
The Parliament of the Commonwealth of Australia

Seeing the forest through the trees

Inquiry into the future of the Australian Forestry Industry

House of Representatives
Standing Committee on Agriculture, Resources, Fisheries and Forestry

November 2011
CANBERRA

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The report title comes from the proverbial saying 'You can't see the forest for the trees', meaning you are focussing on details too much and can't see the 'big picture'.



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Foreword

“Plant trees. They give us two of the most crucial elements for our survival:
oxygen and books!”

-A Whitney Brown
Writer and Comedian

From the earliest times, trees have been the focus of religious life for many peoples around the world. As the largest plant on earth, the tree has been a major source of stimulation to the mythic imagination. Trees have been invested in all cultures with a dignity unique to their own nature, and tree cults, in which a single tree or a grove of trees is worshipped, have flourished at different times almost everywhere. We have the tree of life and the tree of knowledge in our own culture now.

Trees have also featured in our every day life, in design and in structure across this continent. Both indigenous and European peoples have valued the tree for its qualities, its strengths and its influence on a landscape. It is after all the most amazing scientific structure that has occurred in nature. We could never have invented such an entity with its ability to soar to the clouds and yet have the structural integrity to deal with storm, flood and fire, all part of a tree's essence.

So it is not surprising that people feel that trees are “sacred” and shouldn't be touched. However, like all living entities, trees have a life cycle, they seed, they grow and they die, in longer or shorter time scales depending on the species. By managing them through their life cycles, we can improve them, can strengthen their scientific features and in the future develop alternative energy and fuels.

Products that are so much part of our living that if we did not have them any more, we would lose a huge part of our cultures. By growing and harvesting trees, and then replanting, we have the most sustainable way of developing a product that we can use as part of our lives for ever.

Sure we have to keep samples of the various species which make up our natural areas – and I believe Australia has understood this so well through the development of the National Forest Policy Statement and the various RFAs. We need to keep reviewing our agreements and ensuring that we keep our forests sustainable.

But the idea of keeping an individual tree because it represents “bio diversity” or is a “home for animals” is wrong. The tree will die, and if there is nothing coming on to replace it to ensure that its species is continued, then there is no future for that species, nor for its inhabitants.

To help the future of the planet, we will need to have wood replace other materials which embodies much more energy than non renewables, such as steel or plastic.

This inquiry ranged far and wide and took in many different points of view. But we were seeking a future for forestry. We did not want to dwell in the past. So the recommendations have been carefully couched to give hope to our forest workers, our contractors, sawmillers, pulp and papermakers and our craft and woodworkers. Australia wants a sustainable industry in all its facets and we want to ensure that our landscape still reflects the power of the trees.

I believe the Committee has worked hard to do this. I would like to thank all my committee members, particularly my Deputy Chair Alby Schulz, for their diligence and their help in seeking out the best processes in the business and looking forward to the future.

Thank you too to the Committee Secretariat for their hard work in putting this all together.

Lastly, I would like to thank all those contributors who submitted to the inquiry from all areas of forestry or who had an interest in the future of forestry. Without your help, your time given freely to attend consultations and your hospitality, this report could not have been written.

Hon Dick Adams MP

Committee Chair

What do we plant?

American author, Henry Abbey (1842-1911)

What do we plant when we plant the tree?
We plant the ship, which will cross the sea.
 We plant the mast to carry the sails;
We plant the planks to withstand the gales --
The keel, the keelson, and the beam and knee;
 We plant the ship when we plant the tree.

What do we plant when we plant the tree?
 We plant the houses for you and me.
We plant the rafters, the shingles, the floors.
 We plant the studding, the lath, the doors,
 The beams, and siding, all parts that be;
We plant the house when we plant the tree.

What do we plant when we plant the tree?
 A thousand things that we daily see;
We plant the spire that out-towers the crag,
 We plant the staff for our country's flag,
We plant the shade, from the hot sun free;
We plant all these when we plant the tree.





Membership of the Committee

Chair Hon Dick Adams MP

Deputy Chair Mr Alby Schultz MP

Members Mr Darren Cheeseman MP

Mr Geoff Lyons MP

Mr George Christensen MP

Mr Rob Mitchell MP

Mr Tony Crook MP

Mr Dan Tehan MP

Committee Secretariat

Secretary	Mr Russell Chafer (until 2 February 2011) Mr David Brunoro (from 3 February 2011)
Inquiry Secretary	Dr Bill Pender (until 25 July 2011) Mr Thomas Gregory (from 8 August 2011)
Research Officer	Ms Fiona Gardner
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Terms of reference

The Committee is to inquire into the current and future prospects of the Australian forestry industry, particularly in regards to:

- Opportunities for and constraints upon production;
- Opportunities for diversification, value adding and product innovation;
- Environmental impacts of forestry, including:
 - ⇒ Impacts of plantations upon land and water availability for agriculture; and
 - ⇒ The development of win-win outcomes in balancing environmental costs with economic opportunities;
- Creating a better business environment for forest industries, including:
 - ⇒ Investment models for saw log production;
 - ⇒ New business and investment models for plantation production; and
 - ⇒ Superannuation investment in plantations;
- Social and economic benefits of forestry production;
- Potential energy production from the forestry sector, including:
 - ⇒ Biofuels;
 - ⇒ Biomass;
 - ⇒ Biochar;
 - ⇒ Cogeneration; and
 - ⇒ Carbon sequestration;
- Land use competition between the forestry and agriculture sectors:
 - ⇒ Implications of competing land uses for the cost and availability of timber, food and fibre;
 - ⇒ Harmonising competing interests; and
 - ⇒ Opportunities for farm forestry.



List of abbreviations

A3P	Australian Plantation Products and Paper Industry Council
ACF	Australian Conservation Foundation
AFG	Australian Forest Growers
AFPA	Australian Forest Products Association
AFSL	Australian Forestry Standard Limited
CEC	Clarence Environment Centre
DAFF	Department of Agriculture, Fisheries and Forestry
ET	Environment Tasmania
FFIC	Forest and Forest Industry Council of Tasmania
FFORNE	Farmed Forests of the North East
FSC	Forest Stewardship Council
IFA	Institute of Foresters of Australia
MTG	Australian Master TreeGrower Program
NAFI	National Association of Forest Industries
NEFA	North East Forest Alliance
NUFG	Northern United Forestry Group
OAN	Otway Agroforestry Network

PFT	Private Forests Tasmania
SCU	Southern Cross University
TCA	Timber Communities Australia
TWS	The Wilderness Society
VAFI	Victorian Association of Forest Industries



List of recommendations

3 Future role for forestry and forest products

Recommendation 1

The Committee recommends the Australian Government, through the COAG Standing Council on Primary Industries, lead a process to assess and publicly report on likely wood demand and supply scenarios over the longer term (at least the next forty years). This should be completed within twelve months.

Recommendation 2

The Committee recommends the Australian Government, through the COAG Standing Council on Primary Industries, lead a process to consider and publicly report on whether Australia should aim for wood supply 'self-sufficiency'.

Recommendation 3

The Committee recommends the Australian Government run public information campaigns to promote timber and wood products as replacements for more energy-intensive materials.

Recommendation 4

The Committee recommends the Australian Government develop robust national standards quantifying the carbon stored in different products made from harvested trees, including the duration of storage and policy implications of those standards.

Recommendation 5

The Committee recommends the Australian Government, as it develops a mature Carbon Farming Initiative regime, consider:

- the capacity for ‘additionality’ to recognise the diversity of plantations and farm forestry applications, rather than relying on generalised inclusions and exclusions;
- the capacity for ‘permanence’ to include the sustainable harvesting and replanting of plantations and farm forestry; and
- other ways for the CFI to support the forestry industry generally.

4 Native forestry

Recommendation 6

The Committee recommends the Australian Government initiate a process to renew existing Regional Forest Agreements, incorporating the principles of review, consultation, evergreen extension and concrete timelines.

Recommendation 7

The Committee recommends the Australian Government, subject to the agreement of the relevant State Government, ensure that a renewed RFA is in place within three years of the expiry of each existing RFA. Renewed RFAs should incorporate the principles outlined above.

Recommendation 8

The Committee recommends the Australian Government, in negotiation with State Governments, develop, agree and implement a new regime within all renewed RFAs to provide for ongoing monitoring and periodic assessment. The new regime should provide for the periodic assessment of each RFA on an individual basis, at regular intervals, and at arm’s-length from all interested parties.

Recommendation 9

The Committee recommends the Australian Government direct the Department of Agriculture, Fisheries and Forestry to consider and evaluate the ‘stewardship’ proposal outlined above, and that relevant Minister report to Parliament on its findings within twelve months.

5 Plantations

Recommendation 10

The Committee recommends the Australian Government lead a process through COAG to create a national plan for plantations, to ensure that:

- plantations of appropriate species are planted in appropriate locations; and
- appropriate regional infrastructure exists or is planned and funded.

Recommendation 11

The Committee recommends the Australian Government:

- decide whether the encouragement of long-rotation plantations is an appropriate objective of policy;
- establish whether it is necessary and appropriate for government to provide an incentive to meet that objective;
- if it is, set out a clear plan to meet that objective, according to the national plan for plantations;
- assess whether MIS as a mechanism can meet that objective;
- if MIS can meet that objective, determine whether it needs to be altered to make it more effective; and
- if MIS cannot meet that objective, determine whether other mechanisms could do so.

6 Farm forestry

Recommendation 12

The Committee recommends the Australian Government, through COAG, lead a process to agree a national plan for the provision of, and access to, enabling infrastructure for farm forestry.

Recommendation 13

The Committee recommends that the Australian Government, in concert with state and local governments, provide immediate and ongoing financial support to local organisations that provide extension services for farm forestry, particularly through the Caring for our Country initiative.

Recommendation 14

The Committee recommends that the Australian Government explicitly state that Caring for our Country funding is available for farm forestry activities, and actively promote this fact to the broader community through an extensive information campaign.

7 Using forestry biomass

Recommendation 15

The Committee recommends that, under any version of the RET (or similar scheme), bioenergy sourced from native forest biomass should continue to qualify as renewable energy, where it is a true waste product and it does not become a driver for the harvesting of native forests.

Recommendation 16

The Committee recommends that, if the above principles are adhered to, legislation or regulation direct the Minister to grant an individual exemption from native forest biomass exclusion.

Recommendation 17

The Committee recommends that, under any system of exemption from the native forest biomass exclusion, provision be made for reporting on biomass volumes used, energy used and income generated, to ensure that the biomass used is a true waste product.

8 Forestry into the future

Recommendation 18

The Committee recommends that the Australian Government provide funding to FSC Australia to support the development of the proposed FSC national standard, with the expectation that the FSC national standard will replace the interim standard within five years.

Recommendation 19

The Committee recommends the Australian Government lead a process of discussions with all state and territory governments, to consider national approaches to:

- Forestry and climate change;
- Farm forestry; and
- Future wood product demand and supply.

Introduction

The course of the inquiry

- 1.1 On 7 February 2011 the Minister for Agriculture, Fisheries and Forestry asked the Committee to undertake an inquiry into the Australian forestry industry.
- 1.2 The Committee received 121 submissions over the course of the inquiry, listed at Appendix A. All public submissions are available on the Committee's website.¹ The Committee also received 23 exhibits during the inquiry, which are listed at Appendix B.
- 1.3 The Committee travelled to New Norfolk (Tasmania), Melbourne and Grafton (NSW) to hold public hearings with local communities about the forestry industry in each region. The Committee also held numerous public hearings in Canberra over the course of the inquiry. All hearings and witnesses are detailed in Appendix C.
- 1.4 The Committee extends its thanks to every individual and organisation that made a submission and that gave evidence at hearings, as well as those who attended the public gallery during hearings.

The scope of the inquiry

- 1.5 The terms of reference for the inquiry are relatively broad, but in general the Committee is directed to 'inquire into and report on the current and future prospects of the Australian forestry industry.' The Committee has

1 <<http://www.apf.gov.au/arff>>

focussed its attention on the opportunities for forestry both today and in the future. However, the Committee has also discussed elements of the history of Australian forestry where appropriate.

- 1.6 The terms of reference for the inquiry direct the Committee to consider the environmental impacts of forestry, and the Committee has done so. Where submissions have made constructive contributions to understanding and improving the environmental management of forestry, the Committee has included these views. However, submissions that have simply criticised the industry and called for an end to particular kinds of forestry have not been included in the report. The Committee is firmly of the belief that all forestry sectors will continue to be fundamental to the industry, and environmental considerations must be seen in this context.
- 1.7 The Committee is mindful of the different jurisdictions exercising powers and responsibilities for forestry. Whilst the Australian Government must drive national policy, it is usually state, territory and local governments that are responsible for policy relating to individual forestry operations. In addition to this complexity, a considerable part of the forest estate in Australia is publicly owned. This complexity need not be a barrier to good forestry outcomes, but the Committee has taken care to address its recommendations to the Australian Government, often calling for it to pursue policy goals through intergovernmental processes.

Structure of the report

- 1.8 In chapter 2, the report provides a historical overview of forestry in Australia, covering the softwood agreements of the 1960s, the 1992 National Forestry Agreement and the subsequent development of Regional Forest Agreements (RFAs). The more recent Tasmanian Statement of Principles is also discussed.
- 1.9 The future role of forestry and forest products is considered in chapter 3. Anticipated demand and consumption trends present significant opportunities for the forestry industry. At the same time, the effects of climate change present risks to some forests. The chapter finally considers the potential for the Carbon Farming Initiative to support forestry.
- 1.10 Chapter 4 examines native forestry. Native forests are considered in various ways, and the Committee discusses the best way to provide wood supply security to native forest harvesters. The interplay between different

kinds of forest management is considered, as well as producing high-value timber and wood products.

- 1.11 Chapter 5 addresses plantation forestry. The chapter considers the impacts of plantations on land and water competition, as well as the best way to encourage greater investment in long-rotation plantations. Finally, the chapter considers products and innovation.
- 1.12 Chapter 6 deals with Farm forestry, which involves integrating trees into existing farmland. This is an emerging means for farmers to diversify their land uses, and to improve land management. The Committee identifies some barriers to great farm forestry expansion, and has considered various ways to reduce these barriers.
- 1.13 Chapter 7 focuses on forestry biomass, and the multitude of possible uses for forest products and by-product that may provide alternate and diverse sources of income for the industry. The chapter considers how to ensure that waste products can be utilised to create renewable energy, as well as the role of forestry in producing biochar for agricultural use.
- 1.14 The final chapter considers the possible future of forestry, and the opportunities that will present themselves. It then reiterates the necessary policy initiatives to enable the industry to take advantage of these opportunities, as well as discussing additional support needed for the future strength of the industry.



Committee members with Ms Janelle Saffin MP (Member for Page) and Mr Spiro Notaras in Grafton.

History of Forestry in Australia

- 2.1 This report focuses primarily on the future of the Australian forestry industry. The terms of reference specifically direct the Committee to consider the 'current and future prospects' of the industry. However, it is necessary to briefly set out national forestry policy history, so that the Committee's findings and recommendations have a proper context. Two major periods of policy development will be discussed: the 1960s 'Softwood Agreements', and the period since the National Forest Policy Statement in 1992.
- 2.2 As the discussions below demonstrate, forestry policy is a shared policy, between all levels of government. However, as also demonstrated below, this is no impediment to good national outcomes. In each case, all levels of government have been involved to some degree, and a cooperative approach has given Australia coherent national policy that is sensitive to the differences between regions around the country.

Softwood Agreements in the 1960s

- 2.3 As noted by numerous submissions to the inquiry, the plantation estate in Australia expanded significantly in the 1960s, as a result of concerted efforts by the Australian Government and State and Territory Governments. As explained by the Department of Agriculture, Fisheries and Forestry in its submission:

Max Jacobs, Director-General of the Forestry and Timber Bureau, argued in 1964 that Australia should become self-sufficient in wood. The Australian Government supported the States in strategies to establish more plantations to cover the expected shortages, and find pulpwood markets for the otherwise

unsaleable trees so that native forests could be regenerated as future tree crops...This was facilitated through the Softwood Forestry Agreements Act 1967 and subsequent acts (1972, 1976, and 1978), and self-sufficiency became implicitly, if not explicitly, a 'national' policy.

From the 1960s to the 1980s the rate of plantation establishment increased to an average of around 25,000 hectares per year...Over 90% of the plantations established in this period are exotic pines managed on [30 – 35 year rotations] primarily for sawlog production.¹

- 2.4 This extensive plantation resource has contributed significantly to Australia's timber and wood-product output. As pointed out by numerous submissions to the inquiry, the establishment of these plantations was assisted by loans from the Australian Government to State and Territory governments.² Whilst this policy resulted in a considerable plantation expansion, it was largely through government managed areas. As outlined below, policy in the past two decades has strongly emphasised private establishment and ownership of plantations.

