AUSTRALIAN FOREST PRODUCTS ASSOCIATION

afpa

TREES | WOOD | PAPER

19 August 2019

Submissions
Climate Change Authority
GPO Box 787
Canberra ACT 2600
submissions@climatechangeauthority.gov.au

AFPA submission to the Climate Change Authority (CCA) consultation paper 'Policies to meet Australia's commitments under the Paris Agreement'.

The Australian Forest Products Association (AFPA) welcomes the opportunity to provide a submission to the Climate Change Authority (CCA) consultation paper 'Policies to meet Australia's commitments under the Paris Agreement'.

CCA's recent references to the significant emissions reduction potential of our forest industries in its recent stocktake report 'Industry action on climate change mitigation and low emissions technologies' was welcome recognition and should be acted on.

AFPA recognises the proud social, economic and environmental record of our renewable forest industries and the inherent environmental strengths of our products as a renewable resource with a high propensity for recycling, a low carbon footprint and responsible sourcing from sustainably managed forests and fibre waste streams.

AFPA actively promotes the important role our forest industries can play in reducing emissions, transitioning to a carbon constrained future, and assisting the Government achieve ambitious national targets.

In the attached submission AFPA addresses: the interaction of energy, climate change and industry policy; climate change policy principles; current Australian Government emissions reduction policies (CFI, ERF, safeguard mechanism, energy policy, energy efficiency policies and international credits); forest industries opportunities, multiple benefit projects and our 18 by 2030 initiative.

The major pathways for emissions reduction from our renewable forest industries include:

- the carbon sequestered in growing forests;
- the carbon stored in durable wood and paper products;

- the substitution of high emissions materials (e.g. steel, concrete) with wood and other fibre-based products that have low embodied energy; and
- the use of woody biomass for renewable energy (including for renewable heat and biofuels), thereby displacing fossil fuels.

AFPA urges the CCA and the Government to incorporate these emission reduction opportunities in future climate change, industry and energy policy reforms to better capture their benefits and incentivise the providers of the emissions reduction.

The Senior Policy Manager dealing with this matter in AFPA is Mr Gavin Matthew on [redacted] or [redacted]

AFPA SUBMISSION TO THE CLIMATE CHANGE AUTHORITY (CCA) CONSULTATION PAPER 'POLICIES TO MEET AUSTRALIA'S COMMITMENTS UNDER THE PARIS AGREEMENT'.

The Australian Forest Products Association (AFPA) welcomes the opportunity to provide a submission to the Climate Change Authority (CCA) consultation paper 'Policies to meet Australia's commitments under the Paris Agreement'.

AFPA is the peak national industry body representing the Australian forest, wood and paper products industry's interests to governments, the general public and other stakeholders on matters relating to the sustainable development and use of Australia's forests and associated manufacturing and marketing of wood and paper products in Australia.

Our renewable forest products industry is Australia's 6th largest manufacturing industry with an annual turnover of $24 billion. It contributes around 0.6% to Australia's gross domestic product and 6.7% of manufacturing output.

Trees are a sustainable biological resource that produce renewable wood and paper products, including emerging new and innovative products such as biomaterials, biochemicals and bioenergy. They also provide multiple benefits, including the carbon stored over time in the growing forests, harvested products, economic activity, jobs and environmental benefits. In addition, relative to alternative materials such as steel, aluminium and concrete, wood products have very low embodied energy, with very low fossil fuel energy inputs used in their production.

AFPA recognises the proud social, economic and environmental record of our renewable forest industries and the inherent environmental strengths of our products as a renewable resource with a high propensity for recycling, a low carbon footprint and responsible sourcing from sustainably managed forests and fibre waste streams.

AFPA actively promotes the important role our forest industries can play in reducing emissions, transitioning to a carbon constrained future, and assisting the Government achieve ambitious national targets.

The significant potential for our forest industries to contribute to climate change mitigation was acknowledged in the 4th assessment report of the International Panel on Climate Change (IPCC), which stated:

> *A sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.*

The major pathways for emissions reduction from our renewable forest industries include:

- the carbon sequestered in growing forests;
- the carbon stored in durable wood and paper products;
- the substitution of high emissions materials (e.g. steel, concrete) with wood and other fibre-based products that have low embodied energy; and
- the use of woody biomass for renewable energy (including for renewable heat and biofuels), thereby displacing fossil fuels.

AFPA urges the CCA and the Government to incorporate these emission reduction opportunities in future climate change, industry and energy policy reforms to better capture their benefits and incentivise the providers of the emissions reduction.

