



**SUBMISSION TO AUSTRALIAN GOVERNMENT NEGOTIATORS AT THE 19<sup>TH</sup> CONFERENCE OF  
THE PARTIES TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE  
Warsaw, Poland**

November 2013

*The Australian Forest Products Association (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.*

**Introduction**

Wood, and every product made from wood, demands a far greater role in both domestic and international policy making if we are serious about constraining growth in greenhouse gases.

At an international level negotiators have long acknowledged the positive role that sustainable harvesting and regeneration of forests can play but have struggled to provide sufficient policy signals to fully capture these opportunities. They have principally focused on avoiding the widespread deforestation (i.e. land clearing) practices in other parts of the world, which are legitimately considered a major source of global carbon emissions.

In Australia likewise policy makers have as yet failed to properly account in any government incentives program – be it carbon farming or renewable energy – for the fact that trees are the ultimate renewable resource and should be our best friend in the battle against climate change.

**Background**

AFPA, and its antecedents the National Association of Forest Industries and the Australian Plantations Products and Paper Industry Council, has had a long history of stakeholder engagement on international climate change negotiations as well as the ongoing development of domestic climate schemes.

This submission is provided to the Australian Minister for Foreign Affairs the Hon Julie Bishop and the Australian Ambassador for Climate Change, Mr Justin Lee. This paper is intended to help inform the Australian Government negotiating position at the 19<sup>th</sup> meeting of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Warsaw, Poland.

Its purpose is to convey the high level principles and views of AFPA in relation to international climate negotiations as they relate to the forest, wood and paper products industry.

## Summary

- AFPA acknowledges the significant body of research showing the potential for reductions in greenhouse gas (GHG) emissions from forest related abatement activities. This research has shown that sustainably managed forests and forest product industries can make a positive contribution to reducing or abating GHG emissions. The major pathways for emissions abatement include:
  - the carbon sequestered in growing forests;
  - the carbon stored in harvested wood products;
  - the substitution of high emissions materials (e.g. steel, concrete) with wood and other fibre based products that have a substantially lower emissions footprint; and
  - the use of woody biomass for renewable energy, thereby displacing fossil fuels.
- The significant potential for the forest and forest product 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.<sup>1</sup>*

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<sup>1</sup> Nabuurs, G.J., Masera, O., Andrasko, K., Benitez-Ponce, P., Boer R, Dutschke, M., Elsidig, E., Ford-Robertson, J., Frumhoff, P., Karjalainen, T., Krankina, O., Kurz, W.A., Matsumoto, M., Oyhantcabal, W., Ravindranath, N.H., Sanz Sanchez, M.J., and Zhang, X. (2007). *Forestry (9)*, in *Climate Change (2007): Mitigation. Contribution of Working Group III to the Fourth Assessment report of the Intergovernmental Panel on Climate Change*. (Metz B., Davidson O.R., Bosch P.R., Dave R and Meyer L.A. (eds.), Cambridge University Press, UK, and New York, USA.

## Key principles

### *Benchmark of 'what the atmosphere sees'*

- AFPA notes the important role of forest related mechanisms in the Kyoto Protocol (KP) and broader Framework Convention on Climate Change for promoting mitigation. These mechanisms include:
  - the KP provisions under Article 3.3 (i.e. afforestation, reforestation and avoided deforestation) and Article 3.4 (forest management); and
  - links to the Clean Development Mechanism (CDM) and REDD+ (Reduced Emissions from Deforestation and Forest Degradation) measures.
- With regard to climate change mitigation policies, the benchmark for assessment of their effectiveness must be in terms of net verifiable emissions and removals, or in other words 'what the atmosphere sees'. This implies that all relevant carbon pools from sinks and sources should be included in accounting methods.

### *Full life cycle accounting*

- Given the role of harvested wood products (HWPs) as a carbon store and their substitution effects over time, there is a need for more robust and detailed life cycle inventory (LCI) and life cycle assessment (LCA) studies and methods as part of international deliberations on forest-related measures.
- By tracking the inputs and outputs for each stage of processing 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 expose unintended carbon policy impacts, such as:
  - carbon exchanges that incentivize reduced harvesting, which can contribute to greater emissions from using more fossil fuels that can be offset by increasing forest carbon stores; and
  - ignoring the substitution of wood for fossil fuel intensive products since it has the highest leverage in reducing emissions<sup>2</sup>.