The National Forest Policy Statement of 1992

- 2.5 In 1992, the Australian Government, along with five State and two Territory Governments, agreed to the *National Forest Policy Statement* (the 1992 Statement). In 1995 the Tasmanian Government also agreed to the Statement, thereby securing the agreement of all State and Territory Governments.
- 2.6 The 1992 Statement recognises the 'specific interests and responsibilities' had by each of the three levels of government in Australia. Whilst these different interests and responsibilities mean that no single government has sole power to make decisions about forestry, the statement 'describes a process of consultation and cooperation designed to protect Australia's natural and cultural heritage in the context of conservation and development initiatives.'³

1 Submission 59, DAFF, pp.11-12.

2 Submission 105, Mr Robert Newman, p.3; Submission 1, Dr Judith Ajani, p.33; Submission 99, Australian Plantation Products and Paper Industry Council, p.8.

3 *National Forest Policy Statement* (2nd Ed., 1995), p.2.

- 2.7 Under the 1992 Statement, the Governments express a shared vision for the management of Australia's forests. This vision includes an increase of forested land, the management of private forests in close cooperation with public forests, a 'range of sustainable forest-based industries, founded on excellence and innovation', the efficient, environmentally sensitive and sustainable use of forests and their resources, and the participation of the Australian community in 'decision-making processes relating to forest use and management'.⁴
- 2.8 The 1992 Statement has a number of principal objectives, which include:
- maintenance of an extensive and permanent native forest estate in Australia;
 - protection of nature conservation values in forests;
 - sustainable economic use of native forests and plantations, for wood production;
 - maintenance of the existing private native forest cover;
 - facilitation of the ecologically sustainable management of private native forests for nature conservation, catchment protection, wood production or other economic pursuits;
 - increased commercial plantation development on cleared agricultural land including integration with other agricultural land uses;
 - improved productivity of existing plantations; and
 - expansion of plantation base by industrial growers and public forestry agencies to satisfy specific requirements.⁵
- 2.9 The statement also discusses specific policy initiatives directed at achieving these objectives. The following section details the foundation provided by the 1992 Statement, and two major mechanisms that sought to bring about the objectives of the statement: in relation to native forests, the Regional Forest Agreements (RFA) process; and in relation to plantations, the *Plantations for Australia: the 2020 Vision* (the 2020 Vision) initiative.

4 *National Forest Policy Statement* (2nd Ed., 1995), p.3.

5 *National Forest Policy Statement* (2nd Ed., 1995), pp.6-36.

Native forests in the 1992 Statement

- 2.10 In finding a balance between the various objectives relating to native forests, the 1992 Statement identifies a 'single, comprehensive regional assessment process...[providing] the basis for enabling the Commonwealth and the States to reach a single agreement relating to their obligations for forests in a region.'⁶

Regional Forest Agreements

- 2.11 In practice, the process for assessing forests and agreeing to regional forest plans was through the RFA process. As noted by the Department of Agriculture, Fisheries and Forestry (DAFF) in its submission to the inquiry, the RFA process was developed as the 'mechanism to achieve several key goals of the National Forest Policy Statement'.⁷ RFAs have been agreed for ten regions, where 'commercial wood production is a major native forest use.'⁸
- 2.12 As noted by the DAFF submission, the RFAs have three key objectives:
- to protect environmental values and a world class system of national parks and other reserves;
 - to manage all native forests in an ecologically sustainable way; and
 - to encourage job creation and growth in forest based industries, including wood products, tourism and minerals.⁹
- 2.13 Firstly, governments created regional scoping agreements, 'to identify government obligations, regional objectives and interests, and broad forest uses, as well as the nature and scope of the forest assessment.'
- 2.14 Secondly, a national set of criteria for conservation were agreed – for a 'Comprehensive, Representative and Adequate Reserve' system.
- 2.15 Thirdly, a 'comprehensive regional assessment' was undertaken in each region, which 'evaluated the economic, social, environmental and heritage values of forest regions and involved the full range of stakeholder and community groups.'¹⁰

6 *National Forest Policy Statement* (2nd Ed., 1995), pp.21.

7 Submission 59, DAFF, p.9.

8 'Regional Forest Agreements – Regions', DAFF website, <http://www.daff.gov.au/rfa/regions>, accessed 14/9/11.

9 Submission 59, DAFF, p.9.

10 'Comprehensive Regional Assessments by State', DAFF website, <http://www.daff.gov.au/rfa/publications/cra-state>, accessed 14/9/11.

- 2.16 Finally, negotiations were held between the Australian Government and the State Government for each forest region. The final result of these negotiations – an RFA – included an agreed reserve system, as well as providing a wood supply for industry certainty.¹¹
- 2.17 Between 1996 and 2001, ten RFAs were agreed: three in New South Wales, five in Victoria, one in the South-West of Western Australia, and one covering all of Tasmania. A comprehensive regional assessment was completed for South-Eastern Queensland, but an RFA was not agreed.¹² According to the State of the Forests Report 2008,
- Queensland has a ‘statewide forests process’ for the long-term assessment and planning of the public forest estate that will result in a significant expansion of conservation areas. The process involves key stakeholders and the community and is intended to result in forest agreements aimed at providing certainty to the forest industry, protecting environmental values and ensuring ecologically sustainable management of forests.¹³
- 2.18 RFAs have been recognised in Commonwealth law, through the *Regional Forest Agreements Act 2002* (the *RFA Act*). Under that Act, certain legislation does not apply to RFA wood or RFA forestry operations (including the *Export Control Act 1982* and Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999*.)¹⁴ The *RFA Act* also provides for compensation where the Commonwealth is in breach of an RFA.¹⁵
- 2.19 The RFA agreements include provision for regular review, every five years. Under a review:
- an independent reviewer assesses the Australian and State Governments’ (the parties) implementation of the milestones, obligations and commitments as outlined in the RFAs and provides information against agreed state sustainability indicators.¹⁶

11 ‘RFAs – Why?’, DAFF website, <http://www.daff.gov.au/rfa/about/why>, accessed 14/9/11.

12 ‘QLD – South East - DAFF’, DAFF website, <http://www.daff.gov.au/rfa/regions/qld>, accessed 14/9/11.

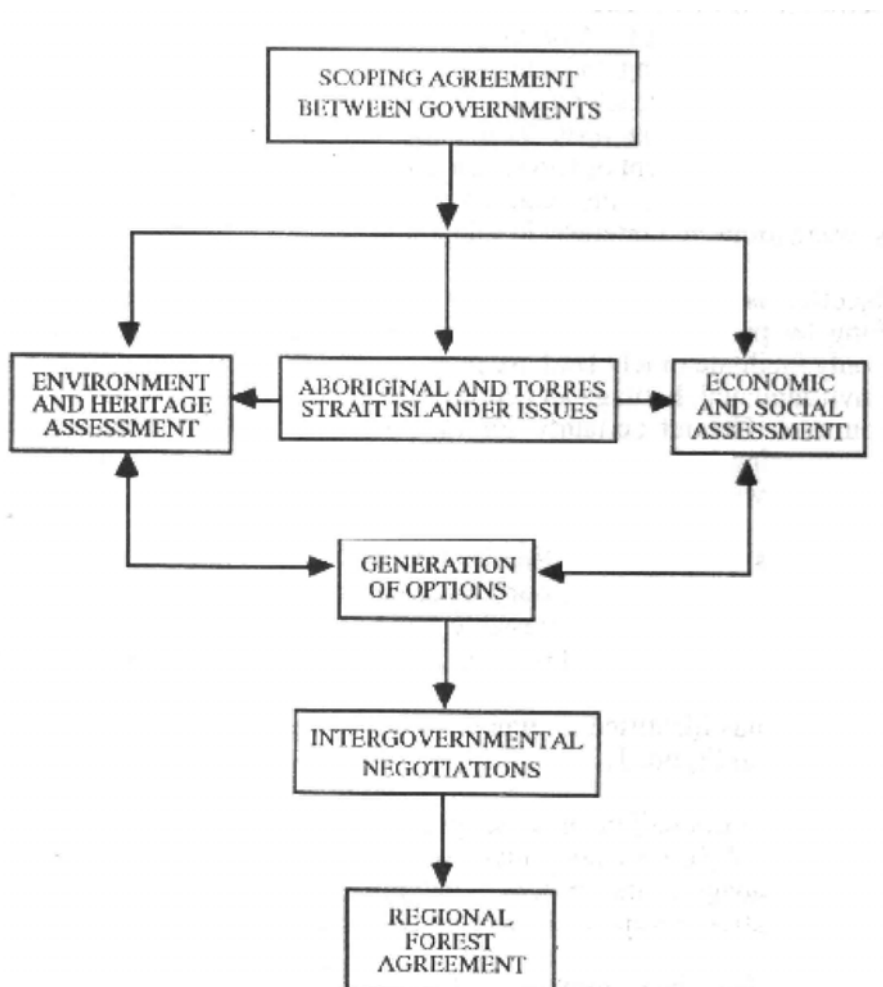
13 *State of the Forests Report, 2008*, xvii.

14 *Regional Forest Agreements Act 2002*, section 6.

15 *Regional Forest Agreements Act 2002*, section 9.

16 Submission 59, DAFF, p.10.

Figure 2.1 The RFA process



Source Department of Agriculture, Fisheries and Forestry website – www.daff.gov.au

- 2.20 In Victoria, for example, the five RFAs were reviewed and reported on simultaneously, in a single report. This report covered two periods: from the signing of the RFAs until 30 June 2004 (a period of between four and seven years), and from 1 July 2004 until 30 June 2009. This means that, in effect, ten five-year reviews were published in a single report (completed in May 2010).¹⁷
- 2.21 As noted by the DAFF submission, all RFAs have been reviewed at least once. Further reviews of various RFAs will be due in 2011, 2012 and 2014.¹⁸ DAFF further notes that all RFAs will reach their fifteen-year mark between 2012 and 2015. As RFAs have a twenty-year duration,

17 *Independent Review on Progress with Implementation of the Victorian Regional Forest Agreements (RFAs)*, May 2010, p.7, DAFF website at <http://www.daff.gov.au/rfa/publications/annual-reports/victoria>.

18 Submission 59, DAFF, p.11.

governments will be 'considering their approach to the extensions of the RFAs'¹⁹ over the coming years.

- 2.22 It is important to note that some evidence to the Committee criticised both the creation and implementation of RFAs. This evidence will be discussed in detail in Chapter 4, along with further consideration of the RFA process, including the options for their renewal.

Plantations in the 1992 Statement

- 2.23 As noted above, the 1992 Statement's 'vision' includes an increase in the total area of forest in Australia. One of the national goals identified was to 'expand Australia's commercial plantations of softwoods and hardwoods so as to provide an additional, economically viable, reliable and high-quality wood resource for industry.'²⁰ As also noted above, there are three main objectives relating to plantations. These objectives were to be met through a number of approaches.
- 2.24 The mechanisms for increasing plantations relied on tax arrangements, planning rules, access to information, pricing policies, export controls and research and development.²¹ Without reproducing the details contained in the 1992 Statement, a range of policies for both the Australian and State and Territory governments was agreed, according to their different powers and responsibilities. Further detail about the specific mechanisms used to encourage plantation establishment are discussed in Chapter 5.

Vision 2020

- 2.25 In 1997, *Plantations for Australia: Vision 2020* was launched by the Australian Minister for Primary Industries and Energy. The vision was the result of work commissioned by the Standing Committee on Forestry, which sat below the Ministerial Council on Forestry, Fisheries and Aquaculture (a COAG body).²² Through this process, the vision had the input and agreement of Federal, State and Territory Governments, as well as representatives of the forestry industry.
- 2.26 Whilst the 1992 Statement made no commitment to the development of a separate plantations agreement, the 2020 Vision itself notes that the plantations initiative follows from the earlier agreement: 'The Plantations

19 Submission 59, DAFF, p.11.

20 *National Forest Policy Statement* (2nd Ed., 1995), p.4.

21 *National Forest Policy Statement* (2nd Ed., 1995), p.25.

22 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.1.

- 2020 Visions was developed in the policy environment established by the Commonwealth and State Governments in the National Forest Policy Statement (1992).²³ Numerous submitters to the inquiry note the strong connection between the two agreements.²⁴
- 2.27 The 2020 Vision is described as a 'strategic partnership between the Australian, State and Territory Governments and the plantation timber growing and processing industry.'²⁵ The Vision's central target is to treble the area of commercial tree crops between 1997 and 2020 – from approximately 1.1 million hectares to 3 million hectares.²⁶ Under the original vision, this measurement was to include farm forestry.²⁷
- 2.28 Figures from *Australia's Plantations 2010 Inventory Update* indicate that in 2009 there were approximately 2.02 million hectares of plantations in Australia. Figures from 2011 show this total declining slightly in 2010.²⁸ Most of the growth in plantation coverage has been in hardwood plantings, which have grown from 29% of total plantations in 1999 to 49% of total plantations in 2009.²⁹
- 2.29 As the vision document states, the plantation area is only one 'measure of success'. Other considerations include the quality, product mix, location and effective management of the plantation resource.³⁰
- 2.30 The nub of the strategy is 'to facilitate an environment that will attract the private investment necessary to develop a significant plantation resource'. Creating this environment relied on sixteen 'actions' including promoting 'the development of appropriate structures to encourage investment in the plantation sector.'³¹
- 2.31 As noted by DAFF witnesses, since the adoption of the Vision 2020 document, significant progress has been made towards the target of trebling plantations in Australia. At the same time, DAFF acknowledged questions about whether 'the mix of products that have gone in aligns

23 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.1.

24 Submission 19, Forests and Forest Industry Council of Tasmania (FFIC), p.15; Submission 74, The National Association of Forest Industries (NAFI), p.6.

25 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.1.

26 *Plantations for Australia: The 2020 Vision / Summary Progress Report* (2008), p.5.

27 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.3.

28 *Australian Plantations Statistics 2011*, (August 2011), p.1.

29 *Australia's Plantations 2010 Inventory Update*, (May 2010), p.2.

30 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.5.

31 *Plantations for Australia: The 2020 Vision*, (2002 Revision), p.8.

with the aspirational targets as they were considered at the time'.³² These matters will be discussed further in Chapter 5.

Tasmanian Statement of Principles

2.32 As pointed out by many submissions to the inquiry, the forestry industry in Tasmania is currently undergoing some substantial changes. This is largely due to the announcement of a 'Statement of Principles to Lead to an Agreement', which was signed on 14 October 2010. The central aim of the process – beginning with the Statement of Principles – is to 'To resolve the conflict over forests in Tasmania, protect native forests, and develop a strong sustainable timber industry.'³³

2.33 There are a number of parties to the Statement of Principles:

- Timber Communities Australia Ltd;
- The Construction, Forestry, Mining and Energy Union;
- The National Association of Forest Industries;
- The Forest Industries Association of Tasmania;
- The Australian Forest Contractor's Association;
- The Tasmanian Forest Contractor's Association;
- Environment Tasmania Inc;
- The Wilderness Society;
- Australian Conservation Foundation; and
- Tasmanian Country Sawmiller's Federation.

It is important to note that neither the Tasmanian Government nor the Australian Government were parties to the Statement.

2.34 The Statement of Principles includes eighteen general principles, including the 'handing back' of some native forest harvesting entitlements, the protection of some High Conservation Value public forests, and 'transition the commodity (non specialty) forest industry out of public native forests into suitable plantations through a negotiated plan and timeline'.³⁴ The

32 Mr Andrew Wilson, DAFF, *Committee Hansard*, 15 June 2011, p.9.

33 Statement of Principles, p.1.

34 Statement of Principles, p.2.

concept of High Conservation Value forests is discussed further in Chapter 4.