1. *INTERACTION OF ENERGY/CLIMATE CHANGE/INDUSTRY POLICY*

The long running energy policy debate is based on three components – energy reliability, energy affordability, and environmental sustainability. Balancing these three goals constitute a difficult policy development 'trilemma', with complex links between public and private sectors, governments and regulators, economic and social aspects, national resources (both renewable and fossil based), and environmental concerns.

Manufacturers of wood, paper and engineered wood products are significant energy users. These industries, like much of the manufacturing sector, have experienced low price rises for their products for many years, and increasing quality and performance demands. While the industry has been able to contain many costs through increased efficiency and scale and competitive sourcing of raw material inputs, it is unable to control the costs of inputs, including energy and energy distribution.

Delivering policy reform which addresses energy reliability, provides ongoing access to affordable energy, and the transition to low emission energy is a 'wicked' problem and one that will need balanced, integrated and effective reform of energy, climate change and industry policy.

AFPA supports a policy environment that delivers least-cost, environmentally effective and reliable outcomes for Australia. The policy framework needs to be stable, predictable and avoid complexity to help minimise investment uncertainty, and not expose Australian export and import competing industries to costs not faced by their competitors in other countries.

2. CLIMATE CHANGE POLICY PRINCIPLES

In a perfect market, a price (or cost) on carbon emissions should encourage substitution for low emissions products such as timber, paper, bio-products and renewable energy. However, the design of climate policies can be difficult given the existence of 'imperfect markets' with carbon leakage – that is, a decrease in domestic competitiveness, and an increase in imports and emissions from overseas products without a comparable carbon cost.

Climate change policies with their associated costs and/or incentives must be complementary and not overlap (such as the potential interactions between an Emissions Trading Scheme (ETS) and a Renewable Energy Target (RET)). Complementarity of, and equity between, existing National and State policies must also be addressed when any new policy or policy reforms are considered.

AFPA supports climate change policy mechanisms, whether a voluntary auction system such as the Emissions Reduction Fund (ERF), or alternative mechanisms such as an Emissions Trading Scheme (ETS), so long as the following broad policy principles are adopted:

- *a consultative approach is adopted to the development of new policies;*
- *there is full market recognition of the multiple emission abatement benefits from carbon sequestration, carbon storage and product substitution from the forest products value chain;*
- *priority is given to addressing the lack of methodologies for wood plantations and naturally regenerating 'working forests' and their resulting products in the Carbon Farming Initiative (CFI) or equivalent land sector crediting mechanism;*
- *the design of any mechanism should:*
  - *be consistent with the strategic national approach;*
  - *ensure and maintain the international competitiveness of Australian export and import competing industries;*
  - *ensure that the burden of emissions reductions is borne equitably across the economy;*
  - *be underpinned by streamlined, efficient and effective administrative, reporting and compliance arrangements;*
  - *deal responsibly with the adverse cost impacts on domestic producers pending a comparable carbon cost on competing imports (i.e. there needs to be commensurate carbon policies from overseas competitors);*
  - *ensure that there is appropriate transitional assistance for trade-exposed sectors pending a comparable carbon cost on imports;*
  - *establish stable and long-term climate policy settings to provide greater investment certainty; and*
  - *cap the use of international credits to allow for a reasonable balance between promoting domestic abatement and minimising overall carbon costs.*

3. COMMENT ON CURRENT AUSTRALIAN GOVERNMENT EMISSIONS REDUCTION POLICIES

With the right policy settings, our renewable forest industries have the potential to play a significant and needed role in in Australia's ongoing emissions reduction effort.

a. Emissions Reduction Fund (ERF) and the Carbon Farming Initiative (CFI)

Late in 2017, the-then Federal Minister for the Environment and Energy approved a new ERF Plantation Forestry method. Eligible participants are now able in principle to apply to the Clean Energy Regulator (CER) to register an ERF project. The method credits abatement by storing carbon from the atmosphere in trees. This is done by establishing new plantation forests or

converting short-rotation plantations to long-rotation plantations. Further, the existing Farm Forestry method can be used by landholders who want to establish a permanent planting of trees or a harvest plantation on land used for grazing or cropping. Projects can be carried out on areas of land up to 100 hectares or 30 per cent of farm area, whichever is smaller (where annual rainfall is greater than 400 mm) or 300 hectares or 30 per cent of farm area, whichever is smaller (where annual rainfall less than 400 mm).