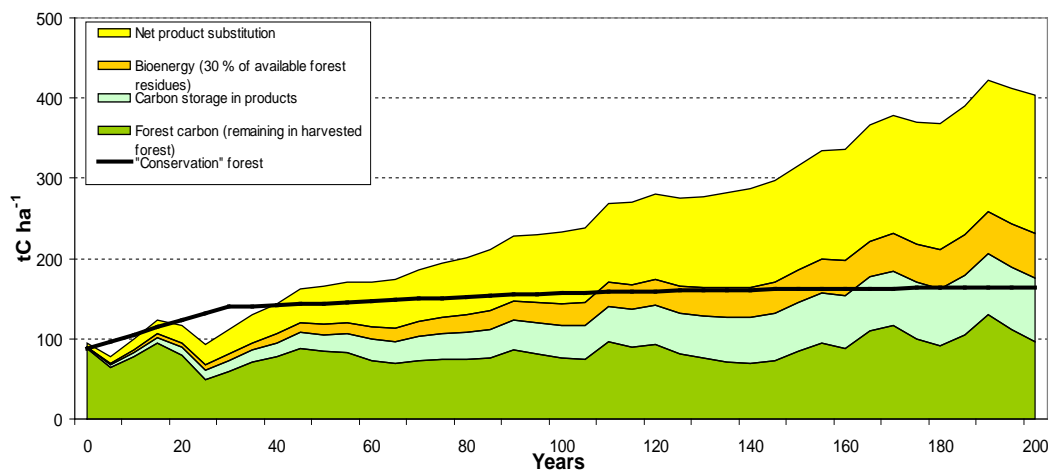
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<sup>2</sup> Lippke, B., Oneil, E., Harrison, R., Skog, K., Gustavsson, L. and Sathre, R. (2011). Life cycle impacts of forest management and wood utilization on carbon mitigation: knowns and unknowns. *Carbon Management* 2: 303-333.

### Multi-decade approach

- AFPA supports the Australian Government advocating a long term view on international and domestic mechanisms for promoting forest related mitigation. This is because a growing body of research is demonstrating that a failure to undertake life cycle assessment leads to short term approaches, such as reduced harvesting, that can lead to perverse mitigation outcomes<sup>3</sup>.
- Recent modelling has shown that sustainably managed wood production forests can produce better carbon mitigation outcomes compared to reserved (i.e. unharvested) forests for two native forest types in coastal New South Wales, taking into account the multiple carbon abatement pathways identified above<sup>4</sup>.
- By taking a multi-decade approach (e.g. 50 to 100 years), the perverse outcomes from 'reduced harvesting' options become apparent, as the carbon stored in HWPs and emissions reductions from the use of biomass for renewable energy continue to increase in perpetuity, in addition to the carbon stored in the regrowing forest (refer Figure 1).

**Figure 1.** Carbon emission abatement implications (t C ha<sup>-1</sup> sequestered or displaced) of the 'conservation' and 'harvest' scenarios for North Coast forests.



Source: Ximenes et al (2012).

<sup>3</sup> Malmshiemer, R.W., Bowyer, J.L., Fried, J.S., Gee, E., Izlar, R.L., Miner, R.A., Munn, I.A., Oneil, E. and Stewart, W.C. (2011). Managing forests because carbon matters: integrating energy, products and land management policy, *Journal of Forestry* 109(7S): S7-S50.

<sup>4</sup> 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.

- Similarly, research from the United States has shown that increasing harvest over the next 100 years, for a Midwest national forest, increases the strength of the carbon sink despite sequestration and harvesting often being portrayed as being in conflict<sup>5</sup>.
- These recent studies simply add to the body of knowledge that led the IPCC to conclude that sustainably managed forests lead to the largest sustained mitigation effort over time. This fundamental principle should be reflected more explicitly in international climate policy measures.