- 2.35 The Statement of Principles is clearly the very first part of a complex process which will involve both the Tasmanian and Australian Governments, as well as local communities, environmental groups and the forestry industry.
- 2.36 To date, there has been a further agreement reached between the Tasmanian Government and the Australian Government, which was announced on 7 August 2011. Both Governments have committed funding for various purposes under the agreement, and have designated three 'streams of activity' for implementing the agreement:
- Stream One: Support for Workers, Contractors and Communities;
 - Stream Two: Protecting High Conservation Forests and Ensuring Sustainable Wood Supply; and
 - Stream Three: Economic Diversification.³⁵
- 2.37 Funding of up to \$276 million will be provided to implement the agreement, most of which will come from the Commonwealth, with the Tasmanian Government providing \$15 million.³⁶
- 2.38 A further element of the Tasmanian process will assess and verify claims about sustainable timber requirements, available native forest and plantation volumes, and High Conservation Value forests. The Independent Verification Group, which will 'design and implement a verification process' to do this work, will give both the Tasmanian and Australian Governments certainty that the Statement of Principles can be implemented.³⁷ The Chair of the Group, Professor Jonathan West, has reported back to the Australian and Tasmanian Governments about developing the verification process. He advised that the Reference Group of Signatories to the Statement of Principles had unanimously agreed to the design of the verification process, and that they would accept the results of the process.³⁸
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35 Tasmanian Forests Intergovernmental Agreement between the Commonwealth of Australia and the State of Tasmania, 7 August 2011, para 8.

36 'Historic agreement provides certainty for Tasmania's forests and forest industry', Media Release, 7 August 2011, <http://environment.gov.au/minister/burke/2011/mr20110807.html>.

37 Tasmanian Forests Intergovernmental Agreement between the Commonwealth of Australia and the State of Tasmania, 7 August 2011, para 20.

38 Advice to Intergovernmental Taskforce on the independent verification process and agreement by the Reference Group of Signatories, 22 September 2011, <http://www.environment.gov.au/land/forests/tasmanian-forests-agreement.html>.

Committee Comment

- 2.39 Throughout evidence to the Committee, the National Forest Policy Statement in 1992 is frequently the central point of reference for the recent history of the forestry industry. The two major policies to come out of that Statement – the RFA process and the Vision 2020 agreement – have had a lasting impact on the industry.
- 2.40 The RFA process, whilst not perfect, is a valuable process for governments to develop local and regional agreement on the use of public native forests. In particular, it has given Australia a way of balancing many different demands on native forests. It has supported a viable forestry industry, it has enabled communities to participate in decisions about resource allocation in their own region, it has protected important forests for conservation, and it has strengthened the environmental credentials of the Australian forestry industry. Across these areas, it has provided certainty. The RFA process has also provided a base for the interpretation of ‘high conservation value’ forests.
- 2.41 In relation to the process itself, it has brought consultation and scientific assessments into regional agreements. In addition, it has enabled the Australian Government to combine regional planning with a national strategy, to improve the coherence of native forest use across Australia.
- 2.42 The Committee is strongly supportive of the new direction in the Tasmanian forestry industry, and is pleased to see that progress is being made on other parts of the Statement of Principles. In particular, the Committee is keen to see the establishment of the Independent Verification Group, discussed above. The Committee looks forward to seeing the Tasmanian process fully implemented, with funding flowing to the three streams outlined above. This new direction will certainly provide considerable environmental benefits, including the protection of additional forests with important values for conservation.
- 2.43 Many submissions to the inquiry make reference to the current policy changes in Tasmania, and one suggests that a similar process could be undertaken in other forestry regions of Australia.³⁹ The Committee does not believe that this is a viable option. The process in Tasmania is the result of a very particular set of circumstances, driven by a group of organisations that were keen to develop a new vision for Tasmanian forestry. Whilst the Committee fully supports this process, it is not feasible for the Australian Government to step back from forestry policy in other

39 Submission 109, Environment Tasmania, The Wilderness Society and The Australian Conservation Foundation, para 3.1.

regions in the hope that a similar process will spontaneously commence. The Australian Government must continue to drive a national policy that is implemented at a regional level. The best way to do this is through the RFA process, which will be discussed in detail in Chapter 4.

Future role for forestry and forest products

3.1 This inquiry's terms of reference direct the Committee to inquire into 'the current and future prospects of the Australian forestry industry'. This chapter will briefly look at some of the overarching trends that will shape the market in which the future forestry industry will operate. Two main trends will be discussed:

- Demand from paper, construction and other sectors; and
- The impacts of, and policy responses to, climate change.

Demand from paper, construction and other sectors

3.2 A number of submissions to the inquiry note the expectation that Australia's population will continue to increase over the coming decades. This is expected to heighten demand for timber and wood-products, and is often cited as proof of forestry's positive future prospects.¹ These submissions also note that environmental concerns² and changing social trends³ will contribute to increased demand for the forestry industry's products in future. Demand is also expected to continue to grow in the Asia-Pacific region, providing increasing export opportunities.⁴

1 Submission 75, Prof. Peter Kanowski et al, p.90; Submission 64, Dr Graeme Palmer, pp.2-3; Submission 74, National Association of Forest Industries, p.1.

2 Submission 74, National Association of Forest Industries, p.6.

3 Submission 75, Prof. Peter Kanowski et al, p.90.

4 Submission 44, Agriwealth Capital Limited, p.1.

Current consumption

3.3 According to the Department of Agriculture, Fisheries and Forestry, the average national consumption of wood products is 22 million cubic metres per year. By comparison, around 27 million cubic metres of logs are harvested in Australia each year.⁵ However, Australia still imports a large amount of wood products, and has a trade deficit in wood products – in 2010 totalling \$1.9 billion. According to *Australia's Forests at a Glance 2011* Australia imported \$4.2 billion worth of wood products in 2010 and exported \$2.3 billion worth in the same year.⁶

Figure 3.1 Forestry at a glance 2010

Major wood product imports (value in 2010):	
Paper and paperboard	\$2 175 million
Manufactured paper products	\$563 million
Sawn wood	\$429 million
Panels	\$250 million
Major wood product exports (value in 2010):	
Woodchips	\$856 million
Paper and paperboard	\$649 million
Sawn wood	\$125 million
Panels	\$87 million
Number of people employed in ABS categories forestry, logging and wood manufacturing (2010)	75 800
Value of turnover in forest product industries (2009)	\$22.0 billion
Forestry and forest products industries contribution to GDP (2008)	0.6 per cent

Source *Australia's Forests at a Glance 2011, ABARES, p.3.*

5 Submission 59, DAFF, p.12.

6 *Australia's Forests at a Glance 2011, ABARES, p.2.*

Future demand

- 3.4 Whilst the Committee acknowledges that it is difficult to predict demand into the distant future, the forestry industry nevertheless needs to have an appreciation of the future opportunities both domestically and overseas. Questions about possible future demand were raised throughout the course of the inquiry. However, there was little concrete evidence on which to base predictions about the future or on which to make the long-term investment decisions necessary in the forestry industry.
- 3.5 Evidence suggested that the Australian forestry industry would be increasingly unable to meet the future domestic wood demand. For example, in relation to sawlogs, figures supplied by the Forest Growers CEO Forum⁷ suggest that demand for sawlogs could reach 8 million cubic metres by 2040. This would be an increase of over 2 million cubic metres compared to today's demand, and well beyond projected Australian supply.⁸ In relation to plantation softwood – both sawlogs and pulpwood – the Department of Agriculture, Fisheries and Forestry suggests that the potential supply 'is not expected to change significantly from now to 2050 or beyond'. This is, in part, 'likely to lead to a steadily increasing dependence on imported timber products and/or substitution for more carbon-intensive materials.'⁹
- 3.6 Other evidence, however, contests this view. According to the joint submission from Environment Tasmania, the Wilderness Society and the Australian Conservation Foundation:
- Plantations now produce the vast majority of Australia's processed wood products. Native forest sawmilling has been reduced to a remnant market-share. We have enough plantation wood supply to meet all our domestic timber needs and to develop a strong export oriented timber industry. Hardwood plantations can now entirely replace native forest woodchip production.¹⁰
- 3.7 However, were this contention true, it would still rely on the substitution of plantation wood for all wood currently sourced from native forests. As discussed in Chapter 4, there is considerable disagreement about whether this is in fact practical.

7 Exhibit 11, *Forecast Sawn Timber Demand*.

8 Exhibit 11, *Forecast Sawn Timber Demand*.

9 Submission 59, DAFF, p.15.

10 Submission 109, Environment Tasmania, the Wilderness Society and the Australian Conservation Foundation, para 3.2.

- 3.8 There has also been a trend of the increasing reservation of forests, which has diminished the available supply of wood from native forests. This has an impact on the ability of Australia's forestry industry to meet timber and wood product demand.
- 3.9 In addition to the question of future supply and demand, there is a policy question of whether – or to what extent – Australia should be 'self-sufficient' in timber and wood-products. The National Forest Policy Statement does not set out self-sufficiency as a goal; rather, it speaks of an 'internationally competitive and ecologically sustainable wood production and wood products industries' which will provide 'national and regional economic benefits.'¹¹ Current policy does not explicitly aim for self-sufficiency, but rather emphasises the potential for growth in the industry. The website for the Department of Agriculture, Fisheries and Forestry states that one of its goals is 'to assist our forestry industry to grow, improve and capitalise on new opportunities while protecting the environment and contributing to the prosperity and quality of life in rural and regional Australia.'¹² Self sufficiency would see the timber industry make a greater contribution to the construction industry, as demand rises for building materials with low embedded energy, such as timber. It would also reduce reliance on wood sourced from foreign sources, which are often less regulated and environmentally damaging.
- 3.10 A number of submissions to the inquiry have supported Australia becoming self-sufficient in at least some parts of the wood supply.¹³ This would obviously support additional income and jobs, particularly in regional and rural areas. Other arguments for self-sufficiency have also been made, such as removing additional carbon from the atmosphere.

Committee Comment

- 3.11 The Committee believes that the forestry industry needs greater certainty about possible demand and supply scenarios in the decades to come. The forestry industry has one of the longest 'lead times' in the Australian economy. It will benefit from a better picture about how the market might look in the future and the policy needed in this area.
- 3.12 In addition to giving the industry better information about future opportunities, more information about possible future demand and supply scenarios will encourage investment by individuals and
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11 *National Forest Policy Statement* (2nd Ed., 1995), p.4.

12 <http://www.daff.gov.au/forestry>, accessed 24/10/11.

13 Submission 54, Dr Douglas Head, p.2; Submission 44, Agriwealth Capital Limited, p.1.

institutions, will support the expansion of farm forestry, and will give governments a sounder basis for making policy. It will also provide a sounder basis for making decisions about the plantation base, and for planning plantation expansion.

- 3.13 The Australian Government – along with state and territory governments – should consider whether Australia should aim for wood supply self-sufficiency.

Recommendation 1

- 3.14 **The Committee recommends the Australian Government, through the COAG Standing Council on Primary Industries, lead a process to assess and publicly report on likely wood demand and supply scenarios over the longer term (at least the next forty years). This should be completed within twelve months.**

Recommendation 2

- 3.15 **The Committee recommends the Australian Government, through the COAG Standing Council on Primary Industries, lead a process to consider and publicly report on whether Australia should aim for wood supply ‘self-sufficiency’.**

Climate change

- 3.16 Whilst the terms of reference for this inquiry do not explicitly refer to climate change, a significant amount of evidence to the Committee focussed on how climate change will affect the forestry industry. This section will discuss how climate change will affect forestry, as well as the Carbon Farming Initiative, which has the potential to support forestry as an activity that removes carbon from the atmosphere and stores it in trees.
- 3.17 As frequently noted in submissions and hearings, climate change is both a potential threat to existing forests and an opportunity for the forestry industry. The Department of Climate Change and Energy Efficiency submitted that:

Australia’s forests are vulnerable to climate change, particularly the effects of increased atmospheric CO₂ concentrations, rising temperatures, changed water availability and increased incidence

of bushfires. Natural forest systems have some capacity to adapt to these changes. There is the capacity to improve the resilience of intensively managed forests and plantations through changed silvicultural practices.¹⁴

And

...forest industries are expected to benefit from carbon pricing. Over time, putting a price on carbon could be expected to increase demand for wood products by making more emission-intensive goods and technologies relatively more expensive.

Carbon credits for increases in reforestation could potentially provide an extra boost for forest industries. The Government's Carbon Farming Initiative will enable crediting of eligible abatement that is not covered under the carbon price mechanism.¹⁵

3.18 The increasing demand for wood – as a material with lower 'embodied energy' – will need to be considered in future demand and supply scenarios, as discussed above. This represents a considerable opportunity for growth in the forestry industry.

3.19 Climate change will also drive demand for timber and wood products through recognition of the carbon stored in trees. However, there is currently insufficient consensus about the carbon that is stored in products made from harvested trees. Robust national standards in this area would need to rely on collecting and analysing national average data about the product-destination and lifetime of wood, as well as waste decomposition factors.¹⁶ Despite this complexity, it is necessary work.

3.20 Finally, there is a major opportunity for the forestry industry to produce renewable energy from wood waste products. However, recent policy change in this area could prevent some of these opportunities being taken up. This is discussed in Chapter 7.

Carbon Farming Initiative

3.21 The CFI is an Australian Government initiative to increase carbon sequestration through various farm or land based activities, including planting trees. The CFI legislation has passed both Houses of Parliament and is expected to come into force during 2012.

14 Submission 76, The Department of Climate Change and Energy Efficiency, p.1.

15 Submission 76, The Department of Climate Change and Energy Efficiency, p.2.

16 Dr Philip Polglase, *Committee Hansard*, 22 June 2011, p.11.

- 3.22 The entire CFI arrangements are not discussed in detail in this report. For a detailed discussion of the CFI legislation, please see the report of the Senate Standing Committees on Environment and Communications into the following three Bills:

*Carbon Credits (Carbon Farming Initiative) Bill 2011 [Provisions],
Carbon Credits (Consequential Amendments) Bill 2011 [Provisions], and
Australian National Registry of Emissions Units Bill 2011 [Provisions],*

which was tabled in May 2011.

- 3.23 Whilst reforestation is a valid CFI activity, a number of submissions to the inquiry called for the CFI to be amended so that it would recognise the carbon stored in 'working forests'.¹⁷ Evidence identified the requirements of additionality and permanence as current barriers to recognition of plantations and farm forestry under the CFI.

Additionality

- 3.24 For an activity to be covered by the CFI, it must pass the 'additionality test'. According to the Explanatory Memorandum for the CFI legislation:

The purpose of the additionality test is to ensure that credits are only issued for abatement that would not normally have occurred and, therefore, provides a genuine environmental benefit.

The Government's intention is that this test will enable crediting of activities that improve agricultural productivity or have environmental co-benefits, but which have not been widely adopted.¹⁸

- 3.25 As pointed out by the Department of Climate Change and Energy Efficiency:

The additionality requirement ensures that credits represent real gains to the atmosphere. Most commercial forestry activities are common practice and occur in the absence of a carbon offsets scheme. These activities are unlikely to be eligible for crediting under the Carbon Farming Initiative. However, forestry activities that are not currently common practice, for example, longer

17 Submission 16, Forestry Tasmania, p.5; Submission 74, National Association of Forest Industries, p.19; Submission 58, Forest Growers' CEO Forum, p.9.

18 Explanatory Memorandum for the Carbon Credits (Carbon Farming Initiative) Bill 2011, paras 5.43-5.44.

rotation or low rainfall plantations, may be eligible under the scheme.¹⁹

- 3.26 The Forest Growers' CEO Forum submission stated such a test is not 'useful or practical', because 'all plantation forestry sequesters carbon.'²⁰ It further suggested that:

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.²¹

- 3.27 Other opinions of the CFI suggest that additionality 'may preclude a broad range of commercial forestry projects for joint carbon and wood production outcomes.'²²

- 3.28 Some farm foresters, such as Mr Rowan Reid, were concerned about how additionality would be applied to farm forestry, arguing that establishing large, single-purpose forests would exclude farm forestry:

Clearly through the government policy development process concerns have been raised about the idea of having these large carbon forests across the landscape – single-purpose forests – so various bodies have tried to influence issues like additionality. You are not going to allow someone who is planting for timber to get the carbon values or something. We are concerned about any sort of single-purpose forest because it denies not only the common sense model but also the opportunity for farmers to participate because they will invariably want to balance risk and uncertainty by seeking various values.²³

[...]

But simple strategies to encourage forests that deny opportunities for multiple use is going to undermine the potential for many of us to be involved.²⁴

19 Submission 76, Department of Climate Change and Energy Efficiency, p.2.

20 Submission 58, Forest Growers' CEO Forum of Australia, p.8.

21 Submission 58, Forest Growers' CEO Forum of Australia, p.19.

22 Submission 74, National Association of Forest Industries, p.19.

23 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p. 21.

24 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p. 22.