However, provisions contained in the **Carbon Farming Initiative (CFI) and the associated 'negative list'** remain a major impediment preventing uptake by many forest planation projects in the ERF, such as the restrictions on forest plantation establishment in regions with average annual rainfall above 600 mm (under the Plantation Forestry Method) and restricting farm forestry planting size around 400mm of annual rainfall (under the Farm Forestry Method).

These restrictive provisions are unnecessary and already addressed under other natural resource management (NRM) legislation and go beyond the regulatory mandate of the CFI. Additionally, the water restriction provisions are not applied to the existing Environmental Planting Method creating an unlevel playing field between methods/projects that needs to be addressed.

Access to the CFI should be based on the merits of the activity and should not duplicate other NRM regulation or provide additional red tape that is unrelated to carbon. Removing or effectively addressing these restrictions would enable forest plantation projects to participate fully in the CFI and make a significant positive contribution to meeting Australia's emission reduction targets.

Operational efficiency of the CFI and ERF. AFPA acknowledges the ongoing efforts of the Government to reduce the complexity and red tape associated with the current process of developing methodologies to further increase uptake and gaining approval for carbon projects under the CFI and ERF. However, areas that need further reform and streamlining include:

- the carbon price points coupled with length of contract and associated requirements currently do not adequately incentivise many potential projects including industrial and some land-based ones;
- burdensome transaction and audit costs;
- effort for key staff to apply for, and manage carbon contracts;
- increase flexibility of growth model assumptions to maximise potential growth parameters and associated carbon;
- overly burdensome make good provisions and risk; and
- minimal recognition of the scale and complexity of industrial processes.

Potential reforms include utilising a Government-funded auditor; developing cost effective audit fast-tracks; reducing burdensome transaction costs; and increasing flexibility of the framework to better reflect industrial processes and growth model assumptions.

Sectoral approach to emissions reduction and targeting multiple benefits. *AFPA urges further investigation into the concept of adopting a sectoral approach in which the CER allocates a proportion of the ERF investment into different emissions reduction (or technology) classes to target the production of multiple benefits.* The main benefits of a sectoral approach can include:

- spreading the portfolio risk;
- generating long term domestic structural capacity across key sectors; and
- delivering a range of low-cost options with targeted multiple-benefits (including environmental and socio-economic).

This would facilitate a range of technology options and land-based activities which can deliver cost-effective outcomes for emissions reduction and broader economic, social and environmental outcomes. With respect to the forest sector, there can be considerable co-benefits in addition to carbon emissions reductions, including reduced salinity, reduced soil erosion, enhanced water quality, improved agricultural productivity, biodiversity and regional economic development and jobs.

b. ERF Safeguard Mechanism

Previous AFPA comments on the ERF Safeguard Mechanism include:

- **In determining baselines**, there will always be fluctuations in emissions as a natural part of business and other non-policy factors. Baselines need to provide an accurate reflection of an entity's emissions profile over time.

- **Treatment of Incremental Expansion:** The ERF Safeguard Mechanism needs to ensure that rational investments to improve productivity and competitiveness are not penalised. Whilst noting the potential flexibility provided by the multi-year averaging provision, and calculated and production-adjusted baselines, it remains based only on a measure of absolute emissions and, as a result, may adversely impact many industry participants that are simply seeking incremental process and technical improvements to increase production by small amounts.

  As an option, the inclusion of an emissions intensity test that would allow a facility to exceed its absolute baselines so long as the emission intensity of production is not increasing. Providing a secondary threshold of emission intensity better reflects the realities of business operations over the business cycle, and allows for changes in production, expansions and maintenance requirements.

- **Best Practice:** There remains a lack of detail and uncertainty around the capacity to assess 'best practice' and continued consultation with affected industries is needed.

- **Exceptional Circumstances:** There remains the need for a provision to allow for the impact of events beyond the control of the facilities. However, this area needs more clarity such as defining what constitutes a 'natural disaster', and what are reasonable

steps to mitigate risk of excess emissions. *The addition of a provision for the impact of other circumstances reasonably outside a facility's control, such as catastrophic equipment failure is suggested.*

- **Publication of Information:** Due to potentially commercially sensitive information at the facility level, it is proposed that only the necessary aggregated baseline and emissions information be made publicly available.

