SUBMISSION

Issues Paper – Prime Ministerial Task Group on Emissions Trading

March 2007

Introduction

The National Association of Forest Industries (NAFI) appreciates the opportunity to make a submission on this important Issues Paper on Emissions Trading prepared by the Prime Ministerial Task Group.

NAFI acknowledges the aim of the Task Group 'to advise on the nature and design of a workable global emissions trading system….and to report on additional steps that might be taken, in Australia, consistent with the goal of establishing such a system.' NAFI also recognises the importance of establishing an emissions trading system in Australia as a means of addressing the ongoing concerns over climate change.

Australia's forest industry has the potential to play a significant role in addressing climate change concerns through the benefits of carbon sequestration in managed native forests and plantations, the use of carbon storing and environmentally sustainable wood products, and the use of wood waste for renewable energy.

However, the forest industry is mindful that these benefits need to be adequately recognised in the development of any emissions trading system for Australia. Therefore, the design and implementation of the trading scheme must be conducted through a consultative and transparent process and should be based on the best available science to ensure these significant benefits are appropriately recognised.

The forest industry would encourage the Task Group to consider the unique conditions in Australia compared to overseas countries in the development of a national emissions trading system. This may require establishing a position which is more independent of the Kyoto Protocol, suiting the characteristics of Australia's economy and emissions objectives, while necessarily interfacing with the overarching international objectives and reporting frameworks.

NAFI also encourages the development of an emissions trading scheme which gives adequate consideration to Australia's broader government forest policy objectives. Therefore, the forest industry would support the Task Group to work with governments to review potential policy implications, and to establish complimentary policy objectives for inclusion into an emissions trading system.

This submission highlights some of the key issues that NAFI believes the Task Group should consider in undertaking this review. These issues include:

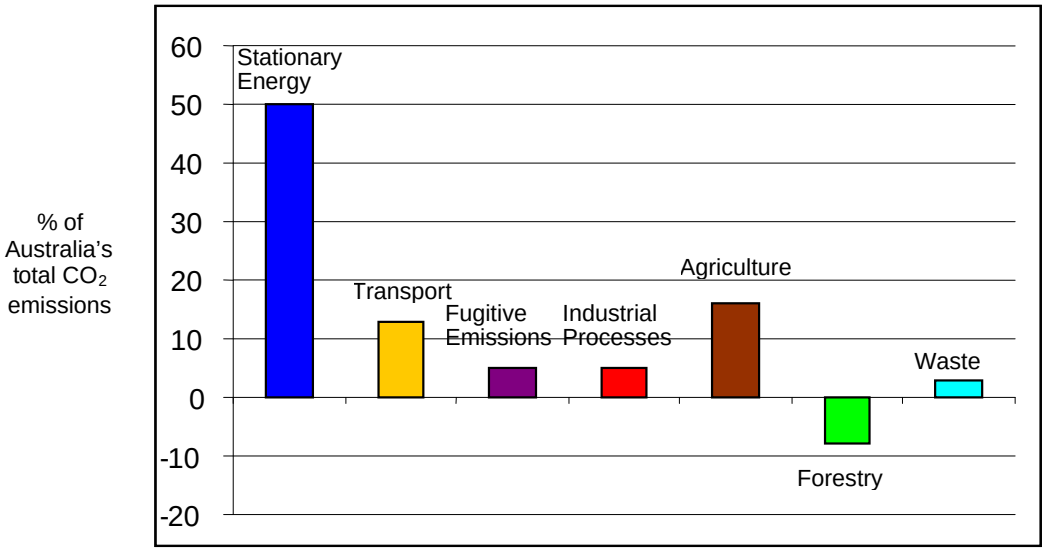
- Recognising the imbalance of abatement measures.
- Recognising and incorporating the full benefit of carbon sequestration and storage through wood products, plantation development, the use of wood 'waste' for bioenergy, and active management of Australia's native forests.
- Ensuring the development, introduction and implementation of an emissions trading system for Australia is fair and equitable for all parties involved.