- 3.29 It is possible that the question of additionality will be resolved in time. As described by Mr Nick Roberts, of the Australian Forest Products Association:

I think the issue about additionality with regard to carbon is that the question would be: would you have planted the plantations with or without the carbon? That is one of the questions and the hub of the additionality question. It is certainly one which is very taxing. We are all trying to understand that a little better in the context of the carbon tax regime.²⁵

Permanence

- 3.30 Activities must also be considered 'permanent' to qualify under the CFI. As set out by the CFI Explanatory Memorandum:

Carbon that has been removed from the atmosphere and stored in plants and soils can be released back to the atmosphere. In order to be genuinely equivalent to emissions (and therefore suitable offsets), sequestration must be permanent.

Sequestration is generally regarded as permanent if it is maintained on a net basis for around 100 years.²⁶

- 3.31 Evidence to the inquiry questioned whether the requirement of permanence would preclude the harvesting of trees for timber or wood-products. The Institute of Foresters of Australia submitted that:

The permanence obligation requires plantation growers to commit to three successive sawlog rotations [approaching 100 years] with the second and third rotations not generating any carbon income apart from that which may in future be recognized for the carbon stored in the harvested wood products. The permanence obligation is expected to be a major disincentive for the farming sector whose investment horizons fall well short of 100 years.²⁷

This is an important question, as young trees sequester carbon more quickly than mature trees. With numerous rotations of trees and careful accounting for carbon storage after harvesting, more carbon could be sequestered than if only one rotation of trees was planted.

25 Mr Nick Roberts, *Committee Hansard*, 10 August 2011, p.41.

26 Explanatory Memorandum for the Carbon Credits (Carbon Farming Initiative) Bill 2011, paras 6.3-6.4.

27 Submission 84, Institute of Foresters of Australia, p.13.

- 3.32 The Committee heard that the issue of ‘permanence’ was also a concern for farm foresters, as it denied them the flexibility to harvest and replant. Various farm foresters expressed dissatisfaction with the CFI policy:²⁸

It is one of the failures.[...] These things can be farmed; you can pull trees out; they can be locked up in furniture; there are a lot of other things that lock them up. What it should be saying is that these carbon sinks, whatever you want to call them, should be managed. We do not recognise that. We do not just say it is going to be there for 100 years. It is about managing them. Maybe it is a legacy of how we have managed our forests in the past, with clear-felling and things like that. [...] From a farm forestry perspective, anyone I see who plants trees on their farm, particularly in these low-rainfall areas, wants to manage it as an ongoing system. They do not want to come in and just knock it all down. They will select the logs they need and they will replant. [...] we have to develop something that is sustainable and ongoing ...²⁹

... we would want to harvest some of those trees within [our] planting. We believe that we can harvest them on a sustainable basis in that mosaic of time and space so that we maintain the integrity of the environment and the values. If a saw log is halved and it gets locked up in tables and we plant another tree in amongst that biodiverse planting and we support that new tree we can get a sustainable system going.³⁰

- 3.33 As noted by a witness from the Department of Climate Change and Energy Efficiency, the international rules about the carbon stored in timber and wood-products are currently being negotiated:

As you are probably already aware, at the moment those accounting rules treat emissions from harvested trees as if all the emissions go into the atmosphere straightaway. For many years now we have been trying to negotiate a much more sensible approach to accounting for harvested wood, in particular to recognise that, as you say, significant quantities of wood wind up in long-life wood products like this table.³¹

28 Mr Phil Dyson, NUFG, *Committee Hansard*, 10 August 2011, p. 27; Mr Howard Perry, NUFG, *Committee Hansard*, 10 August 2011, p. 27; Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, p. 36.

29 Mr James Williams, NUFG, *Committee Hansard*, 10 August 2011, pp. 27-28.

30 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p. 22.

31 Ms Shayleen Thompson, *Committee Hansard*, 6 July 2011, p.2.

- 3.34 Whilst this is a separate issue to the definition of ‘permanence’ under the CFI, it is clear that there remains work to be done on the extent to which timber and wood-products continue to store carbon after harvesting, as discussed above.

Committee Comment

- 3.35 To fully realise the opportunity for timber and wood products to replace materials that have higher embodied energy, the Australian community must have a better understanding of how wood compares to other materials. A public information campaign would assist in ensuring that society is aware of the benefits of timber and wood products in reducing energy use.

Recommendation 3

- 3.36 **The Committee recommends the Australian Government run public information campaigns to promote timber and wood products as replacements for more energy-intensive materials.**
- 3.37 As noted above, there is an opportunity for the forestry industry to benefit from the increased recognition of the carbon stored in timber and wood products. However, there seems to be a lack of acknowledgment of the carbon that is stored in wood products after harvesting. It is important that Australia have robust national standards quantifying how much carbon is stored in these products, and for what period of time. This would involve considerable work but is important to the future of the forestry industry.

Recommendation 4

- 3.38 **The Committee recommends the Australian Government develop robust national standards quantifying the carbon stored in different products made from harvested trees, including the duration of storage and policy implications of those standards.**
- 3.39 The CFI requirements for permanence and additionality have the potential to exclude support for plantations and farm forestry. The Committee is aware that the CFI is a maturing policy, and that over time it will provide greater recognition of the diversity of the forestry industry.
- 3.40 The additionality requirement should be applied so that it recognises the diversity of plantations and farm forestry applications, rather than relying on generalised inclusions and exclusions. The permanence requirement

must be developed in such a way that it does not preclude the opportunity for sustainable harvesting and replanting of plantations and farm forestry.

Recommendation 5

3.41 The Committee recommends the Australian Government, as it develops a mature Carbon Farming Initiative regime, consider:

- the capacity for ‘additionality’ to recognise the diversity of plantations and farm forestry applications, rather than relying on generalised inclusions and exclusions;
- the capacity for ‘permanence’ to include the sustainable harvesting and replanting of plantations and farm forestry; and
- other ways for the CFI to support the forestry industry generally.



Committee members attending a site inspection in the Styx Valley, Tasmania

Native forestry

- 4.1 Since the arrival of the First Fleet in 1788, harvesting from both public and private forests has significantly altered much of the forest estate in Australia. Whilst many native forest products have been replaced by other materials – by concrete, steel and plastics – and despite the growth of timber plantations, native forestry remains a fundamental part of the Australian economy, especially in rural and regional areas. The inquiry’s terms of reference direct the Committee to consider ‘the development of win-win outcomes in balancing environmental costs with economic opportunities’, and this chapter will discuss how those two things can be balanced. Whilst there are challenges that face all parts of the Australian forestry industry, there are particular challenges and opportunities specific to native forestry.
- 4.2 Australia’s forests have been harvested and managed to some degree – however small – for tens of thousands of years. Some submissions to the inquiry have made reference to the use of fire for forest management by Indigenous Australians, as well as their regular use of various forest products.¹ Other submissions have drawn attention to the continuing significance of native forests for indigenous heritage.² It is clear that the cultural story of Australia’s native forests goes back many thousands of years, and the Committee is pleased that so many witnesses and submitters recognise the ancient history of Australia’s forests.
- 4.3 Native forestry is a substantial part of many regional and rural economies around Australia. It provides significant employment in numerous regional centres, and is a vital part of many communities. The Committee consistently heard evidence from groups and individuals who viewed the

1 Submission 36, Mr J Lord, p.3; Submission 87, Mr JA Beale, p.2; Submission 90, Victorian Association of Forest Industries, p.17; Submission 91, Councillor Lindsay Passfield, p.1.

2 Submission 22, South East Forest Rescue, p.58; Submission 20, North East Forest Alliance, p.16;

viability of the native forestry sector as central to the viability of their community. As expressed by Mr Tony Wade, of Timber Communities Australia:

We still have a fair bit of employment in the industry up here. We have lost a lot. But socially I think it has been devastating for a lot of the genuine people that were in timber and in forestry for all the right reasons. I think they have been forced to do other things. Some of them maybe were old enough to receive a pension, but I really believe that had they stayed in the job they loved they would never have retired until they were too old and arthritis got the better of them...Another thing that disappoints me greatly about the undue pressure that has been brought on the industry as a whole and the lifestyle is the fact that families no longer stay intact, that children are forced to go to the cities to work, there is no family business to carry on with, and again this puts a lot of pressure on relationships.³

- 4.4 The evidence of Ms Lisa Marty, CEO of the Victorian Association of Forest Industries, demonstrates how the forestry industry has a significant 'flow-on' effect to other areas of the economy. This is true of native forestry as much as in plantations:

The industry is a significant employer: it directly employs over 24,000 people and indirectly supports the employment of up to 52,000 more. Many of these jobs are located in regional areas which are highly dependent on the industry for employment and socioeconomic activity. The industry also supports the manufacturing sector, which includes the local furniture, frame and truss, and paper industries as well as wholesale and retail sectors.

- 4.5 As for the current and future prospects for the Australian forestry industry, the recent history of native forestry is the most important. As noted in Chapter 2, the National Forestry Policy Statement in 1992 continues to be the central reference point for much discussion around the state of forestry in Australia.
- 4.6 During the course of the inquiry, there have been a number of major themes that have been consistently been raised in evidence given to the Committee. These include:

3 Mr Tony Wade, TCA, *Committee Hansard*, 1 September 2011, p.54.

- How to define a ‘native forest’, ‘old-growth forest’ and ‘high conservation value’ forest, and how to manage conservation values in native forests;
- Wood supply security, including the RFA process and social licence;
- Forest ownership and a ‘fair return’ for the use of a community resource;
- Native forest management, including bushfires, regrowth and biodiversity; and
- Native forest products.

This chapter deals with these themes sequentially.

4.7 The Committee strongly supports a strong, viable native forestry sector. As part of that strength and viability, native forestry must continue to operate under the following principles:

- wood supply security;
- high-value products;
- a ‘fair return’ for the use of a community resource;
- ongoing monitoring and information collection;
- science-based decision making; and
- intergenerational equity.

These principles will be developed in different sections of this chapter.

Defining and managing native forest conservation values

4.8 A significant area of debate regarding native forestry in Australia centres on the definition of a ‘native forest’. A related discussion concerns the best way to classify the conservation value of native forests, and how to manage those conservation values. These issues will be discussed below.

What is a native forest?

4.9 Defining a ‘native forest’ is not simple. It is an inherently vague and imprecise term. Returning to the 1992 Statement, its glossary provides two good definitions, of both ‘forest’ and ‘native forest’.

Forest - an area, incorporating all living and non living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 5 metres, and with existing or potential projective cover of overstorey strata about equal to or greater than 30 per cent. This definition includes Australia's diverse native forests and plantations, regardless of age. It is also sufficiently broad to encompass areas of trees that are sometimes described as woodlands.⁴

Native forest - any local indigenous community the dominant species of which are trees – see *Forest* – and containing throughout its growth the complement of native species and habitats normally associated with that forest type or having the potential to develop these characteristics. It includes forests with these characteristics that have been regenerated with human assistance following disturbance. It excludes plantations of native species and previously logged native forest that has been regenerated with non-endemic native species.⁵

- 4.10 The definition of 'forest' has been used (with some modifications) by documents such as the *State of the Forests 2008* report.
- 4.11 This broad definition of 'native forest' has both advantages and disadvantages. On the one hand, it speaks of all kinds of forests dominated by endemic native species, and uses generally non-technical language. On the other hand, it does not distinguish between 'frontier' or 'undisturbed' forests and those that have been harvested and regrown with human assistance, or forests on land that might previously have been open farmland. This breadth has the potential to create considerable confusion. In the general community, a reference to a native forest might conjure up images of an untouched wilderness, a forest whose wood has never been harvested and which has not changed significantly since European settlement. However, that 'native forest' might have been logged and regrown over decades. The term 'native forest' also denotes both public and private forests. The definition is useful, but by itself 'native forest' is a potentially misleading term.
- 4.12 'Regrowth' native forests might be logged and regrown over decades. According to one witness, some of these forests are classified as 'remnant forest' or 'virgin forest'.⁶ Without adopting an opinion regarding these

4 *National Forest Policy Statement* (1992), glossary, ii.

5 *National Forest Policy Statement* (1992), glossary, iii.

6 Associate Professor J Doland Nichols, *Committee Hansard*, 1 September 2011, p.29.

particular examples, they demonstrate the potential for confusion when the general term 'native forest' is used by itself.

What is an old-growth forest?

4.13 The best definition of an old-growth forest is in the National Forest Policy Statement:

forest that is ecologically mature and has been subjected to negligible unnatural disturbance such as logging, roading and clearing. The definition focuses on forest in which the upper stratum or overstorey is in the late mature to overmature growth phases.⁷

4.14 Hence, an old-growth forest refers to a mature forest that has not been disturbed by activities such as harvesting. Such a forest might have trees that are hundreds of years old. In this sense, an old-growth forest might be described as a 'frontier' forest, as discussed above. It is important that this definition be strictly applied, to ensure it does not apply to native forests that have been harvested and disturbed in the past.

What is the 'conservation value' of a forest?

4.15 Many submissions to the inquiry refer to the term 'high-conservation value' (HCV) forest, often as the main criterion for a forest's protection.⁸ In general, HCV refers to a complex system of assessing the value of a forest, according to numerous factors. As it was put by the CEO of Timber Communities Australia, HCV 'does not just mean ecological values. It means social, environmental and economic values. It means cultural values. It means aesthetic values. It means a whole range of values.'⁹ There are two major issues relating to the HCV term. Firstly, how best to define the term; and secondly, what is the appropriate management of an HCV-designated forest.

4.16 Throughout the inquiry, the Committee asked witnesses who used the term 'High Conservation Value' to provide a concrete definition. The Committee received some of these definitions as exhibits (see Appendix B). The Forest Stewardship Council, one of the major international forest certification organisations, provided the Committee

7 *National Forest Policy Statement (1992)*, glossary, iii.

8 Submission 94, Wilderness Society, p.19.

9 Mr Jim Adams, TCA, *Committee Hansard*, 24 June 2011, p.3.

with its definition of an HCV forest. A forest is assessed against four criteria:

- a) forest areas containing globally, regionally or nationally significant :
 - concentrations of biodiversity values (e.g. endemism, endangered species, refugia); and/or
 - large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance;
- b) forest areas that are in or contain rare, threatened or endangered ecosystems;
- c) forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control); and
- d) forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).¹⁰

4.17 According to Kayt Watts, the CEO of Australian Forestry Standard Limited (which is accredited to the other major international forest certification organisation):

We have 'biodiversity', which covers everything they have in their 'high conservation value'. If you want to go through the two and tick off one against the other, pretty much they are exactly the same.¹¹

Further consideration of the role of certification is provided in Chapter 8.

4.18 By contrast, the Wilderness Society has a range of specific characteristics included in its definition of an HCV forest. Such a forest might:

satisfy the WildCountry Science Principles; [be] rare, threatened or endangered, or contain centres of endemism; old-growth; forested wilderness; rainforest (including with emergent eucalypts); undisturbed / negligibly disturbed mature forests; highly (biologically) productive; have been identified as core habitats for

¹⁰ Exhibit 16, FSC Australia, p.9.

¹¹ Ms Kayt Watts, Australian Forestry Standard Limited, *Committee Hansard*, 24 August 2011, p.11.

local endemic, rare, threatened and endangered species; have been identified as having world heritage or of national heritage value; are located in areas with steep climate gradients; or form part of domestic supply or Wild River catchments.; refugia and/or of evolutionary significance; are significant carbon stores and; areas of high cultural and social significance.¹²

- 4.19 As noted in Chapter 2, the 'Statement of Principles' agreed in Tasmania includes a central role for HCV forests. The principles include action to 'immediately protect, maintain and enhance High Conservation Value Forests identified by ENGOs [Environmental Non-Government Organisations] on public land.'¹³
- 4.20 There are three ENGOs party to the Statement of Principles – Environment Tasmania, the Wilderness Society and the Australian Conservation Foundation; they made a joint submission to the inquiry (submission 109). They also provided the Committee with a document that gives 'background on the ENGO identified high conservation value reserve areas'¹⁴, which the Committee took as an exhibit to the inquiry. This document outlines how the ENGOs identified HCV forests for reservation under the Statement of Principles. The conservation values considered include:
- Large intact natural forest areas; Forest areas displaying ecological maturity; Forest areas of social, cultural and spiritual importance to local, national and/or international communities; Forest ecosystems and habitat with important biodiversity values, including rare, depleted and under-reserved forest communities and species; Forest areas that contribute to good reserve design (eg. Buffering and ecological connectivity); and, Forests with important ecosystem services functions (eg. Carbon storage, water catchments).¹⁵
- 4.21 This is a very broad definition, and could easily capture young regrowth forests. There are clearly some consistent trends throughout all of these definitions of HCV forests, as well as notable differences between them. It is equally clear that the conservation value of a forest is not merely attributable to how 'intact' or 'undisturbed' it is. Making a determination

12 Submission 94, The Wilderness Society, p.19.

13 *Statement of Principles*, p.2.