- **Regulatory Burden:** *AFPA supports the Government's commitment to reducing the regulatory burden on business, as such the safeguard mechanism should be as administratively simple as possible to reduce that burden. As the various liable industry sectors are often vastly different, flexibility is needed in the key components of the safeguard mechanism such as baselines and emission management.*

c. Energy Policy

Significant energy price rises threaten the continued viability of Australia's forest product industries. Internationally competitive energy costs are essential if manufacturing in Australia is to survive and grow. If Australia is to remain competitive in international markets, it is important that Australia's energy policies do not disadvantage domestic operations by subjecting trade-exposed industries to costs not faced by competitors in other countries.

Some key policy reform priorities include:

- **Generators/Users:** Previous energy policy reform has focused on electricity generators and distributors with little regard for energy users. *More balanced policy requires both sides of the energy market to be given equal consideration.*

- **Infrastructure:** Significant energy infrastructure investment (in both renewable and other generation capacity, and transmission and distribution network infrastructure) has occurred over the past decade to deliver 'accessible and reliable' energy to Australia. *AFPA urges Government to consider ongoing reform of the rules and policies to ensure that network investment is prudent, necessary and tightly controlled, and that the costs of the investments are transparent, justified and affordable.*

- **Energy Security/Gas:** Gas-fired generation is important to the ongoing energy input and costs of the forest products industry. Noting too that gas pricing has significantly increased over the last few years imposing a huge unexpected input cost risk on domestic manufacturers. The core policy objectives in this area should be that gas-fired generation remains affordable; reliable; of a high quality; sustainable in the long-term; and the gas market is transparent and accessible by domestic users. *AFPA urges Government to put in place policies to ensure adequate supplies of affordable gas and gas infrastructure, ensuring better certainty for industry into the future.*

- **Renewable heat in industrial processes:** Energy is a far broader term than just electricity, it also includes thermal (heat) such as steam used predominately in large industrial

processes. The Large-Scale Renewable Energy Target (LRET) has only recognises the renewable energy benefits from electrical energy (such as the replacement of coal with renewable biomass fuel which is used to produce electricity).

A significant renewable energy opportunity is currently being missed and it is recommended that the use of renewable biomass should similarly extend to the generation of heat energy (i.e. steam for process drying as in papermaking or sawmills). Inclusion of renewable heat in the RET (or any alternative carbon policy mechanism) has significant potential and could contribute the equivalent of several thousand GWh in renewable energy per annum from the wood and paper products industry in Australia. It should be noted that in the Small-Scale Renewable Energy Target (SRET), solar hot water was included as a source of renewable heat.

AFPA urges recognition of the renewable heat component of energy in an enhanced RET and/or other carbon policy mechanisms (e.g. as is currently the case in UK and Europe).

d. Energy Efficiency

Australia's forest industries have been effective in pursuing energy efficiency projects on a business by business basis. In an environment of increasing energy costs, examining the cost-effective use of energy and potential improvement projects is an essential part of a company's routine business decisions.

AFPA urges that any energy efficiency policy proposals focus on facilitation, communication and support for companies to undertake energy efficiency projects.

e. International Credits

Following the Paris Agreement, the rules for trading international credits after 2020 under article 6 are yet to be finalised – these discussions continue. It is important to alleviate cost pressures on domestic industry while at the same time providing incentives for domestic action. Forest, wood and paper product industries have significant potential to store carbon and reduce emissions.

If Australia is to remain competitive in international markets, it is important that our policies do not disadvantage domestic wood and paper product manufacturing operations by subjecting these trade-exposed industries to costs not faced by competitors in other countries. Additionally, for domestic manufacturing facilities to plan investments and fully understand the net cost of abatement today and into the future, the price of credits needs to be relatively stable and predictable over the long term.

AFPA urges the Government:

- *to continue its active participation in international discussions on trading credible and high-quality carbon credits under Article 6 of the Paris Agreement with consideration of implications for Australian industry; and*
- *that there should be an appropriate focus on domestic credits (including a cap on credible and high-quality international credits) to allow for a reasonable balance between promoting domestic abatement and investment, incentivising multiple benefits, and minimising overall carbon costs to industry.*

4. *OPPORTUNITY – AFPA'S 18 BY 2030 CLIMATE CHANGE CHALLENGE*

As Australia and the world ramp up efforts to reduce emissions, our renewable forest industries can play an even greater role in Australia's transition to a greener, low-carbon emission economy.

In June 2018, the Australian Forest Products Association (AFPA) launched an exciting new initiative *"18 by 2030 – Forest Industries help tackle Australia's climate change challenge"* which lays the foundation for how our forest industries can further contribute to tackling climate change.

