would have proceeded without the existence of the scheme (is additional to business as usual) is not useful or practical. All plantation forestry sequesters carbon. To provide certainty that will maximise the maintenance of existing plantation forests as well as the establishment of new plantations, plantation forests need to be treated as automatically additional in the CFI and in the future design of any carbon pricing mechanism.

Permanence rules need to provide for recognition that trees sequester carbon as they grow and that wood products store carbon, including as the plantation forest is replanted. This approach is consistent with the Australian Government's positions in global climate negotiations and reflects scientific reality. This reality must be recognised in the design of the CFI (and in any future carbon pricing mechanism).

Removing the CFI's additionality provisions and ensuring the permanence provisions provide for income from wood, as well as from carbon, will maximise the potential of the uptake of on-farm plantation forestry.

However, under the current arrangements, it is likely that significant on-farm plantation deforestation will occur and that few, if any, new plantations will be established on farms.

For the CFI to become *part* of the incentives framework for plantation forestry, significant amendments are required.¹² It is important to note that no matter the design features, the CFI could

¹¹ In respect of this matter we refer the inquiry to the submission of Australian Forest Growers.

¹² For further information on amendments to the CFI, we refer the inquiry to the submissions of the National Association of Forest Industries and the Australian Plantation Products and Paper Industry Council (A3P) in response to the CFI consultation process conducted by the Department of Climate Change and Energy Efficiency.

only represent one element of a comprehensive suite of policies directed towards plantation forestry.

Certainty of domestic wood supply derived from plantations can meet future housing demand

Housing is a mainstay of the Australian economy. Building and construction contributes AUD45 billion¹³ to the national economy every year. With a much commented upon and ever expanding deficit in domestic housing stocks that is expected to reach a national shortfall of 500,000 dwellings by 2020.¹⁴ Even without taking into account the anticipated increases in Australia's population, it seems certain that housing construction in Australia will expand in coming years.

The average house in Australia contains an average of 9m³ of wood products and depending on materials selection, can contain as much as 14m³ for the same average house.¹⁵ In this way, our houses are already long term stores of carbon, with the potential under the correct policy prescriptions and with increased recognition of the positive role of timber, to store even more carbon derived from Australian plantation forests in the future.

Wood processing and manufacturing facilities need security of plantation fibre

For reasons of scale and the impact of the high Australian dollar, Australia's wood processing and manufacturing facilities are becoming increasingly uncompetitive. Many are in urgent need of investment both to improve technology and to 'scale up' to meet their major international competitors. Costs and finance are always a consideration, but the major issue constraining new investment is security and reliability of domestic supply of long rotation logs.

These wood processing and manufacturing facilities are required to produce the building and construction materials that are required for the massive effort to house Australia in the future. The alternatives are far more energy and emissions intensive alternatives replacing carbon storing wood products, or imported wood products. Neither is a good option for Australia.

Equally, any expansion of the national plantation forestry estate increases the security of supply and opportunities for the construction of domestic pulp mills. This is the reason that the Federal Government's Pulp and Paper Industry Innovation Council (PPIIC) recognised expansion of the plantation estate as one of the sector's priority strategic issues.¹⁶

Plantation forestry assists the balance of trade and economic security

The alternative to domestic wood processing and manufacturing that is underpinned by an expanded plantation forestry estate is an increase in imports of wood products and pulp and paper.

¹³ Housing Industry Association (2011) Facts, Figures and Research Notes
<http://economics.hia.com.au/Factsheets.aspx>

¹⁴ Housing Industry Association (2010) Housing to 2020 Report
<http://economics.hia.com.au/publications/housingto2020.aspx>

¹⁵ HIA (2010) Federal Government's Intergenerational Report 2010. Media release

¹⁶ Pulp and Paper Industry Strategy Group (2010) Final Report
http://www.innovation.gov.au/Industry/PulpandPaper/PPIIC/Documents/Preliminary_PPISG.pdf

As it currently stands, the annual deficit in wood products, including pulp and paper is around AUD2 billion¹⁷. The deficit will grow larger over time, driven by a failure to invest in new processing and manufacturing facilities and re-invest in existing facilities, should the plantation forestry estate not expand to meet the anticipated increase in demand.

Considerations around national economic security go further than the balance of trade. Ensuring that an economy has some capacity in every sector to protect itself from the vagaries of international circumstances is an important consideration.

Relevantly, the societal move towards assuring the provenance of timber and wood products used in Australia, through measures such as illegal logging legislation and support for certification schemes, provide further and broader sustainability drivers for maintaining and potentially expanding the domestic plantation estate.