14 Exhibit 13, p.1.

15 Exhibit 13, p.3.

about the conservation value of a forest necessarily encompasses many considerations.

How to manage conservation values in native forests

4.22 As noted above, there are different views about how to manage an HCV forest. The HCV forests identified under the Tasmanian Statement of Principles are by explicitly intended for protection¹⁶ – that is, to be reserved permanently. By contrast, the FSC definition is part of the overall certification system, and adherence to the FSC certification does not necessarily entail permanent reservation of a forest. Rather, the FSC Principle is the ‘maintenance and preservation of high conservation values in forests’.¹⁷ Another view is that advanced by Timber Communities Australia, that:

high-conservation value of itself – certainly within the FSC – does not necessarily mean no logging. What it means is identify the value and manage the value...you can identify high-conservation values. You can manage for them. You can ensure that those values, where the value is inconsistent with intensive harvesting, can have that level of management applied.¹⁸

4.23 The Committee supports this view of managing conservation values in forests. However, it is important that this principle is rigorously applied in practice. Most forest managers have been diligent in understanding the value of their forests over the last 200 years, as can be attested by the quality of the forests existing today. But they should continue to do so with updated and continuous monitoring. Harvesting codes are very stringent now, but if there are negative impacts, forest managers must actively investigate and share what they find.

4.24 They must also ensure that they treat forests appropriately, relying on the information available, to ensure that they actively and sensitively manage the conservation values over the long term. The principle of intergenerational equity demands that native forests be managed so that the ability of future generations to benefit from all of their uses and conservation values is not diminished. Ideally, we should be passing forests on to future generations in a better state than we received them.

16 *Statement of Principles*, p.2.

17 Submission 111, FSC Australia, p.6.

18 Mr Jim Adams, TCA, *Committee Hansard*, 24 June 2011, p.3.

- 4.25 The definition and management of high conservation value forests will continue to be debated in Australia, and around the world. Whilst the Committee does not wish to adopt one particular definition, nor to suggest that forests falling under such a definition be automatically managed in a particular way, it is important for this debate to be supported by sound science and that a range of views are taken into account, including those of local communities.



Committee Chair, Hon Dick Adams MP, in a regrowth area.

Wood supply security

4.26 In the 1992 Statement, it was noted that in order to

attract new investment and profitable value-adding projects, the Governments must establish clear and consistent policies for resource development, providing secure access to resources and consistent environmental guidelines.¹⁹

4.27 Clearly, one of the aims of the statement, and the resulting RFA process, was to provide security of wood supply to the forestry industry. The statement also acknowledges the role of state governments in ensuring that harvesting rights 'will reflect security of supply for wood users'²⁰. Numerous submissions to the inquiry reiterated the importance of wood supply security as provided by the statement and the RFA process, particularly for attracting investment.²¹ In addition to the formal agreements regulating the use of public native forests, numerous submissions to the inquiry have highlighted the importance of maintaining social licence for native forestry. These issues will be discussed below.

RFAs and wood supply security

4.28 As noted above, many submissions have given the RFA process qualified support for providing wood supply security. The submission from Timber Communities Australia notes that:

Despite the fact that some Governments, for political reasons, have failed to honour the commitments of the RFAs, the agreements have provided the forest industry with considerably more certainty than previously existed in relation to access to forests and have encouraged investment by the industry. This investment has provided new and more skilled employment opportunities, particularly in rural areas, and has led to increased domestic [processing] of our native timbers.²²

19 *National Forest Policy Statement* (2nd Ed., 1995), p.14.

20 *National Forest Policy Statement* (2nd Ed., 1995), p.18.

21 Submission 35, Timber Communities Australia, p.1; Submission 54, Ta Ann, p.1; Submission 70, NSW Forest Products Association, p.7; Submission 19, Forests and Forest Industry Council of Tasmania, p.15.

22 Submission 35, TCA, p.3.

4.29 However, some submissions have suggested that RFAs have not performed this role:

The RFAs have in our view delivered no such certainty. Forest based industries cannot be robust when agreements fail to deliver and cannot distribute on an ongoing basis the wood volumes as specified in the agreements.²³

According to the Victorian Association of Forest Industries, RFAs do not currently live up to their potential and actually prevent greater forestry investment:

until they are seen and implemented as a strong guarantee for resource security and supporting of effective forest management, there will be an under-investment in forestry in Australia.²⁴

4.30 RFAs are an instrument that allows twenty year contracts, with review every five years, and this can be a continuous process. RFAs use the best practice and best science to give resource security to the native forestry sector.

4.31 In addition to the debate about the certainty currently provided by RFAs, many submissions raised concern about the limited lifespan of RFAs. According to submissions from Timber Communities Australia, the Forest Industries Association of Tasmania, the NSW Forest Products Association, Hurford Hardwood, the National Association of Forest Industries, and the Port Macquarie–Hastings Council, the best way to ensure wood supply security is to adopt ‘evergreen’ RFAs, such as with a ‘rolling’ renewal process. This would mean that, for example, ‘at any time the industry has at least 15 years of resource security.’²⁵ Currently, each RFA has a fixed ‘expiry’ date, beyond which there is no guarantee of wood supply security. According to the NAFI submission, the Australian Government should:

immediately start a process of renewing Regional Forest Agreements (RFAs) and provide evergreen 20 year resource security through five yearly rolling renewals – backed by Commonwealth and state legislation.²⁶

4.32 The Committee also received submissions supporting the original design of RFAs, but calling attention to so-called faults in the way that RFAs have

23 Submission 89, CFMEU, p.3.

24 Submission 90, VAFI, p.11.

25 Submission 35, TCA, p.2.

26 Submission 74, National Association of Forest Industries, p.10.

been created, implemented and reviewed. South East Forest Rescue states that:

The scientific processes in the RFAs were politically compromised, the established Joint ANZECC/Ministerial Council on Forestry Fisheries & Aquaculture National Forest Policy Statement Implementation Subcommittee ("JANIS") criteria for forest conservation were not fully applied. There are large areas of high-value conservation forest that would have been reserved if the original RFA criteria for forest conservation had been fully employed.²⁷

However, these forests are not identified, which makes it impossible to judge the validity of the claim.

- 4.33 The submission from the North East Forest Alliance alleges that 'the Regional Forest Agreement process has become a sham with numerous commitments and timelines simply ignored.'²⁸ However, the alliance does not call for the North East NSW RFA to be abolished. It rather makes a number of recommendations, including to:

review compliance with all clauses of the RFA and identify actions to remedy failures...Investigate and remedy the failure by NSW to annually report on actual versus predicted yields as required by the RFA... Require the identification of the reservation status of all forest ecosystems in accordance with the RFA.²⁹

- 4.34 Other evidence to the Committee recommends that RFAs should simply be abolished. According to the joint submission from Environment Tasmania, The Wilderness Society and The Australian Conservation Foundation:

The Australian Government needs to abandon the Regional Forest Agreements (RFAs). Where RFAs remain in place, conflict in public forests persists. Where they have been abolished, conflict has dissipated. It is clear that RFAs have failed to protect jobs, industry security, or the environmental benefits of native forests.³⁰

- 4.35 The Committee has formed the view that RFAs should be retained. This is discussed below in the next 'Committee Comment' section.

27 Submission 22, South East Forest Rescue, p.2.

28 Submission 30, North East Forest Alliance, p.10.

29 Submission 30, North East Forest Alliance, p.2-3.

30 Submission 109, Environment Tasmania, The Wilderness Society and The Australian Conservation Foundation, p.2.

Social licence

- 4.36 In addition to formal agreements – such as RFAs – that allocate rights to use native forests, the forestry industry relies on a social licence to operate. As defined by the submission from Timber Communities Australia:

Social licence is the permission that the community gives an operator (public or private) to use a community resource either for profit or not for profit, once it (the community) has reached a level of comfort that the costs to the community associated with that use are acceptable to the community relative to the benefits. The concept of social licence recognises that, in addition to all the necessary government licences and approvals, an industry needs broad community support if the industry is to proceed and prosper.³¹

- 4.37 There have been significant improvements in forestry practices over the years, but this has been largely unrecognised. Forest management is politicised and criticised without documented reasons which has led to forestry being vilified generally. Banks and other financial institutions have withdrawn their support in various ways despite many criticisms being unfounded.
- 4.38 Witnesses frequently referred to the need for improved social licence, to ensure that the forestry industry has broad support in the general community. Whilst this is important for all sectors of the forestry industry, it is particularly relevant for native forestry.
- 4.39 According to evidence from Mr Jim Adams, the CEO of Timber Communities Australia, the social licence of the forestry industry in general has been in decline over recent decades. As noted during a hearing,

That social licence, I believe, has been lost over the years due largely to politicisation of forest management decisions. So many forest management decisions have become politicised and regrettably some of them have been politicised in a very negative way. The community has really started to distrust forest management and to some extent I could sit here and say that some of the practices of themselves have contributed to that and there has been a significant improvement of practices over the years. I think we have got to a stage now where the whole politicisation of the forest industry debate is beyond the point where it is actually

31 Submission 35, TCA, p.3.

making a constructive contribution to on-ground management of forests. We now have the community broadly saying, 'We don't want native forest management', simply because they have been convinced that it is not a good thing not because it is actually not a good thing.³²

4.40 Whilst it is no simple task to improve the social licence of a particular industry, improving social licence begins locally. Numerous submissions have suggested that some corporations have attempted to improve their social licence by simply exiting native forestry completely.³³ This is obviously not a solution for sustainable native forestry, quite the opposite.

4.41 Some evidence suggests that certification will play a role in improving social licence:

I think that increasingly the communities nowadays in both the plantation sector and the native forest sector look at certification as a way of gaining a level of comfort in forest management. Our submission talks to some extent about the importance of certification as a vehicle to help communities generate comfort and industry to restore social licence to its activities.³⁴

Representatives of the Forest Stewardship Council gave evidence that certification provides 'peace of mind' to customers.³⁵ If the forestry industry can use certification to give more Australians 'peace of mind' about individual native forest products, it will build greater social licence. In addition, certification can actually make timber and wood-products more valuable in the market. Forestry operations that are certified can expect higher returns for their products, and greater acceptance for their products overseas. This should be reflected in the support given by financial institutions to those operations.

4.42 Unfortunately there are few simple strategies for improving the social licence of native forestry. This remains an area for work by those involved in native forestry. Chapter 8 includes a discussion about improving social licence for the forestry industry more generally.

32 Mr Jim Adams, *Committee Hansard*, 24 June 2011, p.1-2.

33 Submission 33, Mr Don Frankcombe, p.4; Submission 38, Nature.net Pty Ltd, p.3.

34 Mr Jim Adams, *Committee Hansard*, 24 June 2011, p.2.

35 Mr M Spencer, *Committee Hansard*, 17 August 2011, p.12.

Committee Comment

- 4.43 The RFA process has clearly played a central role in native forestry since the 1992 Statement was agreed. The RFA process ensured that the local community was involved in the creation of each RFA, and RFAs have provided some certainty for both conservation and wood supply since they were agreed.
- 4.44 RFAs clearly arouse passions, and the Committee has heard some very strongly-held views about value and future of RFAs. Whilst some submissions have called for RFAs to be abolished, the vast majority of evidence suggests that they should be carefully reviewed, improved and extended. In short, they should be renewed. RFAs are a sound way for Governments to broker compromise agreements about the use of public native forests. The negotiation of such agreements will always have to balance multiple interests, and no group or individual can expect to receive everything they want. It is through such negotiation that communities can identify the relative importance of all the different values of a native forest – social, economic, environmental – and agree on how to best manage each of those values. The Committee supports the renewal of existing RFAs.
- 4.45 As noted in Chapter 2, the ‘Statement of Principles’ in Tasmania is a departure from the RFA process. The Committee fully supports the Tasmanian process, but reiterates its belief that it cannot be simply extended other regions of Australia. It is specific to Tasmania, and the Australian Government must continue to drive national policy with the renewal of RFAs.
- 4.46 There are a number of important principles that must form the basis of any process to renew existing RFAs, as discussed in the following paragraphs. These principles are:
- comprehensive review of existing RFAs;
 - thorough and wide-ranging consultation, providing it uses information that has a strong factual basis;
 - ‘evergreen’ or ‘rolling’ RFA extension; and
 - concrete timelines for the renewal process.
- 4.47 The ‘next generation’ of RFAs must be more than just an extension of existing agreements. The process should ensure that the lessons learnt from the first RFAs are incorporated into the next agreements, and put into practice as they are implemented.

- 4.48 Whilst the Committee believes that RFAs continue to be the best way to produce a workable regional agreement on both forest use and conservation, it is essential that they have the confidence of all stakeholders. This applies to both the RFA process and the content of the resulting agreement. The Committee supports the renewal of RFAs, but this must be done by using a thorough and wide-ranging consultation. It is important that this consultation uses information that has a strong factual basis.
- 4.49 The Committee supports the general principle of providing continuing certainty under RFAs, whether this is through early renegotiation, yearly extension, or mid-life direction setting.
- 4.50 As a general principle, RFAs should also use a 'carrot and stick' approach. If companies operating under an RFA are doing the right thing, they should be rewarded. If companies are in breach of the agreement, they should lose rights under the RFA.
- 4.51 Whatever process is used, it should include the other 'renewal' principles of review, consultation and concrete timelines. This would mean that all stakeholders have certainty about wood supply and some conservation outcomes from native forests. The Committee believes that there should be at least ten years on a rolling basis as a starting point for consideration.
- 4.52 RFAs have played a central role in native forestry, and the Committee believes that they have an important role to play in the future. In developing that future role, concrete timelines should be set and adhered to. RFAs will also present an opportunity for all parties to participate in the renewal process, and they should have sufficient time to make a contribution and respond to the contribution of other participants.
- 4.53 To ensure that RFAs continue to have broad support, renewed RFAs must have improved ongoing monitoring and periodic assessment. As noted in Chapter 2, some existing RFAs have been monitored and assessed ('reviewed') in groups, with significant delays. Communities must have confidence that each RFA is monitored and assessed on its own merits, regularly, and at proper arm's-length from all interested parties. As part of the renewed RFA process, a new ongoing monitoring and periodic assessment regime must be developed, agreed and implemented. This will ensure that RFAs continue to have the full confidence of governments, forestry operators and the general public.

Recommendation 6

- 4.54 **The Committee recommends the Australian Government initiate a process to renew existing Regional Forest Agreements, incorporating the principles of review, consultation, evergreen extension and concrete timelines.**

Recommendation 7

- 4.55 **The Committee recommends the Australian Government, subject to the agreement of the relevant State Government, ensure that a renewed RFA is in place within three years of the expiry of each existing RFA. Renewed RFAs should incorporate the principles outlined above.**

Recommendation 8

- 4.56 **The Committee recommends the Australian Government, in negotiation with State Governments, develop, agree and implement a new regime within all renewed RFAs to provide for ongoing monitoring and periodic assessment. The new regime should provide for the periodic assessment of each RFA on an individual basis, at regular intervals, and at arm's-length from all interested parties.**

Forest Ownership

- 4.57 According to *Australia's Forests at a Glance 2011*, of the approximately 147 million hectares of native forest in Australia, 71 percent (almost 105 million hectares) is either privately held, in private leasehold, or in unresolved tenure. The remaining 29 percent (over 42 million hectares) is public forest, largely state owned and managed.³⁶
- 4.58 According to that report, 23 million hectares of native forest are in (public) formal conservation reserves, representing 16 percent of total native forests in Australia. According to the *State of the Forests Report 2008*, there has been an increase in private native forests managed for conservation

36 *Australia's Forests at a Glance 2011*, p.21.

values in recent years, but that the increase is 'not well documented.'³⁷ A total of 9.4 million hectares of public native forests are used for timber production, about 6 percent of total native forest area.³⁸

4.59 As the *State of the Forests Report* notes, 'native multiple-use public forests provide most of Australia's native timber and wood products'³⁹, though there is also a substantial harvest from private native forests. There are no national statistics on private native forestry and, as the Report continues, 'In practice, most private forest managers make limited use of their forests for wood production, responding to immediate needs and opportunities in the market.'⁴⁰

4.60 Public native forests are managed by State and Territory governments, through agencies such as Forests NSW, Forestry Tasmania and VicForests. These agencies respectively described as a 'public trading enterprise', 'government business enterprise' or 'State-owned business'.⁴¹ Under the National Competition Policy, these agencies should have no competitive advantages or disadvantages compared with private entities that manage and harvest from private native forests.⁴² As outlined by the State of the Forests Report:

state forest agencies must charge prices (royalties) for sawlogs and pulplogs which, over the long term, generate revenues that at least cover the costs of managing their forests for wood supply and provide a commercial return on assets, including land and timber. Moreover, the focus on cost recovery and the trend to the greater transparency and accountability of public agencies in their management of public resources have encouraged forest agencies to evaluate the efficiency and financial performance of their forest management practices.⁴³

4.61 Public native forests are clearly an asset that belongs to the entire community, and as such these forests should be managed to ensure that the community receives a fair return for the resources removed for private

37 *State of the Forests Report 2008*, p.1-2.