The initiative outlines how Australia's forest industries can remove an additional 18 million tonnes of $C0_2$ equivalent per year from 2030 (on top of the carbon already stored by our forests), with the right policy settings. In the lead up period from 2019 to 2030, 115 million tonnes of $C0_2$ equivalent can also be stored.

- The 18 by 2030 climate change challenge document can be found here.
- AFPA's associated 18 by 2030 website with more information is here.

Australia's forest plantations and managed native forests are a renewable and sustainable resource, consisting of some 2 million hectares of hardwood and softwood plantations plus around 5.5 million hectares of a sustainably managed native forest of which about half a per cent is harvested and regenerated each year.

Australia's forest industries are pledging to remove over 18 million tonnes of CO2-e per year by 2030, by:

- **Building Block 1:** Storing carbon in new forest plantations.
- **Building Block 2:** Replanting existing forest plantations to maximise on-going carbon storage.
- **Building Block 3:** Increasing the use of wood products in the construction of new detached residential houses, multi-rise apartment and commercial buildings to offset emissions.
- **Building Block 4:** Reducing emissions from our processing and industrial facilities by being more energy efficient and using renewable bioenergy (both electricity and renewable heat) instead of fossil fuels.
- **Building Block 5:** Reducing emissions in transport by replacing fossil fuels with renewable biofuels.

- **Building Block 6:** Reducing emissions by supporting the use of sustainable biomass for cofiring in existing coal fired power stations.

This ambitious but important goal can only be achieved through the right mix of policies across all levels of government to maximise the carbon-storing and emissions reduction potential of our renewable forest industries.

5. *OPPORTUNITY - RENEWABLE BIOENERGY AND BIOFUELS*

Globally, bioenergy accounts for around 50% of renewable energy and 70% of direct renewable heat in 2017[1]. Residues from Australia's forest, wood and paper products industry hold great potential as alternatives to fossil fuels for energy generation. Biomass can be used for renewable electricity, heat and liquid fuels (which tend to be more efficient than electricity generation).

The International Energy Agency (IEA) forecasts that by 2050, bioenergy could provide 3,000 TWh of electricity or 7.5% of world electricity generation. In addition, heat from bioenergy could provide 15% of global final energy consumption in industry and 20% in the building sector. However, despite having the highest area of forest per capita of the developed nations, Australia lags in the use of bioenergy, which represents over 7% of renewable generation and 1.5% of total electricity generation. In Finland, bioenergy contributes 26% of total primary energy supply. In Denmark and Sweden, it is 23%. In the EU, it is 10% of energy consumed.

Sustainably produced biomass from timber processing activities (such as sawdust, timber offcuts and forestry waste) and other agricultural sources, can offer significant potential to contribute to Australia's renewable energy future. Currently, Australia's timber industry produces a large amount of sustainable biomass from timber processing and paper manufacturing operations. However, only some of it is being utilised in local or regional bioenergy facilities, or as wood pellets that are exported overseas as a source of renewable energy. This export market potential also demonstrates the imbalance in renewable energy policy settings, whereby markets in many countries in Europe and Japan, for example, can offer better prices for sustainable biomass given their more favourable renewable energy policies.

Uniquely, bioenergy can deliver baseload power 24 hours a day, 7 days a week, unlike many alternative renewables. Bioenergy can also support greater jobs compared to other renewables, and it is well suited to many existing wood and paper product manufacturing sites in rural and regional areas.

Bioenergy produced from sustainable biomass is renewable. Under the Kyoto Protocol, bioenergy is regarded as CO_2 neutral. The United Nations Framework Convention on Climate Change also defines bioenergy as renewable, if it is produced from biomass that is sustainably managed. Australian governments recognise it as an eligible renewable source under the current Renewable Energy Target, and other renewable energy and climate change policies and

[1] IEA Renewables 2018 (iea.org/renewables2018/

initiatives. The Clean Energy Finance Corporation (CEFC) recognises the significant potential for bioenergy to contribute to renewable energy, biofuels and carbon emissions, creating the $100 million Australian Bioenergy Fund[2] to invest in bioenergy and waste to energy projects. As at April 2019, the Australian Renewable Energy Agency (ARENA)[3] had invested over $88 million in bioenergy and waste to energy projects and wants to invest more in this renewable.