Imbalance of abatement measures

The forestry sector makes a substantial contribution to carbon emissions abatement in Australia and has significant potential to offset emissions from other sectors. As shown in Chart 2 of the Issues Paper, many of these sectors have markedly increased their emissions since 1990. The forestry sector is the only carbon positive sector, as Australia's plantations and commercial native forests removed a net 43.7 million tonnes of CO_2 from the atmosphere in 2004[1].

By contrast, around 50 percent of Australia's annual greenhouse emissions (280 million tonnes of CO_2) come from the stationary energy sector. Agriculture is the second largest emitter, contributing 16 percent (90 million tonnes CO_2), while transport is the third largest accounting for 13 percent (76 million tonnes CO_2) of Australia's annual emissions[2]. See Figure 1 below.

Figure 1: Australia's net CO_2 emissions by sector for 2004



[1] Forest and Wood Products R & D Corporation (2006). Forests, Wood and Australia's Carbon Balance.
[2] Australian Greenhouse Office (2006), National Greenhouse Gas Inventory 2004; Australia's National Greenhouse Accounts.

For the Commonwealth Government to achieve the self-imposed domestic target of meeting 108 percent of 1990 emission levels by 2010, it has facilitated a number of 'measures' aimed to reduce emissions (by 85 million tonnes CO_2). The main focus of these abatement measures are within the stationary energy sector where around 38 million tonnes of CO_2 abatement is expected. The land use and land-use change sector is also expected to lower emissions by 18 million tonnes of CO_2, mainly through a reduction in land clearing activities for agricultural purposes[3].

Currently, forestry is grouped with the greenhouse emissions from land use and land-use change for reporting purposes. This is unfortunate as, the linkage between forestry and land clearing or other land-use change does not fairly represent the true value of sustainable forestry and the use of wood-products in contributing to carbon sequestration and storage[4].

The imbalance of abatement measures is evident when the agriculture sector is the second largest emitter, while the expected abatement requirement is around 1 percent for the sector (under 1 million tonnes CO_2)[3]. The forestry sector on the other hand has increased its removal of CO_2 from the atmosphere since 1990, when 34.1 million tonnes CO_2 was removed, compared to currently where over 43 million tonnes CO_2 is removed. This represents an emissions reduction of 79%[5]. Over this same period the agriculture and stationary energy sectors have increased their emissions by 5% and 50% respectively.

Ideally, all sectors should endeavour to devote equal effort towards Australia's carbon emissions abatement targets. While, the opportunities and costs for abatement may not be spread evenly across all sectors this should not be used as an excuse by certain sectors not to explore opportunities to deliver on their responsibilities in relation to carbon abatement contributions.

Adjusting to a 'carbon conscious' economy

While Australia is on track towards achieving the Kyoto target for 2010, maintaining or reducing the emission levels onwards will be considerably more difficult as a result of the diminishing low-cost abatement options. This need is demonstrated by Australia's requirement for an additional 76 million tonnes CO_2 emissions reduction by 2020, over and above the 85 million tonnes CO_2 reduction target for 2010.

Each sector represents different opportunities to contribute to Australia's overall emissions abatement targets and there will be a varying level of risk between these sectors in relation to their attempts to meet these targets. For Australia to manage the potential economic impacts from adjusting to a 'carbon conscious' economy there must be opportunities to mitigate the impacts felt by the most vulnerable sectors.

Significant periods of time and expense may be required by some sectors to eventually meet their carbon abatement targets. The opportunities for readily available low cost abatement solutions may be limited within those sectors. This is where the forest industry may be able to

[3] AGO (2005). 2005 Tracking to the Kyoto Target: Greenhouse Emissions Trends 1990 to 2008-2012 and 2020
[4] Forest and Wood Products R & D Corporation (2006). Forests, Wood and Australia's Carbon Balance.
[5] AGO (2006). Forestry Sector Greenhouse Gas Emissions Projections 2006.

play a pivotal role in providing immediate 'low cost' abatement solutions for other sectors, effectively 'buying time' for them to adjust to low emission processes and technologies.