38 *Australia's Forests at a Glance 2011*, p.2.

39 *State of the Forests Report 2008*, p.59.

40 *State of the Forests Report 2008*, p.60.

41 Forests NSW, <http://www.dpi.nsw.gov.au/forests/about-forests-nsw>, accessed 4/10/11; Submission 16, Forestry Tasmania, p.2.; VicForests, <http://www.vicforests.com.au/about-us.htm>, accessed 4/10/11.

42 *State of the Forests Report 2008*, p.195

43 *State of the Forests Report 2008*, p.195.

gain. Additionally, public native forests should be managed so that they operate on a 'level playing field' with private native forests.

- 4.62 Evidence to the Committee has suggested that some state forestry agencies operate at a loss, causing a drain on public finances. However, there needs to be more recognition of the public good provided by public forestry, including roads, bushfire protection, communication services in rural areas, pest control, assistance to allow beekeeper access, dog walking and horse riding areas, other recreational access and research opportunities for outside bodies (such as Warra in Tasmania ⁴⁴). These public agencies have to cover these costs as well as general production costs, and together they are greater than the costs private forestry companies or any other land use activities have to face.

Committee Comment

- 4.63 The Committee supports the principle, as expressed in the *State of the Forests Report 2008*, that state owned forest enterprises should operate on the basis of open competition, without distorting the market in which they operate. This is also an issue in relation to public assistance in establishing plantations, discussed further in Chapter 5. In addition, it is important that the Australian public receives a fair return for the use of a community resource.
- 4.64 As noted above, public forest agencies contribute to the provision of the public good that is difficult to quantify in dollar terms. The Committee supports any attempt to put a value on this public good, so that public forest agencies can better demonstrate the costs and benefits of their forest management.
- 4.65 In practice, State Governments must make decisions about the structure, operation and oversight of their own forestry enterprises. However, the Committee is firmly of the view that these decisions should be made in accordance with the National Competition Policy which 'aims to promote efficient competition between public and private enterprises to ensure that government businesses have no competitive advantages or disadvantages compared with their private competitors.'⁴⁵

44 <<http://www.warra.com/warra>>

45 *State of the Forests Report 2008*, p.195.

Native forest management

4.66 The Committee received considerable evidence regarding the management of native forests in Australia. The evidence focuses on three major policy areas, and the Committee is keen to acknowledge the ongoing debate in these areas. The three major debates concern:

- Bushfires;
- Regrowth; and
- Biodiversity.

4.67 At a basic level, these debates all focus on how different uses of forests – whether reservation, harvesting or multiple-use – contribute to long-term forest values. The differing uses of forests can have profound impacts on the local environment, and it is essential that native forest management reflects the best available knowledge about those impacts.

Bushfires

4.68 As noted by the State of the Forests Report, ‘fire is an important forest management tool in Australia because many forested ecosystems are ecologically adapted to fire and require it for regeneration.’⁴⁶ Many submissions to the inquiry make reference to the role played by fire in Australian native forests. However, the majority of evidence points to an incomplete understanding of how fire – in all its complexity – affects different kinds of native forests, which are themselves under many different management regimes. The NSW Forest Products Association notes that there is no simple way to characterise the role of fire in forests:

Fire regimes influence forests in many ways. Some are more susceptible to fire, seedlings can be killed by low intensity fires and mature trees by higher intensity fires [...] However, fires can also assist regeneration by promoting seed fall, improving seedbed condition and removing competition for seedlings [...] Fires can also promote germination and establishment of other species such as Acacia.⁴⁷

4.69 Numerous submissions to the inquiry note the need for greater research into the way fires affect forests. A changing climate will have an impact on

46 *State of the Forests Report 2008*, p.69.

47 Submission 70, NSW Forest Products Association, p.27.

the kinds of fires in Australian forests.⁴⁸ The North East Forest Alliance draws on evidence that 'altered fire regimes' contribute to the disturbance of some native bird species in native forests.⁴⁹ The CSIRO has identified the need for more research into the role fire regimes play in the carbon stored in forests.⁵⁰ The Victorian Association of Forest Industries (VAFI) has identified the need to better understand how forest management can be integrated with fire-risk mitigation.⁵¹

4.70 VAFI also gave evidence about the potential for forest management to affect water catchments:

We do thin our forests to improve the productivity and health of the forests. There has also been an enormous amount of research, both in Victoria and Western Australia, to look at the value of ecological thinning to maximise water yield. This could have particular benefits to Victoria when you look at the impacts of the 2009 bush fires. About 30 per cent of Melbourne's water catchments were burnt. Some catchments, such as Armstrong Creek, were 100 per cent burnt. Before that, the Victorian government had commissioned some research that found that a severe bushfire, looking at the Armstrong Creek catchment, could actually decrease water yield [...] Applying ecological thinning techniques could have real benefits in terms of forest health but in particular water yield. I also think ecological thinning has a place in fuel reduction through mechanical biomass manipulation and mechanical fuel reduction, and this really has value along roadsides, close to communities, where prescribed burning might not be feasible. The integration of forestry techniques into fire management and conservation management certainly could have real value, particularly given our changing climate and the increasing bushfire risk that we face.⁵²

4.71 These examples demonstrate the need for further research into the role that fires play in native forest management, and the impact that forest management has on fires.

4.72 In addition, numerous witnesses identified the fire-risk in National Parks as a major concern. According to Professor Jerry Vanclay:

48 Submission 75, Prof. Peter Kanowski et al, attachment 7, pp.46-7.

49 Submission 30, North East Forest Alliance, pp.103-106.

50 Submission 39, CSIRO, p.14.

51 Submission 90, Victorian Association of Forest Industries, p.3.

52 Ms Lisa Marty, *Committee Hansard*, 10 August 2011, p.9.

If we create a large national park system without adequate staffing to maintain that, we may find a situation where the fire regime has changed, not necessarily for the better, where we are not maintaining a rural population well equipped to deal with situations that might happen there.⁵³

- 4.73 Further evidence suggested that logging in National Parks may assist in reducing the risk of fires therein:

The areas of those national parks that grow hardwood that has been used for sawmilling in the past I believe should be revisited with a view to logging those areas. I guess overcoming the urban myth, or the urban view, of conservation may be a big issue in managing that perception that if you lock something up it is there forever and you do not need to do anything with it. But the reality is, particularly with bushfire, the only thing you can manage is fuel. You cannot manage the ignition source, whether it is lightning or arson. You cannot manage the climate or the weather conditions but you can manage fuel.⁵⁴

- 4.74 Whilst it is clear that fuel management can have a significant impact on bushfires, it is not a panacea. Forest management – whether in multiple-use or reserved forests – must adopt a comprehensive fire protection regime.

- 4.75 Dr Douglas Head also identified the ‘corporate knowledge’ held by state forest agencies, including relating to fire management. As he put it:

If the native forest industry goes under one of the things the community will lose is the state forest agencies, which have an enormous historic bank of knowledge. Once that is dissipated – I am sure these people will all get jobs and they will break up – that consolidated institutional knowledge of our forests and not just growing forests [...] Not just in terms of the timber industry but bushfire management and the many other facets for which they run their forests will be lost as well.⁵⁵

Regrowth

- 4.76 As noted at the beginning of the chapter, a considerable part of Australia’s native forest estate has been harvested and regrown many times over.
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53 Professor Jerry Vanclay, *Committee Hansard*, 1 September 2011, p.1.

54 Councillor Lindsay Passfield, *Committee Hansard*, 1 September 2011, p.19.

55 Dr Douglas Head, *Committee Hansard*, 1 September 2011, p.38.

There are many different management schemes for replanting forests, and the Committee is keen to see further research on new and innovative approaches to this aspect of forest management.

- 4.77 According to Ta Ann Tasmania, regrowth timber can be more promising for innovation and value adding, owing to the ‘properties inherent in regrowth timber that have a comparative advantage - such as higher density and sustainable management.’⁵⁶ As noted by the Institute of Foresters of Australia:

Professional expertise must be employed in timber harvesting to better improve biodiversity outcomes in large areas of regrowth forests originating after fire and from previous timber harvesting. It has been demonstrated that adaptive silviculture in certain regrowth forests can contribute to reducing the time forests take to develop old-growth characteristics such as large trees and hollows which are important for some species.⁵⁷

- 4.78 However, other submissions have pointed out that regrowth is not universally positive for the local environment. The Gippsland Environment Group notes that harvesting practices affect species in different ways: ‘disturbance loving species thrive, to the detriment of many species that are adversely impacted by mechanical disturbance and post harvesting fires, potentially resulting in local extinctions.’⁵⁸ As a general comment, this does not identify particular examples of such occurrences, and good forest management can prevent these problems from occurring. The North East Forest Alliance has suggested that, at least during early stages, regrowth forests use more water.⁵⁹

- 4.79 Good forest management can have multiple benefits, and continuing research will further demonstrate the potential for regrowth management to impact on both the timber and wood-products, as well as on the local environment. Management of regrowth in native forests is a matter for local communities, the forestry industry and governments, relying on the best available information to continue to achieve positive outcomes.

56 Submission 54, Ta Ann Tasmania Pty Ltd, p.1.

57 Submission 84, The Institute of Foresters of Australia, p.9.

58 Submission 61, Gippsland Environment Group, p.2.

59 Submission 30, North East Forest Alliance, p.62.



Committee members in a regrowth area.

Biodiversity

4.80 As noted with the two previous discussions about native forest management, decision makers must have access to the best available research, and be willing to try new approaches that balance the competing demands on forests. The management of forest biodiversity is another heavily debated topic, and the Committee received copious evidence about the best ways to protect and improve biodiversity.

4.81 In the 1992 Statement, biodiversity is defined as follows:

A concept encompassing the diversity of indigenous species and communities occurring in a given region. [...] It includes 'genetic diversity', which reflects the diversity within each species; 'species diversity', which is the variety of species; and 'ecosystem diversity', which is the diversity of different communities formed by living organisms and the relations between them. [Biodiversity] is the variety of all life forms – the plants, animals and micro-organisms – the genes they constitute, and the ecosystems they inhabit.⁶⁰

⁶⁰ National Forest Policy Statement (1992), glossary, i.

4.82 Rather than provide a survey of the evidence about the impact of forest management on biodiversity, the Committee wishes to report on a possible mechanism to encourage private forest managers to manage biodiversity in their own forests. That is, rather than a discussion of how management practices affect biodiversity, the following section described one method to provide an incentive for individuals and organisations to protect and improve biodiversity.

4.83 Professor Jerry Vanclay, from Southern Cross University, has developed (with colleagues) a proposal for 'stewardship payments' to landholders and managers for environmental services provided by forests:

The public gets landscape, environmental, water and wildlife benefits from having forests on land. If we can set up a scheme of payments for environmental services that gives those landholders an annual income for delivering a good outcome, it will then put into place a system by which we will see delivery of good forests on private lands.⁶¹

As Professor Vanclay noted, this would reward positive outcomes rather than proscribing actions, or binding individuals on the basis of promises to achieve outcomes in future. This notion of paying forest owners for environmental services provided by the forest is similar to the Carbon Farming Initiative, which can reward forest owners for the carbon stored in their trees (discussed in Chapter 3).

Committee Comment

4.84 The Committee is aware of numerous debates about the best way to manage native forests in Australia. Whilst many forests have been formally reserved, there is still a considerable public and private native forest estate that must be managed for multiple uses. Forests can have an enormous impact on their local environment, and it is important that decision makers encourage forest management that considers the impact of forestry management outside the forest.

4.85 In relation to fires, the Committee believes that there is a pressing need for more information about how fire regimes affect different kinds of forests, as well as the risk that fire poses to forests. This should include further research into the fire risks in National Parks, and the multiple ways to prevent fires or ease their impact.

61 Professor Jerry Vanclay, *Committee Hansard*, 1 September 2011, p.2.

- 4.86 In relation to biodiversity, the Committee believes that the ‘stewardship’ proposal outlined above is an interesting idea that deserves consideration by the Australian Government. However, the Committee does not believe that stewardship payments should be provided by public finances. Rather, these payments should ideally be provided by the market, by ensuring that management of biodiversity in forests is reflected in the value of the timber and wood products produced in those forests. Government consideration of a stewardship proposal should include a rigorous analysis of the cost of administration and monitoring, the practicalities of achieving a market reward for biodiversity management, as well as modelling the kinds of financial returns necessary to achieve good biodiversity outcomes.

Recommendation 9

- 4.87 **The Committee recommends the Australian Government direct the Department of Agriculture, Fisheries and Forestry to consider and evaluate the ‘stewardship’ proposal outlined above, and that relevant Minister report to Parliament on its findings within twelve months.**
- 4.88 Finally, the Committee wishes to recognise the immense contribution made by foresters and those who study and research native forests in Australia. Many of these individuals gave the Committee their time and energy, and they are vitally interested in the future of the Australian forestry industry, as well as the future of Australia’s native forests. Whilst much of their work focuses on the harvesting of timber and wood-products, their contribution to the preservation and conservation of Australian native forests is immeasurable. Much of the work they undertake has had flow-on benefits for our understanding of Australian native landscapes, and the Committee commends them for their work and their contribution to the inquiry.

Native forest products

- 4.89 As noted by many submissions to the inquiry, over the past 60 years, there has been a gradual shift in Australia’s forestry industry from exclusive reliance on native forests, to a mixed reliance on both native forest and

plantation trees.⁶² This shift is the result of many factors, discussed in chapter three. The trend towards plantation timbers is continuing: in the period from 2003 to 2008, the volume of timber harvested from native forests declined by 14 percent, whilst that harvested from plantations increased by 28 percent.⁶³ Part of this trend can be explained by additional native forests being put in reserves, and taken out of production.

4.90 According to the Forest Growers' CEO Forum, 'existing plantations cannot supply the current or future demand for timber and wood products.'⁶⁴ That submission continues:

Only around 1 million hectares of forestry plantations are in longer rotations, suitable for structural timber products used in building, construction and manufacturing. 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.⁶⁵

4.91 In addition, many submissions raised concern about the effect of increased timber imports if native forestry were ceased in Australia:

Ongoing demand for timber with special strength, durability or appearance features and declining supply might act as a signal for the importation of similar material from other regional sources [...] Excluding harvesting from all Australian native forests for environmental reasons, at least in part, is merely exporting a larger environmental consequence on our neighbours, which have been under severe environmental pressure for decades.⁶⁶

4.92 Amongst submissions to the inquiry, there was considerable agreement that the Australian forestry industry will need to, and should, continue to harvest timber and wood products from native forests. There are a number of debates that nevertheless arise beyond that point of agreement. The discussion in the previous section, about forest management, included three such debates. The final section of this chapter will consider the debate about the particular products that could be made from native forests.

62 Submission 75, Prof. Peter Kanowski et al, p.3; Submission 81, Australian Forest Growers, p.2.

63 State of the Forests Report, 2008, p.125.

64 Submission 58, Forest Growers' CEO Forum, p.4.

65 Submission 58, Forest Growers' CEO Forum, p.4.

66 Submission 84, The Institute of Foresters of Australia, p.4.

High value timber and wood products

- 4.93 Some evidence suggests that the market for native woodchips is steadily declining. Various reasons have been cited for this decline, including concern in international markets about sustainability⁶⁷, pressure from environment groups, the high Australian dollar⁶⁸, the lack of processing facilities, and international competition.⁶⁹
- 4.94 There is a need to be able to market lower-grades of native forest or the waste from native forest harvesting so that the whole tree can be value added, not just the sawlog component.
- 4.95 As the demand for woodchips has declined, some mills have found new uses for previously chipped timber, such as peeled veneers.⁷⁰ As noted by the Huon Resource Development Group, utilising timber for veneer is a way of 'value-adding the timber that fails to meet sawlog requirements rather than exporting it as wood chip.'⁷¹
- 4.96 During its site inspections and hearings, the Committee regularly heard of the ways that Australian mill operators are increasing the value of products that they produce from the available wood. As imported products continue to enter the Australian market, the best way for Australian producers to compete is to increase the efficiency of their milling operations, as well as the quality of their product. When asked about innovation, many witnesses told the Committee that the forestry industry continues to innovate in order to remain competitive and to ensure that they are making the best use of the wood available. In the words of Mr Andrew Blakesley, from the Tasmanian Government:
- We are going to be living in a fibre-short world. We are going to be living in a carbon constrained world. The products that we now regard as the lower quality parts of the wood flow are going to become increasingly valuable. We already know the technology exists to transform those products into elaborate manufactures.⁷²
- 4.97 In addition, there remains an opportunity to use waste products from the forestry industry to generate electricity. This is discussed in Chapter 7.