As discussed, a major impediment to the general uptake of bioenergy in Australia is the sole emphasis on renewable electricity in the current RET. This has constrained bioenergy investment in renewable heat and cogeneration opportunities. The RET currently offers a carbon price that incentivises companies to undertake these types of renewable projects. The use of renewable heat is actively promoted in Scandinavia and many other parts of the world as an effective means for reducing fossil fuel reliance. The lack of incentives for the use of forest biomass in energy generation creates a serious imbalance in the renewable energy market and misses some of the lowest cost opportunities for carbon emissions abatement.

Policy development needs to be flexible to support a potentially broad range of bioenergy-based opportunities from small co-generation facilities located in small regional areas to large facilities located in cities and other industrial centres.

AFPA supports renewable energy policies that:

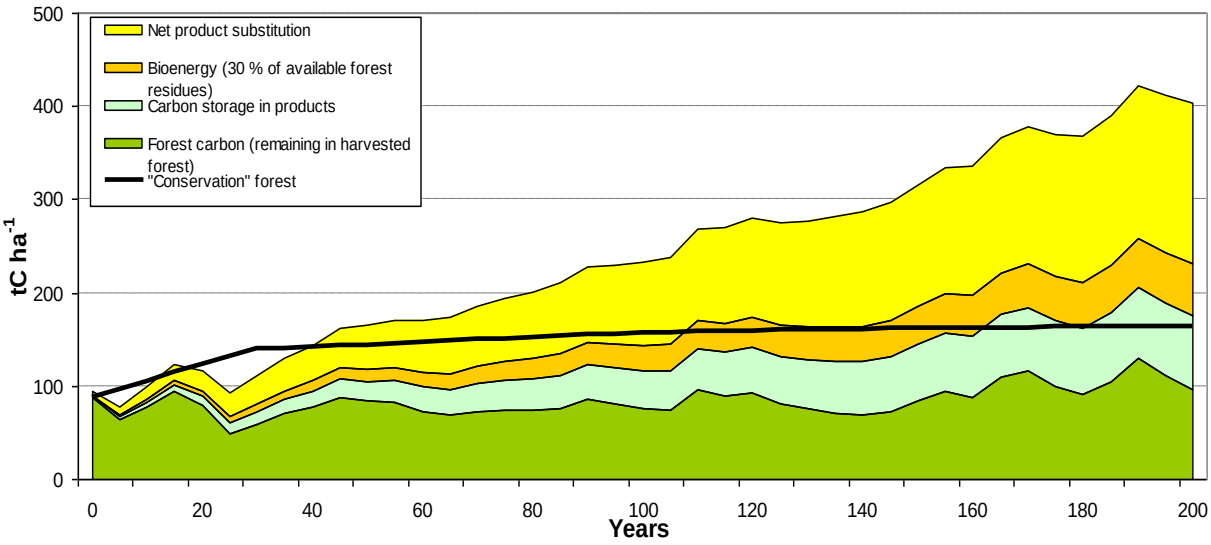
- *recognise the potential and develop incentives for renewable energy opportunities for bioenergy, including for renewable electricity, heat (i.e. renewable thermal/steam) and biofuels;*
- *support the inclusion of both plantation and native forestry harvesting and processing residues from sustainably managed operations as renewable energy sources which must be provided the same opportunity for renewable energy credits (or any other policy instrument) as hydro, wind and solar;*
- *support greater utilisation of waste to energy systems; and*
- *provide a level playing field for bioenergy with respect to other clean technology sources, such as wind and solar.*

4. OPPORTUNITY - FOREST INDUSTRIES AND CARBON LCA BENEFITS

Land based emission reduction schemes such as the Carbon Farming Initiative (CFI) and Emissions Reduction Fund (ERF) need to recognise the full life cycle benefits from harvested wood and paper products in addition to the carbon stored in trees (see Figure 1). A full life-cycle analysis of forest products will also consider their relatively low embodied energy and clarify the advantages of using them to substitute for other materials and/or other wood product imports.

Figure 1. Carbon emission abatement implications (t C ha-1 sequestered or displaced) of the conservation and harvest scenarios for North Coast of NSW forests.

[2] https://www.cleanenergyfinancecorp.com.au/media/158193/cefc-factsheet_australian-bioenergy-fund_lr.pdf
[3] https://arena.gov.au/projects



Source: Ximenes F., George B., Cowie A., Williams J. and Kelly G. (2012) Greenhouse gas balance of native forest in New South Wales, Australia. Forests 3: 653-683.