For instance, the stationary energy sector is currently exploring a variety of alternatives to current coal-fired electricity generation (e.g. clean coal technology) in its efforts to lower emissions within the sector over the longer term. The options available may require lengthy periods of time and expense to explore and develop and readily available low cost abatement solutions within the sector appear limited. The forestry sector could provide these more immediate solutions (i.e. carbon offsets in plantations and wood waste for renewable energy) to the stationary energy sector. This would help to manage the economic impact during the interim period within the sector and for the broader Australian economy.

Full benefits of forests and wood products

Some key points surrounding the benefits of forests and wood products for consideration by the Task Group in the development of an emissions trading system include:

- The accumulated storage in Australia's forest plantations and wood products is about 323 million tonnes of carbon, of which wood products store more than 230 million tonnes of carbon[4].

- Australian plantations and commercial forests act as a carbon sink, removing a net 43.7 million tonnes of CO_2 from the atmosphere in 2004[4].

- Solid wood products such as sawn timber for buildings and construction are renewable and have very low embodied energy in their manufacture compared to alternative materials. They also store carbon for significant periods of time.

- Paper products, though having a shorter life compared to other wood products, also act as a carbon store in the longer term, as waste paper is often disposed of in landfill.

- The use of sustainably harvested wood waste biomass to generate renewable energy permanently eliminates atmospheric emissions that would otherwise have resulted from the use of fossil fuels.

- Storage of carbon in harvested wood products from managed production forests represents a more secure way of 'locking up' carbon as unmanaged conservation forests may be at greater risk of carbon emissions from intense wildfires, diseases and mortality.

Adequate recognition of these benefits

From the forest industry's perspective, for an emissions trading system to be fully effective there must be adequate recognition of the full net carbon benefits of forests and wood products. As the blueprint for the design of an emissions trading system, the NSW Greenhouse Gas Abatement System (GGAS) and other trading systems in general, do not account for the long-term storage of carbon in harvested wood products. Recognising this reality in any emissions trading system has the potential to:

- Take advantage of the significant role forests and wood products can play in offsetting emissions form other sectors, thus making carbon trading a more attractive proposition for the forest and wood products industries.

- Increase the value of carbon sequestration in forests, as the penalty currently paid due to the false assumption that all carbon is emitted at harvest would effectively be removed.

- Encourage the establishment of more plantations for carbon sequestration, providing greater investment incentives for growers to participate.

- Increase the use of carbon storing wood products, as a substitute for less desirable and high carbon emitting materials.

- Encourage the utilisation of wood waste residues for energy generation and biofuels, thereby reducing the reliance on the use of fossil fuels and permanently eliminating atmospheric emissions that would have otherwise resulted.

- Provide a benefit in terms of storing carbon in landfills in the form of unrecoverable waste timber.

Clearly, there are significant opportunities for Australia's forest industry in the development of a domestic emissions trading scheme, providing the scheme gives due recognition to the realities of carbon sequestration and storage in forests and wood products. The structure and function of existing schemes which fail to fully recognise these realities, should not be used as a reason to also not fully consider them in the development of an emissions trading scheme in Australia.

Strategies for reducing and offsetting greenhouse gas emissions

NAFI proposes a number of strategic options to the Task Group which should be promoted in the development of an emissions trading system. These strategies would assist in reducing and offsetting greenhouse gas emissions from other sectors, thus helping Australia to achieve an 'emissions-conscious' economy. These options, as summarised in Table 1, are expanded on in more detail below.