67 Submission 100, Western Rivers Preservation Trust, p.4.

68 Submission 80, Timber Communities Australia - Tasmania, p.2

69 Submission 113, Tasmanian Country Sawmillers' Federation, p.13.

70 Submission 54, Ta Ann Tasmania, p.1.

71 Submission 25, Huon Resource Development Group, p.4.

72 Mr Andrew Blakesley, *Committee Hansard*, 28 June 2011, p.7.



Committee members with Ms Janelle Saffin MP (Member for Page) and Mr Jim Bindon in Grafton.

Committee Comment

- 4.98 The Committee believes that it is preferable for native forests to be harvested for high-value products. In addition, it is important to ensure that the whole tree is processed, so that the integrated value of the tree is realised. Given the strong views that are held about native forestry – both for and against harvesting – a good way to build support for sustainable native forestry is to ensure that durable, high value products are created. This will ensure that the Australian community has a strong understanding of the innovative and high-quality products that native forests produce.
- 4.99 Whilst this should ultimately be a matter of markets providing a greater reward for more valuable products, there are a number of things that will help speed the transition to higher-value products. The industry must continue to find new ways of using more of the wood supply that is available, and continue to improve the efficiency of its processing. It must also continue to improve the quality of its products, which are already

world-class. The Committee has seen plenty of evidence during site inspections that the Australian forestry industry is already innovating and adapting its approaches in order to remain viable and internationally competitive.

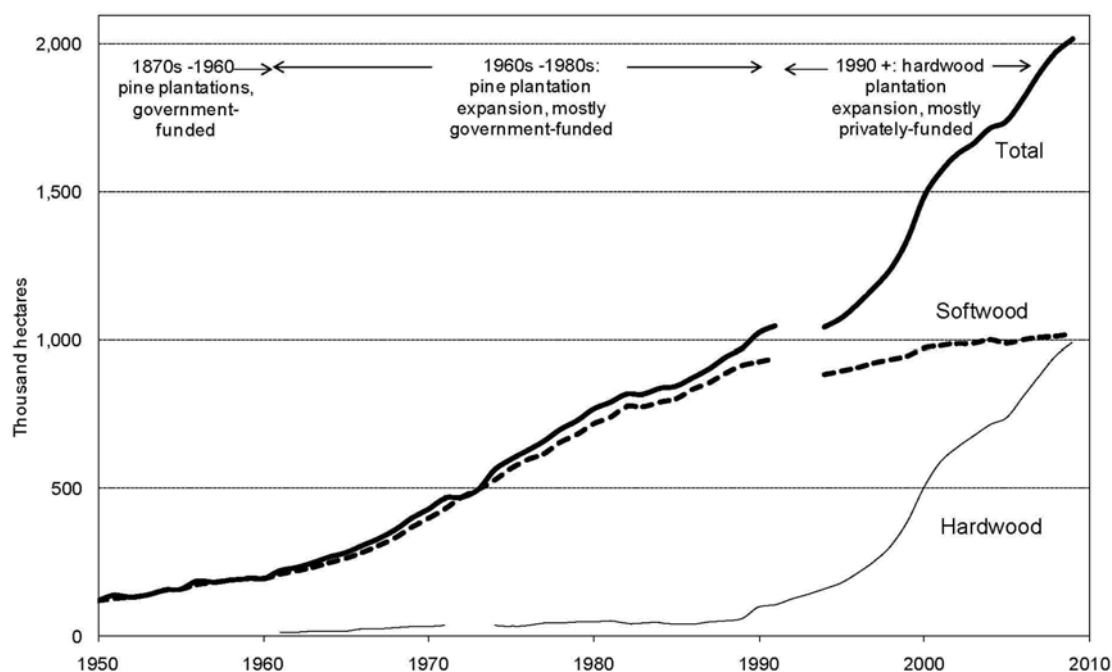
Plantations

- 5.1 As discussed in Chapter 2, the National Forest Policy Statement of 1992 included the objective of expanding Australia's plantation estate, an objective this Committee supports. The principle mechanism created to encourage the establishment of more plantations was the *Vision 2020* initiative.
- 5.2 As also discussed in Chapter 2, the land area of plantations in Australia has roughly doubled since 1997, when *Vision 2020* was launched. Most of this plantation expansion has been in hardwood plantings. For a graphic representation of the expansion of the plantation estate – from 1950 to 2010 – see Figure 5.1, below.
- 5.3 The term 'plantation' is generally understood – in the community – to refer to large plantings of a particular kind of tree (often exotic). In the 1992 Statement, plantations were defined as 'intensively managed stands of trees of either native or exotic species, created by the regular placement of seedlings or seed.'¹ However, this definition is misleading, because it suggests that plantations are composed of a single species.
- 5.4 In fact, plantations can be planted with a mix of different species, in a variety of planting arrangements and patterns. Whilst many concerns about plantations relate to monocultural plantations – those planted with one species only – considerable research and investment has gone into developing mixed plantations, and the Committee is keen to see these kinds of plantations expand in the future.
- 5.5 This Chapter will consider a number of issues relating to plantations, including:
- land and water competition;

1 *National Forest Policy Statement (1992)*, glossary, iii.

- planting, including rotation length and sustainability, and finance and investment;
- management, including the use of thinning, impacts on the local environment and impacts on the local community; and
- products and innovation.

Figure 5.1 Phases of plantation development in Australia since 1950



Source Submission 59, Department of Agriculture, Fisheries and Forestry, p. 12.

Land and water competition

5.6 The terms of reference for the inquiry include the 'impacts of plantations upon land and water availability for agriculture'. The Committee received considerable evidence about the impact that plantations can have on their local area and region, and the Committee is keen to share its findings.

Land competition

5.7 The plantation estate has expanded considerably in the past two decades, and this has seen the transformation of land area from agricultural to forestry uses. As noted by Dr Jackie Schirmer, this has fuelled two major concerns in the agricultural sector: first, that it reduces the amount of land

available for agricultural use; and second, that it drives up the price of agricultural land.²

- 5.8 The Department of Agriculture, Fisheries and Forestry cites research by Jacki Schirmer that showed

rapid plantation expansion in some regions and over some periods has contributed to land price increases. Land prices have also increased rapidly in other areas. [In addition] National Plantation Inventory data show that the rate of plantation expansion in the late 1990s and early 2000s was exceptionally high.³

- 5.9 Timber Queensland states that

Recent expansion of the plantation estate in some regions has caused friction with other traditional industries and resulted in generally poor community acceptance of plantations. These conflicts have been particularly prevalent in north Queensland, where plantations have been established on former cane land.⁴

- 5.10 Councillor Ian Howard, from the Meander Valley Council (Tasmania) submitted that plantations must be considered on a regional basis, to ensure that other land uses in the region are still viable:

Timber plantations should not be defined as agriculture and should not be competing with food crops for access to agricultural land of any class without some mechanism to control plantation densities within a region. Too many plantations in a region can make traditional and essential agriculture unviable within that region.⁵

Plantations can be integrated into farm operations, and can be a form of farm forestry. Plantations can be integrated into a range of different land uses, and trees can play an important role in many different ways in land management. The role of trees in land management is discussed further in the next chapter, on farm forestry.

- 5.11 As noted by many submissions, the impact of plantations on land competition – both the availability and price of land – is mixed, and not as great as some in the community have claimed. For example, A3P suggests that the impact of plantation expansion is only one of many factors increasing the cost of land. Other factors include:

2 Submission 11, Dr Jackie Schirmer, p.8.

3 Submission 59, DAFF, p.19.

4 Submission 65, Timber Queensland, p.5.

5 Submission 102, Councillor Ian Howard, p.2.

low interest rates, high commodity prices, strong international demand for Australian farm products, rationalisation in the rural sector with farm amalgamations, competition for farms from overseas buyers, and multiple changes in land use.

The changes in land use include plantations, as well as:

broadacre cropping (a major land-use change); dairying and beef cattle expansion; intensive agriculture; farm consolidation; rural subdivision and lifestyle farms (especially in popular 'sea-change' and 'tree change' regions); and urban encroachment.⁶

- 5.12 The Forest Industries Association of Tasmania submitted that 'plantations do not compete significantly for prime agricultural land with other agricultural users in Tasmania. The free market effectively determines the allocation of land between agriculture and plantations.'⁷ As FIAT continued, the per-hectare price of prime agricultural land in Tasmania precluded plantation expansion on such land.
- 5.13 Professor Jerry Vanclay suggested that the expansion of cities represents greater land competition:
- There is greater land use competition (and longer-term implications) between urban development and agriculture than there is between forestry and agriculture, so the forestry-agriculture competition should be kept in perspective.⁸
- 5.14 Australian Forest Growers note that the total area of plantations is very small – less than one percent of total land area. By contrast, AFG quotes figures showing that '61% of Australia's total land area...is occupied by grazing and cropping.'⁹
- 5.15 Numerous submissions to the inquiry have suggested that the market be left to allocate land to the highest-value use. The Institute of Foresters of Australia advocates 'a free market as the best mechanism for determining land use. Landowners should be free to use and trade their land as they judge best unless there are compelling reasons for community intervention'.¹⁰ Professor Jerry Vanclay suggests that 'Ideally, if market distortions can be avoided, agriculture-forestry issues should be resolved by the marketplace by economics of crop yields, rather than by

6 Submission 99, A3P, p.15.

7 Submission 72, FIAT, p.19.

8 Submission 18, Professor Jerry Vanclay, p.2.

9 Submission 81, Australian Forest Growers, p.12.

10 Submission 84, Institute of Foresters of Australia, p.22.

legislation.’¹¹ According to the Forest Industries Association of Tasmania, the market already performs its role efficiently in Tasmania.¹²

- 5.16 The Committee has found that plantations can make a local impact on land competition, but at a regional or national level, their impact has been overestimated. It supports the principle that the market be used to allocate land to the highest-value use.

Water competition

- 5.17 Whilst the expansion of plantations has, in some places, increased competition for land, plantations can also compete for water. As noted by the CSIRO, ‘water availability is the most important limiting factor to plantation productivity across most of the plantation estate.’¹³ According to Australian Forest Growers, plantations in Australia are ‘generally a non-irrigated crop.’¹⁴
- 5.18 Some evidence to the Committee told of community disquiet about the extent to which plantations remove water from the local environment. As noted by Professor Peter Kanowski and colleagues, both competition for water and social conflict over ‘plantation expansion militate against [international] investment’ in plantations.¹⁵
- 5.19 As for the actual impact of plantations on the local water resource, the submission from the CSIRO describes a complex situation. Whilst plantations use more water than crops or grassland, ‘the impacts of plantations on water security and availability had been overstated and the importance of the much larger area of natural forests on water availability for urban catchments needs to be emphasised.’¹⁶ Further, the water impact is likely to be local rather than regional. The submission also notes that:

plantations accessing groundwater may use water more efficiently...that is they produce more timber per unit of water than plantations without access to groundwater. This suggests that careful siting of plantations in the landscape can maximise timber production while minimising impacts on catchment water yield.¹⁷

11 Submission 18, Professor Jerry Vanclay, p.2.

12 Submission 72, Forest Industries Association of Tasmania, p.30.

13 Submission 39, CSIRO, p.2.

14 Submission 81, AFG, p.4.

15 Submission 75, Professor Peter Kanowski et al, p.2.

16 Submission 39, CSIRO, p.3.

17 Submission 39, CSIRO, p.10.

- 5.20 As noted by Private Forests Tasmania, the concern about the water use of plantations is 'made worse by considerable periods of drought'.¹⁸ Timber Communities Australia considers that 'the potential competition between the forestry and agriculture sectors, particularly for water, has been exaggerated by some commentators and that both sectors complement rather than compete with each other.'¹⁹
- 5.21 The evidence presented to the Committee suggests that the water impact of plantations is primarily at the local level. In addition, it is clear that good planning, planting and management can ensure that plantations can be sensitively integrated into the local water management regime. One submission to the inquiry suggested that 'it should be a mandatory requirement that all future plantation developments be accompanied by a water management plan and a water audit of the area.'²⁰
- 5.22 Professor Peter Kanowski and colleagues have noted that there is a need for better understanding of 'the complex relations between forests and water yield, and associated risk factors such as fire.'²¹ Further discussion of plantations and water is under the heading 'environmental impact of plantations', below.

Committee Comment

- 5.23 The Committee is well aware that there is concern in some rural and regional parts of Australia – particularly in regional and rural areas – about the impact of plantation expansion on land and water competition. As noted above, both the actual competition and the associated community disquiet have the potential to constrain the further expansion of plantation forestry in Australia.
- 5.24 As for land competition, the Committee considers that the expansion of plantations has certainly increased land competition in some local areas of Australia. However, at a regional and national level, the impact is negligible. As noted above, the amount of land currently under tree plantation is miniscule compared to that in native forest or agriculture. The Committee is aware that there are many other pressures on agricultural land, and blaming plantations alone for the entirety of land competition is unreasonable.

18 Submission 92, Private Forests Tasmania, p.8.

19 Submission 35, TCA, p.8.

20 Submission 100, Western Rivers Preservation Trust, p.4.

21 Submission 75, Professor Peter Kanowski et al, p.4.

- 5.25 In regard to water competition, the Committee has found that plantations might have a local impact, but regionally and nationally their impact is very low. In addition, plantations have a complex and dynamic impact on water resources, and can actually play a significant role in improving the quality and management of water resources if planned well.
- 5.26 Land planning and water allocation are primarily dealt with by state and local governments. The role of the Australian Government is limited, and the Committee believes that land and water competition can and should be resolved at a local and regional level.
- 5.27 As put by Professor Gordon Duff:
- [We] have a natural advantage in Australia for growing trees; we do. It is something we are good at, we have expertise and we have the infrastructure. We have the land [based] issues to do with competition for water and space aside. We have got the know-how to resolve those issues. It gives us the security going forward. It is [playing] to a natural advantage. There are those multiple benefits from managing and growing forests beyond just wood production, which include carbon sequestration, energy resources and dealing with other land management issues like salinity.²²
- 5.28 The Committee believes that the further expansion of the plantation estate can be achieved with the agreement and support of local communities. Plantations make a contribution to local economies, and can assist the treatment of local environmental problems. The industry should ensure that it engages flexibly and constructively with local communities to ensure that it adequately addresses community concerns and builds local support. The 'good neighbour charter' in Tasmania is a good example of finding agreement between agriculture and forestry,²³ and a similar approach could be used elsewhere to deal with issues like water and land competition. It is an example of the forestry industry ensuring its own future, by building its social licence at a local level. (Social licence is further discussed in Chapter 8).

Planting

- 5.29 As discussed in Chapter 2, there was a massive expansion in Australian plantations during the 1960s, and a second big expansion in the past two

22 Professor Gordon Duff, *Committee Hansard*, 24 June 2011, p.26.

23 Submission 72, FIAT, p.30.

decades. More plantations should be established over the coming years, as this will support economic growth and ensure the long-term viability of the forestry industry. However, there are certainly some challenges to overcome in order to achieve this. These challenges – and possible solutions – will be discussed as follows:

- rotation length;
- finance and investment; and
- Managed Investment Schemes.

As discussed in Chapter 3, there is also a potential role for the Carbon Farming Initiative to support plantation expansion in the future.