#### *Incentives for improved fire management*

- AFPA supports landscape level accounting for forest management activities. This should include removals and emissions on forest lands from anthropogenic activities.
- However, AFPA believes there is a lack of recognition in the international negotiations of the growing occurrence of 'mega-fires' and their implications for mitigation and adaptation. Mega-fires are described as those fires that comprise a high proportion of annual total suppressions costs, area burnt and emissions as a result of their scale and intensity<sup>6</sup>.
  - The 2003 south-eastern fires in Australia, for example, generated 190 Mt of emissions, equivalent in magnitude to almost a third of Australia's national target of 591 Mt per year of emissions reductions under the KP first commitment period.
- The problem of mega-fires has been attributed to an anthropogenic emphasis on fire suppression in many countries rather than preventative fuel management. This has led to higher tree stocking and fuel loads compared to historical forest ecological conditions and contributed to fires of increasing scale and intensity<sup>7</sup>.
- For example, it is well accepted that earlier Indigenous burning practices in Australia had a direct impact on wildfire behaviour:

*Australian bushfire scientists and anthropologists generally agree that, before European settlement, Indigenous people carried out frequent, regular and wide-scale burning, especially in the drier forest types. The net result was a mosaic of burnt and unburnt patches that limited the extent and intensity of fire under severe weather conditions.*<sup>8</sup>

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<sup>5</sup> Peckham, S.D., Gower, S.T. and Buongiorno J. (2012). Estimating the carbon budget and maximizing future carbon uptake for a temperate region in the U.S. *Carbon Balance and Management* 7: 6 (doi: 10.1186/1750-0680-7-6).

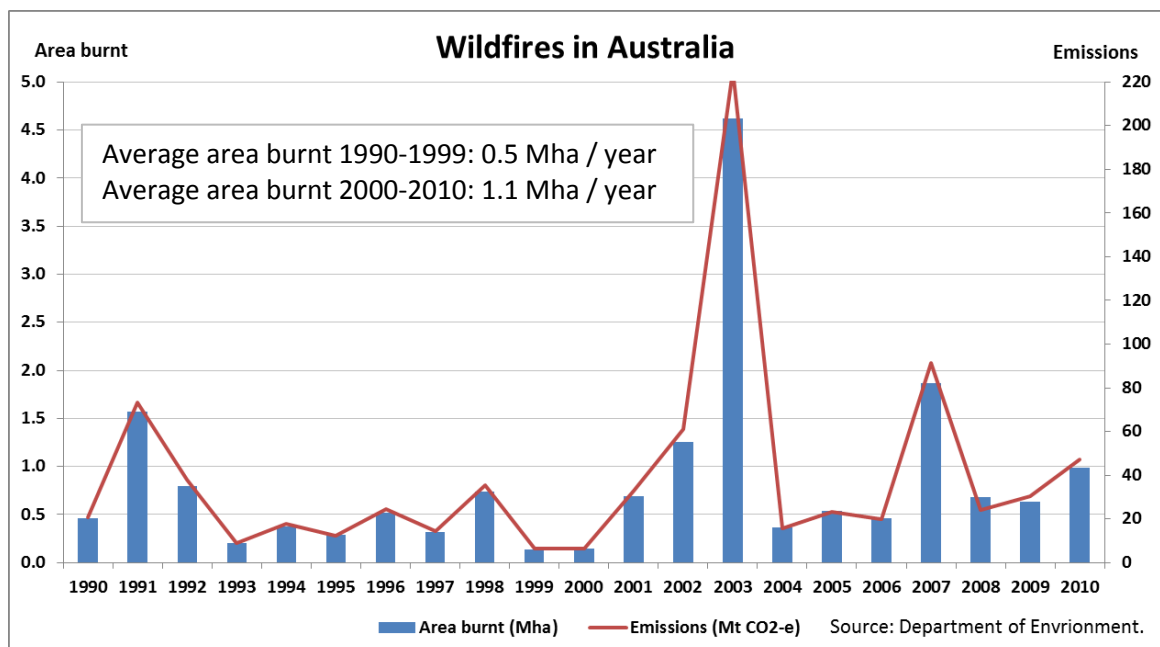
<sup>6</sup> Adams, M.A. (2013). Mega-fires, tipping points and ecosystem services: managing forests and woodlands in an uncertain future. *Forest Ecology and Management* 294: 250-261.

<sup>7</sup> Williams J. (2013). Exploring the onset of high-impact mega-fires through a forest land management prism. *Forest Ecology and Management* 294: 4-10.