Table 1: Opportunities for emissions offsets from forestry

Sector	**Potential Forestry Offsets**			
	Plantation offsets	Wood waste for renewable energy	Wood waste for biofuels (i.e. ethanol)	Use of carbon storing wood products
Stationary Energy	☑	☑		
Agriculture	☑			
Transport	☑		☑	
Building and Construction	☑			☑

**Please Note: While all options are potential offset opportunities for sectors, in this example the most directly related options have been highlighted.*

Plantation development

Continued plantation development in Australia, through the delivery of strategies such as the *Plantations for Australia: The 2020 Vision*, would produce an estimated 50 million tonnes of CO_2 offsets a year (under the 2020 Vision, Australia would have 3 million hectares of plantations by the year 2020). This could be achieved by reinforcing commitment to the strategy in the context of the benefits for emissions reduction and climate change.

Additonally, the development of an extra 1 million hectares of 'carbon specific' plantations grown in low rainfall areas of Australia could abate an estimated 25 million tonnes of CO_2 a year by 2020. This proposal could be driven by enhancing the taxation arrangements for growing plantations for wood and carbon by providing the same deductibility arrangements for investors growing trees for carbon sequestration purposes as investors growing trees for wood products or environmental benefits. It could also be achived by facilitating the development of a secondary market for immature plantations and reaffirming the current taxation arrangements for growing trees for wood products.

It is also important to ensure the development of other government policy (e.g. water and the allocation of water entitlements) reflects the economic, social and environmental benefits (including carbon benefits) of tree plantations and wood products. There is currently a concern held by the forest industry that water policy development in response to the National Water Initiative may unfairly restrict plantation establishment and development while failing to recognise other significant benefits such as the role of plantations as carbon sinks.

Given the strong land use link between the tree plantation sector and the agriculture sector, it seems logical for plantations to play a major role in offsetting emissions from agriculture. Tree plantations, many of which are established on previously cleared farmland, removed 17.8 million tonnes of CO_2 from the atmosphere in 2004.