Plantation forestry supports major Australian regions

Plantation forests and the major manufacturing and wood processing facilities are largely located in a small number of important regional centres in every state in Australia. Regions like the Green Triangle in South East South Australia and South West Victoria, Tumut and Bathurst in New South Wales, South East Queensland, South West Western Australia and much of Tasmania are all highly dependent upon plantation forestry and downstream processing.

In many cases, the integrated nature of the plantation forest growing and management, the harvesting and haulage operations, the primary sawmills, engineered wood products mills, pulp and paper mills and secondary processing facilities and the transport and logistics systems are the economic lifeblood of their regions.

Across Australia, conservative estimates are that almost 85,000 people are directly employed in the total forestry and forest products industries.¹⁸ These jobs are largely concentrated in regions where employment flow on effects are strong both for directly and in-directly reliant additional employment. As many as 17.5 jobs have been demonstrated to have been created for every AUD1 million spent in the plantation sector.¹⁹

If, as it seems is the case, plantation forestry is to be relied upon to provide ever more of Australia's wood and timber, these are all powerful drivers for achieving lasting community understanding and recognition of the importance of the sector to Australia's environmental, economic and social interests.

¹⁷ ABARE (2009) Australian Forest and Wood Products Statistics, March and June Quarters 2009.

http://www.abare.gov.au/publications_html/afwps/afwps_09/afwps_09.html

¹⁸ ABS (2008), Employment in Australia's Forest Industries

¹⁹ FWPRDC (2005), Socioeconomic Impacts of Plantation Forestry in the Great Southern Region (WA)

Carbon, land use and investment policies must be integrated

For the existing plantation forest estate to be maintained and partly rationalised to long rotations focussed on supplying wood products and for an expansion of plantation forestry and associated regional employment and economic opportunities to occur, several key issues must be addressed in an integrated manner.

A viable framework of solutions and incentives must encompass the following issues that are underlying drivers for the impending crisis in carbon storage and supply of wood products.

Improving the value of wood products in Australia is critical to maintaining and expanding the national plantation forestry estate. The substantial, national co-benefit of the carbon sequestered in plantation forests and stored in wood products provides the means to improve wood product values.

Carbon sequestration in plantation forests and carbon storage in wood products should be recognised through a scheme of offsets able to be transacted in both voluntary markets and within any compliance based scheme that also prices the emissions associated with alternative building products.

As described earlier, the proposed CFI is inadequate in these respects and is not a proxy for integrated policy measures targeted towards plantation forestry that an economic value placed on carbon storage and a price being applied to emissions.

Overall, access to land must be rational, equal for all land uses and supported by regulation and complementary policy (for example, with respect to water) that does not discriminate between land uses. This will assist in adjusting land transaction costs and in some cases, land access (whether by purchase or lease) costs.

Investment incentives directed towards wholesale and institutional investors are important, especially focussed towards those investors with longer investment horizons.

Project facilitation for major manufacturing and wood processing facilities (such as sawmills, engineered wood product mills and pulp and paper mills) is required in many cases and can reduce the risks of investment and re-investment. This can in turn provide the market certainty required for re-planting of existing plantation forests and establishment of new plantations.

With integrated and appropriately structured policy settings encompassing these issues and incorporating relevant complementary policies, opportunities for sequestering and storing carbon long into the future and at the same time, meeting demand for wood products are real and accessible for Australia.

Securing the opportunities for a sustainable low carbon economy

An enduring solution for plantation forestry is critical in Australia's journey to a sustainable low carbon economy.

The issues identified are recognised by industry as strategically important and have been the subject of a preliminary research report on behalf of industry. Following the report's submission in March 2011, the industry established an industry-wide steering committee whose focus is working with government and other stakeholders to establish a framework for continuing investment in plantation forestry.

The objective is to address the imminent crisis and the associated challenges and to provide a lasting and reliable solution that meets the national interest and industry's needs.

The complexities of that solution require a body of work.

A properly resourced and fully inclusive planning process managed through the Australian Government's Forest and Wood Products Council that was charged with establishing a new, comprehensive and integrated policy for Australia's forest products industries would be eagerly welcomed.

Key to that new plan must be to deliver on the opportunities and potential to expand Australia's plantation forest estate, sequestering and storing millions of tonnes of carbon and providing desperately needed building and construction materials as well as providing significant regional employment and incomes.

An enduring and integrated policy framework that contributes to our low carbon economy and delivers our future wood and timber product needs is within our national grasp.