As the only carbon positive sector of the Australian economy, our forest industries should be at the forefront of a renewable and sustainable economy. However, the policy environment for enabling carbon-based opportunities to be realised fully is either yet to be developed or is impeded by the existing regulatory environment.

Given the role of harvested wood and paper products (HWPs) as a carbon store and their substitution effects, there is a need for more appropriate implementation of life cycle inventory (LCI) and life cycle assessment (LCA) with respect to procurement of building materials and paper products. By tracking the inputs and outputs for each stage of production and consumption, the LCI of a product can be traced from cradle-to-grave, including in-service, recycling and landfill. Full life cycle accounting can identify and compare the low embodied energy of wood and paper products versus other more carbon-intensive products which is important in terms of the use of wood in reducing emissions in housing and non-residential construction[4].

To realise some of the forest industry's carbon-based emissions reduction opportunities, AFPA urges the Government to:

a) *address the policy and regulatory impediments to carbon-based opportunities for the forestry sector, such as developing suitable methodologies in the Carbon Farming Initiative (CFI) and Emissions Reduction Fund (ERF);*

b) *take a holistic view of the carbon emission abatement potential of naturally regenerated forests and plantations recognising their multiple carbon sequestration and product substitution benefits;*

[4] Lippke, B., Oneil, E., Harrison, R., Skog, K., Gustavsson, L. and Sathre, R. (2011). Life cycle impacts of forest management and wood utilization on carbon mitigation: knowns and unknowns. *Carbon Management* 2: 303-333.

c) *provide a policy framework for carbon that does not attempt to regulate other land use issues (e.g. water, biodiversity, community issues), which are more appropriately addressed elsewhere in public regulation;*

d) *amend existing regulations to value the carbon stored in wood and paper products over their service life and beyond through landfill;*

e) *ensure building codes and energy rating schemes do not unfairly restrict the use of wood products, and recognise their life-cycle benefits and low carbon footprint; and*

f) *that Government agencies more adequately take into account and implement LCI and LCA assessments, including the carbon emissions profile of alternative materials on a whole-of-life procurement basis, as part of the environmental sustainability provisions of the Commonwealth Procurement Rules (CPR).*

6. OPPORTUNITY - GOVERNMENT PROCUREMENT POLICIES

Given their inherent environmental strengths as a renewable resource with a very low carbon footprint, forest products should be adequately acknowledged in public procurement programs. Planet Ark in their national '*Make It Wood*' campaign have identified that local, state and national governments around the world are working hard to find ways to help tackle climate change. Local governments are often leading the way with energy saving and green building policy solutions. They state that building with responsibly sourced wood can help meet climate change targets as well as deliver other benefits like increased speed of construction and better health outcomes.

As an example, National governments (in countries such as New Zealand, Canada, France, Finland and the Netherlands), State governments (Tasmania and WA) and many local governments in Australia (such as the Latrobe City [in Victoria] and Wellington [in NSW] councils), are adopting Wood Encouragement Policies (WEPs) as part of their procurement practices to better capture the carbon abatement benefits of using more wood in building and construction.

Governments are urged to develop and adopt similar WEPs for all housing and commercial construction developments. A WEP generally requires responsibly sourced wood to be considered, where feasible, as the primary construction material in all new-build and refurbishment projects. A WEP does not mandate the use of wood, but rather requires its full consideration as a preferred building material when it is equally fit-for-purpose. The emissions abatement potential from adopting policies such as WEPs can make a significant contribution to reducing emissions.

These opportunities are also relevant in the context of mid-rise and multi-residential construction trends and changes to the National Construction Code (NCC), which now allows for timber construction up to 25 metres or around 8-storeys in height. The changes to the NCC allow buildings in Classes 2 (apartments), 3 (hotels), and 5 (offices) to be constructed using timber building solutions. New building materials options include traditional timber framing and innovative massive timber systems, such as CLT, LVL and glulam. The drivers for adopting the new building practices will be emissions reductions, cost savings and consequent potential

increases in margins for developers and builders. Preliminary economic modelling indicates possible savings in the order of 10-15% in multi-residential and commercial build costs, primarily due to shorter construction times.

To realise some of the forest industry's carbon-based emissions reduction opportunities, AFPA urges governments to:

- *Implement more transparent government procurement policies and practices which take into account the high environmental and social standards of domestic suppliers, as well as the significant economic and social benefits from purchasing locally made products; and*
- *Develop a target for green building and wood product encouragement policies, such as the adoption of a wood encouragement policy by up to 50 local councils by 2030. Wood based products could be used in new Federal and State Government buildings, including government offices, schools, hospitals (noting the proven health benefits of utilising wood products in commercial buildings*).