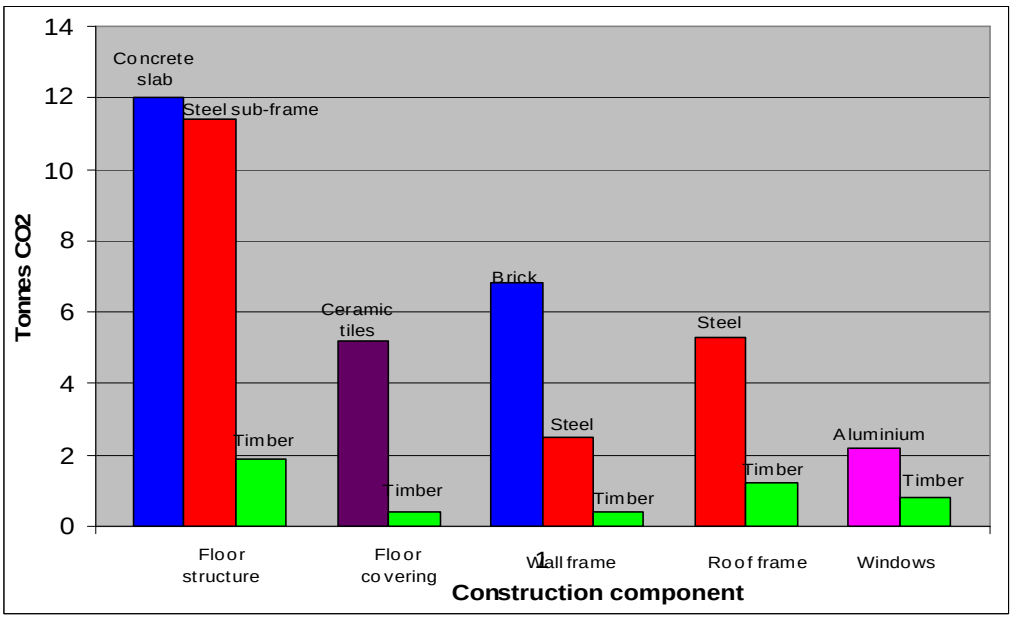
Wood products

In addition to the many significant environmental advantages over alternative materials, wood products are effective in actively storing carbon from the atmosphere. As noted by the Forest and Wood Products R & D Corporation (FWPRDC), the key focus of recent research into carbon in Australia has been to quantify the benefits of carbon sequestration in forests. However, each year 25 million m^3 of logs are removed from Australian forests, the equivalent of around 8 million tonnes of carbon or about 30 million tonnes of CO_2. Depending upon the type of product manufactured and the disposal method at the end of its life, the sequestered carbon will remain locked up in the product for many decades[6].

Use of timber from sustainably managed forests in building construction should be promoted as it will assist in lowering Australia's emissions levels by reducing the use of building materials such as steel, concrete, plastics and aluminium, which emit high amounts of CO_2 in their manufacture (see Figure 2).

[6] Forest and Wood Products R & D Corporation (2006). Carbon Storage in Wood Products in Australia; a review of the current state of knowledge

Figure 2: Greenhouse gases emitted in the manufacture of building materials used in an average family house in Australia[4].



For example, recent research indicates that utilising a timber floor as opposed to a concrete floor produces a net saving of 15 tonnes of CO_2 emissions per home[7]. If half of Australia's new homes were built using timber for flooring instead of concrete, around 800,000 tonnes of CO_2 emissions would be saved each year. This is equivalent to the emissions from 160,000 cars for one year.

Additional emission savings can be obtained by the promotion of other timber products, for example, structural framing and furniture. It has been shown that by choosing wood products wherever possible in house construction, greenhouse gas emissions, equivalent to more than 25 tonnes of CO_2, could be saved per house[7].

The forest industry would encourage the Task Group to work with governments to amend procurement policies and processes to recognise and endorse the use of Australia's sustainably managed native forest and plantation timbers and wood products. It is also important to ensure building codes favour the use of timber over emission intensive alternatives.

Unfortunately, current building codes and energy rating schemes do not fully recognise the carbon benefits of wood products as they are typically not based on full life cycle assessments. For instance, they are often based on operational energy which favours higher mass materials (i.e. concrete and steel) and do not consider the superior embodied energy credentials of timber over these materials.

The forest industry would support the Task Group working with State and Federal Governments to ensure energy efficiency rating schemes reflect the low energy emissions and subsequent carbon benefits of wood products in construction applications.

[7] CRC for Greenhouse Accounting, http://www.greenhouse.crc.org.au/Research/a3.cfm

Use of Wood Waste

The choice of disposal option of wood products has a direct impact on the overall environmental performance of the product. Encouraging and extension of the life-cycle of timber products prior to disposal is an option to extend the carbon cycle. For example, this could see 'waste' timber products being converted to engineered wood products such as particle board, thus extending their product life by deferring disposal in landfill or being burnt.

The use of wood waste for bioenergy and biofuels is currently not widespread throughout Australia. However, experience from overseas indicates that wood waste is an efficient, low emissions and sustainable feedstock which could make a valuable contribution to Australia's efforts to address climate change.

Greater consideration should be given to allowing increased access to residual harvested wood waste in native forests. Over 50% of the biomass in the trees is currently left in the forests following harvest operations. This biomass is left to decay over time or is burnt, contributing to greenhouse gas emissions. The use of part of this resource for the generation of bioenergy would have two main advantages:

- Reduction of greenhouse emissions due to decay or burning of residues; and

- Generation of renewable energy that will permanently displace emissions due to the use of fossil fuels.

There is enough waste in Australia from existing forest industry activities to produce 3 million MWh of electricity per annum, providing a permanent reduction of 3 million tonnes in CO_2 emissions[8].