<sup>8</sup> Montreal Process Implementation Group for Australia 2008, *Australia's State of the Forest Report 2008*. Bureau of Rural Sciences, Canberra.

- Over the past decade there have been numerous state and national public inquiries<sup>9</sup> into the inadequacy of bushfire mitigation including inadequate levels of fuel reduction, particularly on public forest lands.
- The downsizing of the forestry industry brought about by the transfer of large tracts of multiple-use state forest to formal conservation reserves has also been associated with a more passive approach to fuel reduction on public forest land. This has contributed to a decline in resources for fuel reduction and suppression, including fire management personnel and the maintenance of access tracks and equipment<sup>10</sup>.
- The average annual area burnt from bushfires in Australia has doubled over the past decade, largely as a result of a number of very large hot fires (Figure 2), while the area treated for fuel reduction has declined over the same period. Between 1990-1999 and 2000-2010, the average annual area treated for fuel reduction declined respectively from 627,000 hectares to 456,000 hectares.

**Figure 2.** Area of wildfires in Australia, 1990-2010



<sup>9</sup> Parliament of New South Wales Inquiry into the 2001/2002 Bushfires; House of Representatives Select Committee on the Recent Australian Bushfires 2003; Council of Australian Governments National Inquiry on Bushfire Mitigation and Management 2004; Victorian Bushfires Royal Commission 2009; Senate Inquiry into Bushfires in Australia 2010.

<sup>10</sup> Stephens, M. (2010). Bushfire, forests and land management policy under a changing climate. *Farm Policy Journal* 7: 11-19.

- AFPA supports the domestic and international development of fuel management initiatives and programs for bushfire mitigation and emissions reduction.
- Research in Western Australia<sup>11</sup> and the United States<sup>12</sup> has shown that fuel reduction can be effective at reducing the severity and extent of future wildfires, and associated long term reductions in wildfire carbon emissions<sup>13</sup>.
- In addition, the United States has initiated a number of large scale forest restoration activities aimed at restoring more fire-resilient ecological conditions through active fuel reduction. The 2009 Collaborative Forest Landscape Restoration Programme (CFLRP), for example, has provided \$400 million for the treatment of fuels across 23 forested landscapes for multiple goals, including severe fire risk reduction, habitat restoration, bioenergy development and employment<sup>14</sup>.
- AFPA therefore supports more collaborative international work on forest fire management for mitigation and adaptation purposes, recognising the longer term benefits from active fuel reduction for emissions reductions and risk management. This work should include capacity building initiatives and programs as well as targeted research on carbon flows at a landscape scale from fuel reduction.

#### *Robust land sector accounting*

- AFPA notes the UNFCCC Durban decision CMP.7 for Land use, land-use change and forestry (LULUCF) for the mandatory inclusion of forest management activities in the second commitment period (i.e. 2013-2020) of the KP.
- As part of this decision, countries have adopted a Forest Management Reference Level (FMRL) framework. The FMRL framework aims to provide a credible baseline reference level for assessing net changes in future emissions and removals from forest management activities in the second commitment period of the KP.
- The importance of a principled approach to setting reference levels for robust climate outcomes has been noted, as well as the speculative potential for windfall credits in the second commitment period of the KP from reduced harvesting activity<sup>15</sup>.

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<sup>11</sup> Sneeuwjagt RJ et al (2013). Opportunities for improved fire use and management in California: lessons from Western Australia. *Fire Ecology* 9: 14-24.

<sup>12</sup> Hartsough BR et al (2008). The economics of alternative fuel reduction treatments in western United States dry forests: Financial and policy implications from the National Fire and Surrogate Study. *Forest Policy and Economics* 10: 344-354.

<sup>13</sup> Stephens, S.L., Boerner, R.E.J., Moghaddas, J.J., Moghaddas, E.E.Y., Collins, B.M., Dow, C.B., Edminster, C., Fiedler, C.E., Fry, D.L., Hartsough, B.R., Keeley, J.E., Knapp, E.E., McIver, J.D., Skinner, C.N. and Youngblood, A. (2012). Fuel treatment impacts on estimated wildfire carbon loss from forests in Montana, Oregon, California, and Arizona. *Ecosphere* 3(5): 1-17.