7. *OPPORTUNITY - NEW FOREST, WOOD, PAPER AND BIOPRODUCTS*

AFPA is very positive about the continued future market demand for forest and wood products globally, regionally and in Australia in traditional markets, in emerging markets, and also in new bio-fibre based products and services which are developing. Wood fibre is a natural, renewable, recyclable and sustainable resource. This is now well recognised in many countries in the rest of the world and supported by communities and governments for their triple bottom line benefits: environmental, social and economic.

With an expanding population, both in Australia and in the South-East Asia region, aging stock and high forecast demand for new housing and other wood-based products over the next few decades, the forest industry has the potential to provide a versatile range of wood products for structural, commercial building and high quality appearance uses. Wood and paper products involve lower energy inputs in production and provide a range of carbon mitigation and sequestration benefits relative to other building materials.

Historically, forests have and can produce many different products to meet highly diverse society demands and evolving environmental consciousness. Some known opportunities for improved efficiency, diversification, value adding and product innovation with respect to wood and paper products include:

- biofuels for electricity and heat production;
- cogeneration of electricity and heat in pulp and wood processing operations;
- composite wood products and building systems;
- new structural and panelling technologies that utilise small-wood and residues in timber construction in commercial and high-rise buildings;
- innovative tissue, paper and packaging products; and
- bio-chemicals, textiles, solvents, plastics, lubricants, fragrances, and other potential outputs from 'bio-refineries'.

AFPA recommends that appropriate, effective and sustained action is taken by Government to ensure that industry can take advantage of the opportunities to diversify and value-add, including by commercialising its Australian innovations.

8. *OPPORTUNITY - FOREST INDUSTRIES ROLE IN CLIMATE CHANGE ADAPTATION*

Governments have a major role to play in climate change adaptation policy and implementation. Forest industries are both adversely impacted by, and can play a significant positive role in, climate change adaptation.

Although there are many similarities between agricultural pursuits and the forestry sector, forestry does have unique characteristics, due in part to the long timeframes between establishment and harvest. Natural forests and plantations are vulnerable to harm from both extreme weather events (e.g. bushfires, cyclones) and long-term effects of a changing climate such as more frequent drought, especially as a dry-land agricultural land-use activity. Forecast changes in rainfall, temperature and weather patterns can produce a range of positive and negative productivity and other impacts depending on industry sector and geographic region. A changing climate imposes significant challenges and some opportunities for the forest and forest-based industries in dealing with these changes.

Forestry activities can also enhance agricultural productivity through beneficial impacts on pasture, crop and animal production, primarily through provision of shade and shelter, nutrient cycling and soil conservation. Agriculture and forestry are not mutually exclusive and there exists a continuum of tree planting and forestry activities across the landscape at a range of scales and tree densities.

These activities are undertaken for a range of production and environmental purposes, such as salinity and riparian plantings through to farm woodlots and plantations used primarily for wood production.

It is for these reasons that well targeted forestry activities can be complementary to a broad range of farm level and landscape management objectives. This is particularly relevant given current climate change impacts and previous tree clearing and land use practices that have resulted in land degradation at a range of national and regional scales, including dry land salinity, invasive weeds, soil erosion and water quality reduction.

It is well known that tree plantations yield the benefits of wood production and carbon sequestration but also provide significant other benefits such as water quality and soil conservation, salinity control, biodiversity and agricultural productivity (e.g. shade and shelter for livestock). These additional benefits are also important in the context of land management strategies (e.g. to potentially reduce soil run-off into the Great Barrier Reef).

In collaboration with relevant researchers, industry practitioners and companies involved in climate change issues and adaptation responses, AFPA managed a three-year project to enhance the industry's ability to reduce the harmful effects of, and exploit the opportunities

from, a changing climate. This work was supported by funding from the Australian Government Department of Agriculture under its Australia's Farming Future initiative. The 'Plantation Forest Industry Climate Change Adaptation Handbook' was prepared as part of the project to promote awareness of future climate change scenarios and relevant adaptation management options and strategies, which can be used to improve adaptive capacity in dealing with climate change.

AFPA urges the Government to adopt a climate change adaptation framework including recognition of forest industry benefits and support projects that will consider and address climate adaptation options for the forest industry and broader processing issues.