Bioenergy production from wood waste provides an alternative waste disposal mechanism for timber product manufacturers, the building and construction sector, commercial enterprise and other sectors. The forest industry encourages the Task Group to work with all levels of Government to ensure there are no unfair impediments to the use of wood waste for use as bioenergy and biofuels, while ensuring appropriate entitlements are made available for producers and consumers.

Currently, trends indicate that burning the wood to waste or for energy generation is almost exclusively restricted to processing activities. Government policy directions could significantly enhance the energy generation from commercial, construction and demolition sectors. This would have the potential to significantly increase the energy outputs from the use of wood waste and divert timber products from landfills.

The forest industry could play a major role in reducing emissions from the stationary energy sector. The use of wood waste as renewable bioenergy has significant potential to reduce emissions from current electricity generation in Australia which is mostly generated by coal-

[8] NAFI (2006), The environmental benefits of using wood waste for renewable energy, http://www.nafi.com.au/bioenergy_factsheets/WWFS03.pdf

fired power stations. Renewable energy from wood waste reduces CO_2 emissions by 95-99% for each MWh of electricity generated when compared to coal-fired electricity generation[8].

In addition, the forest industry may also play a role in reducing emissions from the transport sector. The use of wood residues for the production of renewable biofuels such as ethanol is an option with significant potential to reduce the existing large amount of emissions from the burning of fossil fuels within the transport sector.

Active management of native forests

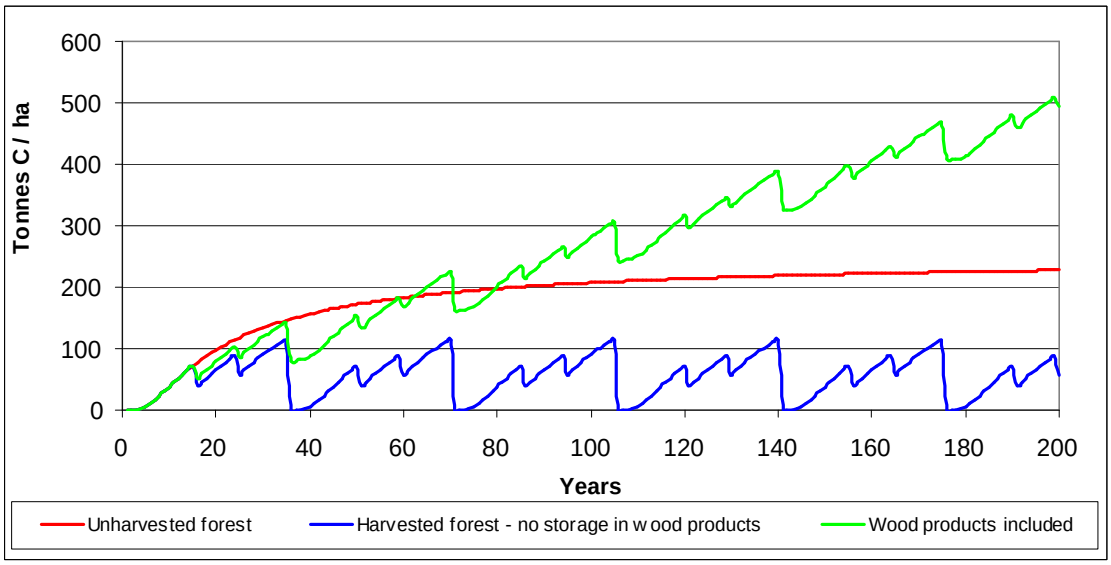
Over 11 million hectares of public native forests previously available for timber production have been placed into conservation reserves since 1994. The management regimes adopted within these reserves, particularly relating to fire, are very different to those previously practiced while the areas were more actively managed as production forests.

The current 'passive' approach to managing Australia's conservation reserves is creating a significant risk to Australia's carbon emissions from bushfires. Passive management of forests in these reserves may lead to a significant build up of fuel loads and an increase in the risk of high intensity wildfires. This is a factor often not well considered by governments in the creation of reserves.