<sup>14</sup> Schultz, C.A., Jedd, T. and Beam R.D. (2012). The Collaborative Forest Landscape Restoration Program: a history and overview of the first projects. *Journal of Forestry* 110: 381-391

<sup>15</sup> Macintosh A. (2011). Are forest management reference levels incompatible with robust climate outcomes? A case study of Australia. *Carbon Management* 2: 691-707.

- AFPA does not support accounting rules or policies that would allow potential credits from reduced harvesting activity on Forest Land, as it is contrary to the fundamental IPCC principle that sustainably managed forests (i.e. forests subject to periodic harvest and the use of wood products) produce the largest sustained mitigation benefit<sup>1</sup>.
- It is critical that the FMRL framework fully recognises the multiple abatement pathways from harvesting activity and their substitution effects<sup>2 3 4 5</sup>, in order to avoid perverse accounting rules and carbon emission outcomes.
- In addition, AFPA has a number of concerns regarding the identification of Forest Lands and treatment of disturbances, primarily fires, with respect to the Australian Government submission to the UNFCCC on its revised Forest Management Reference Level (FMRL)<sup>16</sup>.
- The Australian Government FMRL submission largely restricts forest management land to state multiple-use forest (MUF) tenures where sustainable timber harvesting activities are undertaken (i.e. 9.4 Mha). This area represents only a small proportion of the total area of forest in Australia (i.e. 149 Mha).
- AFPA considers the narrow definition of forest management land to be a serious flaw in the FMRL approach, as it fails to take into account the impact of human activity on the frequency and severity of fires across the landscape, including on MUF and non-MUF natural forest.
- The Durban land sector rules also include the provision of a 'natural disturbance exclusion' clause, whereby wildfires of a significant magnitude can be excluded as a natural disturbance that exceeds an accepted background level of such annual disturbances. Natural disturbances are defined as:

*"Natural Disturbances" are non-anthropogenic events or non-anthropogenic circumstances. For the purposes of this decision, these events or circumstances are those that cause significant emissions in forests and beyond the control of, and not materially influenced by, a Party.*

- While accepting the notion of managing for climatic variability, the assumption that natural disturbances outside the MUF area are primarily non-anthropogenic is not substantiated in an Australian context, given the direct impact of human activity on the build-up of fuels and pre-conditions that can contribute to fires of increasing scale and intensity and higher associated emissions.
- The current definition of Forest Land negates any potential liability for disturbances that are partly anthropogenic and provides no incentive for mitigating emissions from wildfires across the landscape

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<sup>16</sup> Australian Government (2011). Submission to the AWG-KP, Forest Management Reference Level, September.

[http://unfccc.int/files/meetings/ad\\_hoc\\_working\\_groups/kp/application/pdf/australia\\_290911.pdf](http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/australia_290911.pdf)



- Furthermore, bushfires in non-MUF areas not only represent a large source of emissions and risk to life and property, they represent a significant risk to the industry through the loss of standing wood and fibre resources within the MUF estate.
- AFPA therefore supports a more thorough scientific review of the underlying basis and rationale for the FMRL approach taken by the Australian Government with respect to the identification of Forest Land and the treatment of bushfires, as well as the development of more sensible measures for addressing bushfires across the landscape.

*Supporting the role of bioenergy in mitigation*

- Globally, bioenergy accounts for around 77 per cent of global renewable energy, which represents 13 per cent of the world's primary energy mix. Furthermore, woody biomass accounts for nearly 90 per cent of the world's renewable energy supply<sup>17</sup>.
- Given the current and ongoing importance of bioenergy for climate mitigation, international deliberations should continue to promote bioenergy as a renewable energy source, particularly woody biomass given its links to multiple abatement pathways and the concept of cascading mitigation benefits from the use of HWPs and bioenergy at the end of their useful lifecycle<sup>18</sup>.

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<sup>17</sup> International Energy Agency (IEA) (2009). Bioenergy – a Sustainable and Reliable Energy Source, Main Report. IEA Bioenergy: ExCo 2009-06.

<sup>18</sup> United Nations Economic Commission for Europe/Food and Agriculture Organisation (UNECE/FAO), Proceedings of the Workshop on Harvested Wood Products in the Context of Climate Change Policies, 9-10 September 2008, United Nations Palais des Nations, Geneva, Switzerland.