Commercial native forests are actively managed to reduce fuel loads within their estates. This is achieved through managed burning programs to control excessive fuel-load build-ups within these forests. This effective management system should be recognised within a domestic emissions trading scheme as it minimises the risk of significant emissions from wildfire, such as the 130 million tonnes of CO_2 that were emitted during Australia's 2002/03 bushfire season (this is quarter of Australia's total annual greenhouse emissions).

As shown below in Figure 3, by actively managing and harvesting forests for timber products which 'lock-up' carbon, the carbon benefit can be significantly increased over time. When the storage of carbon in wood products is appropriately accounted for, the carbon benefit of a production forest is more than double that of a forest which remains unharvested.

Figure 3: Carbon storage in a harvested and unharvested forest[4].



Emissions trading to suit Australian conditions and objectives

Current rules on carbon trading from the Kyoto Protocol are potentially restrictive on opportunities for carbon abatement by the forest industry and do not reflect the true nature of the carbon benefits of forests and wood products.

Australia's forest industry would like to see the development of an emissions trading system, or other emissions reduction arrangement, that suits the characteristics of Australia's economy and emissions objectives. This should support the necessary international reporting frameworks, and allow credit trading internationally if required. These should be the primary objectives of any national emissions trading scheme, which may be independent to the expectations of the Kyoto Protocol.

Emissions trading consistent with certain aspects of the Kyoto Protocol may fail to reflect the true nature of carbon benefits from the forestry sector. For example, the failure to recognise carbon storage in harvested wood products and the issue of permanence (a minimum carbon stock must be maintained within the carbon pool on a 'permanent' basis) will limit the forest industry's ability to fully utilise the benefits it can provide in emission trading.

The development of an emissions trading scheme in Australia should not be constrained by the failure of other schemes, both in Australia and internationally, to adequately recognise the realities of carbon sequestration and storage in forests and wood products. There is a real opportunity for Australia to 'set the standard' by recognising these realities in emissions trading. This would be a critical step towards realising the full carbon benefits of forests and wood products which may then be more widely adopted in the development of other similar systems throughout the world.

Conclusion and Recommendations

NAFI recognises that a national emissions trading scheme may play a significant role in Australia's efforts to lower its greenhouse emissions. While there are significant opportunities for the forest industry to provide a range of carbon abatement solutions in emissions trading, the realisation of these opportunities will depend greatly on full recognition of the carbon sequestration benefits of forests and wood products.

NAFI considers that the following issues must be addressed in developing an emissions trading system to adequately provide the forest industry with full recognition of the beneficial role it can play in meeting Australia's emissions targets:

- Establishing an emissions trading system that suits Australia's emissions objectives, supporting the necessary international reporting frameworks, and allowing credit trading internationally if required. These should be the primary objectives of a national emissions trading scheme, independent to the expectations of the Kyoto Protocol.

- Consideration must be given to the broader forest policy objectives in the development of an emissions trading system to ensure consistency with these policies.

- Adequate consideration of the full net benefits of forests and wood products in terms of carbon sequestration and storage in the development of emissions trading. This can play a pivotal role in Australia's endeavours to meet its future emissions reductions targets.

- Strategy options including increased plantation development, increased uptake and use of wood products, effective use of wood waste products and active management of native forests can all assist in reducing and offsetting greenhouse gas emissions, thus helping Australia to achieve an 'emissions-conscious' economy.

NAFI and the broader forest industry intend to be actively involved in any strategies to develop emissions trading within Australia. NAFI is currently involved in the National Emissions Trading Taskforce's (NETT) process to consider a national emissions trading scheme.

NAFI is willing to answer any queries from the Task Group in relation to this submission. We look forward to further consultation with the Group over its considerations on emissions trading in Australia. This is a critical step towards achieving carbon abatement outcomes for Australia thus mitigating our impacts on climate change.