Rotation length and sustainability

- 5.30 The period for which a tree is grown before harvesting is commonly referred to as the ‘rotation length’. A plantation goes through a cycle of planting, growing, harvesting, and then replanting. The length of time between planting and replanting may be from ten years up to seventy or eighty years²⁴: this is the rotation length.
- 5.31 Both softwoods and hardwoods can be grown for short- and long-rotation: in general, short-rotation (perhaps 10 to 15 years) suits trees that are to be chipped or pulped, and long-rotation (more than 20 years) suits trees that are to be grown for sawlogs. As noted in the *State of the Forests Report 2008*, the expansion of plantations since 1998 has been particularly focussed on short-rotation hardwoods.²⁵ A graphic representation of new plantation establishment is in Figure 5.2, below: it is mostly hardwood. However, Australia’s timber and wood-product needs can only be met by plantations of both short- and long-term rotation softwood and hardwoods.
- 5.32 Many submissions to the inquiry called attention to the fact that much of the recent expansion in plantations has been in short-rotation regimes, and called for future expansion to focus on long-rotation regimes.²⁶ The greatest impediment to further expanding the long-rotation plantation

24 Submission 69, Mr David Cameron, p.2.

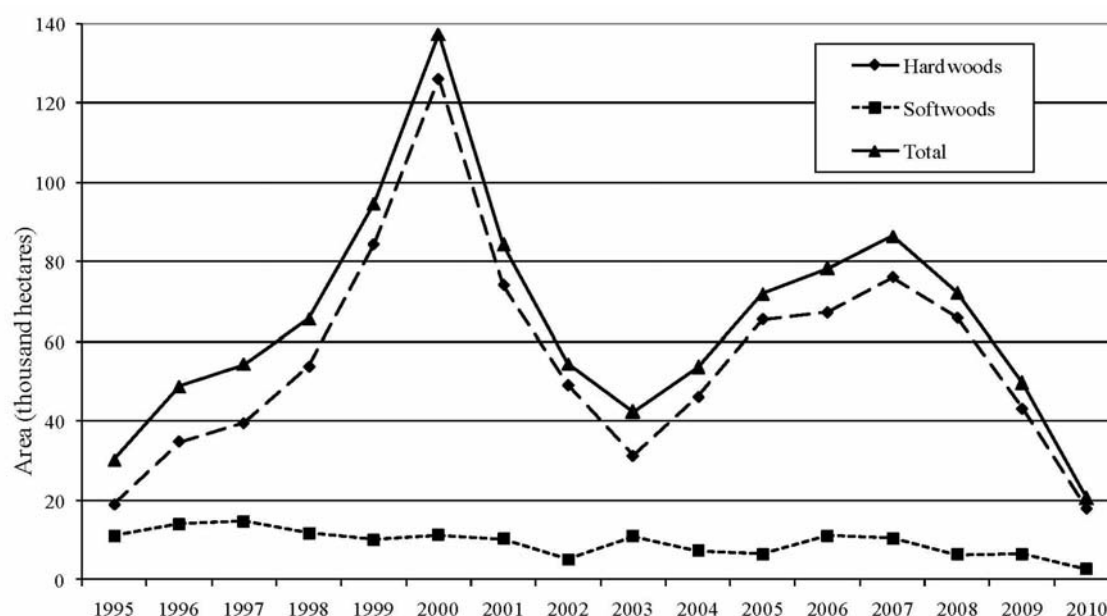
25 *State of the Forests Report 2008*, p.194.

26 Submission 58, Forest Growers’ CEO Forum of Australia, p.4; Submission 65, Timber Queensland, p.3; Submission 81, Australian Forest Growers, p.2; Submission 84, The Institute of Foresters of Australia, p.11-14.

estate is the considerable investment period (with increased risks) and the decades-long wait for a return on that investment.²⁷

- 5.33 The establishment of new long-rotation plantations is clearly a priority for Australia to ensure a more balanced industry and stronger domestic supply chain. The following section will discuss the finance and investment challenge for such plantations.

Figure 5.2 New plantation area reported, 1995-2010, Australia (National Plantation Inventory)



Source Submission 59, Department of Agriculture, Fisheries and Forestry, p.20.

Finance and investment

- 5.34 Historically, as noted above, investment in plantations came largely from governments and state-owned agencies and corporations. However, governments have generally not made direct investments in plantations for some decades:

State Governments appear to have ceased or greatly reduced their investment in establishing new plantations. It is difficult to see, if an increase in plantation production is desired, where new investment will come from.²⁸

27 Submission 65, Timber Queensland, p.3; Submission 81, Australian Forest Growers, p.13; Submission 70, NSW Forest Products Association, p.12.

28 Submission 68, Future Farm Industries Cooperative Research Centre, p.7.

5.35 As discussed in Chapter 2, policy in the past two decades has emphasised private establishment and ownership of plantations. Encouraging private investment in long-rotation plantations is one of the biggest challenges for the future of the Australian forestry industry.

5.36 Evidence from the Department of Agriculture, Fisheries and Forestry underlined the need for the market to fund plantation expansion:

Australia's forest industry should be competitive, sustainable, self-reliant and responsive to market signals. A stable operating environment that provides certainty but allows free market mechanisms to have influence will help to achieve this.²⁹

5.37 As noted by many submissions to the inquiry, there are three main disincentives to investment in long-rotation plantations. First, they involve a much longer investment period than many other investments. Second, there is a greater risk attached to the investment than for other investments. Third, there is a lower rate of return than investors might receive for other investments. As described by the NSW Forest Products Association:

The long time frames expose investors to greater liabilities of resource failures, such as bushfires and political interference...Poor profitability is attributed to the high initial costs of acquiring land, establishing the plantation and the need for early silvicultural treatment. That creates a huge opportunity cost of capital for a period of time until the investment hopefully matures after several decades.³⁰

Managed Investment Schemes

5.38 As noted by the submission from the Department of Agriculture, Fisheries and Forestry, the expansion of the plantation estate was partly attributable to changes in taxation law, made by the Australian Government.³¹ These changes led to the creation of managed investment schemes (MIS) in forest plantations. Whilst this increased the short-rotation plantation estate, the Committee found general agreement that MIS arrangements have so far done little to encourage long-rotation plantations. The discussion of MIS and plantations will address two of the major areas of concern – viability and usefulness.

29 Mr Ian Ruscoe, *Committee Hansard*, 15 June 2011, p.1.

30 Submission 70, NSW Forest Products Association, p.12.

31 Submission 59, DAFF, p.24.

5.39 MIS arrangements were developed to encourage new investment in the rural sector. They helped to focus on the value of rural and regional industries. However, as will be seen below, in some cases they were badly targeted and poorly managed. Future investment strategies to encourage investment in the rural sector will need to be carefully researched and redesigned with the specific goals of the strategies in mind. Farmers and investors must work together to ensure that such investments are broadly supported as part of normal agricultural practice. Such goals could include, for example, the encouragement of long rotation plantations. Whilst this is a general task across rural economies, the Committee has made specific recommendations about MIS and plantations.

Viability

- 5.40 For additional background information, the report of the Parliamentary Joint Committee on Corporations and Financial Services' *Inquiry into aspects of agribusiness managed investment schemes*³² contains useful discussions of how MIS operates. That inquiry's terms of reference referred to two major MIS companies that went into administration in the first half of 2009. As noted by that Committee's report, both outside events and structural deficiencies within the MIS model have been blamed for their collapses.³³
- 5.41 Criticism of MIS schemes in submissions to this inquiry have been broad ranging, raising questions about both outside events and structural deficiencies.
- 5.42 In respect of outside events, many submissions blamed the global financial crisis. The NSW Forest Products Association noted that 'highly leveraged capital requirements brought about the collapse of [one] enterprise in the Global Financial Crisis.'³⁴
- 5.43 In respect of structural deficiencies, many blamed the poor conduct of individual MIS scheme operators, and the failure of the MIS model to prevent this occurring. New Forests Pty Ltd pointed out that 'MIS companies were often driven by financial product sales and occasionally became undisciplined in the acquisition of land for forestry.'³⁵ Agriwealth Capital claimed that 'collapses arose because of the mismanagement by

32 Available at:
http://www.aph.gov.au/senate/committee/corporations_ctte/MIS/report/report.pdf.

33 Parliamentary Joint Committee on Corporations and Financial Services, *Inquiry into Aspects of Agribusiness Managed Investment Schemes*, p.32.

34 Submission 70, NSW Forest Products Association, p.29.

35 Submission 2, New Forests, p.2.

those entrusted with the responsibility to properly manage the respective plantations.’³⁶

- 5.44 Queensland Timber noted that the global financial crisis exposed ‘some serious flaws in the operation of the MIS model, where future management liabilities were not adequately accounted for.’³⁷ The submission goes on to say that, with improvement to the model, MIS ‘remains an important vehicle for investment in timber plantations into the future.’³⁸
- 5.45 Proposed MIS plantations should develop a prospectus for the market that reflects the fact that plantation products are commodities. Prospectuses must be based on sound market principles, and properly researched. Getting funding for plantations is a question of market investment, and proposals must be prepared by investment market and financial experts, to get an effective prospectus that reflects the needs in the marketplace.

Usefulness

- 5.46 There has been considerable debate about the kinds of plantations delivered under MIS arrangements. As described by Mr Ian Ruscoe, of the Department of Agriculture, Fisheries and Forestry, ‘there seems to have been some disjoint between what has been planted in the plantation estate versus market demand.’³⁹
- 5.47 As noted above, there is considerable agreement that MIS did little to encourage hardwood sawlog plantation expansion. However, evidence to the Committee suggests that some of the MIS plantation estate was poorly planned – planting the wrong trees in the wrong places. According to Mr Nick Roberts, of the Australian Forest Products Association,
- We know that the MIS regime has worked to put trees in the ground but has not worked to put the right trees in the right ground to meet our actual needs. It is in the wrong locations; it is not located where the processing plants are to allow leverage on existing infrastructure.
- 5.48 Miss Linda Sewell, of the Australian Forest Products Association, suggested that MIS managers did not necessarily consider the best place to locate plantations:

36 Submission 44, AgriWealth Capital Limited, p.2.

37 Submission 65, Timber Queensland, p.3.

38 Submission 65, Timber Queensland, p.3.

39 Mr Ian Ruscoe, *Committee Hansard*, 15 June 2011, p.2.

As an industry we probably would consider there are probably enough trees in the ground but they are just in the wrong place...From a private forestry perspective, that is typically what you would want to do; you would want to put the trees in the ground where there is a reasonable infrastructure anyway. But when you are looking at tools around things such as MIS investment you have got a very different group of investors, who are really just looking at the financial return. They do not care where the tree is.⁴⁰

- 5.49 Regarding the kinds of species planted in MIS plantations, witnesses had general comments to make about the suitability of these decisions:

The MIS tax incentives drove a lot of money into plantations and it was like a gold rush. To get those trees in the ground by the end of June meant that the wrong species were planted in the wrong place at the wrong time. There was no prudent linkage to a productive outcome.⁴¹

- 5.50 In Victoria, witnesses gave evidence about the inability of MIS to put the right species of trees in plantations: 'We ended up with an MIS and blue gums. It has failed us and we need to revisit [this] and look at why it failed and start to rebuild.'⁴²

- 5.51 The issue of species is also linked to that of location: the right kind of tree must be grown near the right kind of infrastructure and processing facilities:

We are in a situation here where I think about 60 per cent of our plantation asset in this area from here [Grafton] to the Queensland border is *dunnii* or white gum. It is ideal for pulping. We have no pulping facility. We have no port access to export that product.⁴³

- 5.52 However, as noted by Mr David Shelton, of New Forests Pty Ltd, the original MIS structure was not tasked with ensuring that the best species of tree was planted in the best location:

When the original MIS legislation was drafted it had the mandate of encouraging plantation establishment. It did not say anything about species, location et cetera. On those grounds, it was a tremendously effective instrument – using the tax tool to do

40 Miss Linda Sewell, *Committee Hansard*, 10 August 2011, p.44.

41 Councillor Lindsay Passfield, *Committee Hansard*, 1 September 2011, p.18.

42 Mr James Williams, *Committee Hansard*, 10 August 2011, p.31.

43 Councillor Lindsay Passfield, *Committee Hansard*, 1 September 2011, p.18.

exactly that...The mandate then is for the people charged with the policy design, the mechanism design, itself to deliver not only an incentive for plantation establishments, but an incentive for plantation establishment of softwoods in these sorts of locations... So there are ways of doing it, it just comes back to your objective in the mechanism design. Is it softwood and hardwood or is it just plantations?⁴⁴

Changes to MIS

- 5.53 Whilst, as noted above, there is considerable agreement that MIS did little to support new long-rotation (sawlog) plantations, evidence suggests that the mechanism might be able to do so in future. As noted by Mr Ian Ruscoe of the Department of Agriculture, Fisheries and Forestry, legislative change in 2007 was aimed at ensuring that long-rotation plantations could be supported by MIS. In his words:

I think the government has made some conscious decisions to try to increase the amount of longer rotation plantations. Specifically there were additional changes to the tax law I think in 2007 that allowed secondary trading of your investment. That was put in place to try to encourage people to come in and invest for a period and then, when they thought the time was right, they could sell up and someone else could buy that investment and grow it through for 10 to 15 years to give us a longer rotation.⁴⁵

- 5.54 Other evidence supported this view. As described by Mr Richard Stanton, of the Australian Plantation Products and Paper Industry Council (A3P):

A provision was inserted into the amended legislation that allowed an investor to sell a plantation part way through its life and get the return on their investment that way, rather than waiting until the final harvest, and not lose their tax deduction. We thought that was a good mechanism to help encourage secondary markets in immature plantations under the MIS system, but it did not have a chance to run its course before we saw the other problems with MIS investment and corporate failure.⁴⁶

- 5.55 Ms Lisa Marty, of the Victorian Association of Forest Industries, supported the ability to trade MIS investments during the lifecycle of

44 Mr David Shelton, *Committee Hansard*, 24 August 2011, p.5.

45 Mr Ian Ruscoe, *Committee Hansard*, 15 June 2011, p.6.

46 Mr Richard Stanton, *Committee Hansard*, 25 May 2011, p.5.

long-rotation plantations,⁴⁷ and Dr Peter Volker, of the Institute of Foresters of Australia said that this kind of flexibility would be necessary to encourage long-rotation plantations through MIS.⁴⁸

- 5.56 As discussed above, the events of the global financial crisis have largely precluded a consideration of whether the secondary-trading amendments have encouraged long-rotation plantations. However, in time this will be possible.

Committee Comment

- 5.57 The Committee is aware of the broad range of views regarding the role of MIS in plantation expansion. Some see MIS as an unfair tax break; others see MIS as a way for plantations to compete on an equal footing with other investments. In either case, the Committee believes that MIS amounts to intervention by the Australian Government in the market, by changing the incentives and costs of investment in plantations. This does not mean that MIS is necessarily a good or a bad thing, but it must be assessed according to the objective it is intended to achieve. For this, there must be clarity about why such an intervention has been made.
- 5.58 For example, the Committee has heard considerable evidence alleging MIS failed to ensure that plantations were established in appropriate locations and with appropriate species. Many witnesses have, however, pointed out that the MIS mechanism was not originally designed to ensure that these decisions would be made appropriately.
- 5.59 The Committee believes that there are four steps for the Australian Government to determine whether MIS remains a viable way to encourage investment in plantations. These steps are, however, constructed around plantations rather than around MIS itself.
- 5.60 First, the objective must be identified: in this case, the encouragement of long-rotation plantations. Second, the best way to meet the objective must be determined: is it necessary and appropriate for government to provide an incentive to meet that objective? Third, the mechanism must be assessed: is MIS the best mechanism to meet that objective? Four, if MIS is the best mechanism to meet that objective, does it need to be altered to make it more effective? Each step self-evidently follows from the previous one: if a negative answer is found, then MIS is clearly not a viable way to encourage investment in plantations.

47 Ms Lisa Marty, Victorian Association of Forest Industries, *Committee Hansard*, 10 August 2011, p.8.

48 Mr Peter Volker, *Committee Hansard*, 24 June 2011, p.30.

Recommendation 10

- 5.61 The Committee recommends the Australian Government lead a process through COAG to create a national plan for plantations, to ensure that:
- plantations of appropriate species are planted in appropriate locations; and
 - appropriate regional infrastructure exists or is planned and funded.

Recommendation 11

- 5.62 The Committee recommends the Australian Government:
- decide whether the encouragement of long-rotation plantations is an appropriate objective of policy;
 - establish whether it is necessary and appropriate for government to provide an incentive to meet that objective;
 - if it is, set out a clear plan to meet that objective, according to the national plan for plantations;
 - assess whether MIS as a mechanism can meet that objective;
 - if MIS can meet that objective, determine whether it needs to be altered to make it more effective; and
 - if MIS cannot meet that objective, determine whether other mechanisms could do so.
- 5.63 Long-rotation plantations can be viable through the resources of various markets. A new market opportunity is available by generating credits for carbon sequestration, through the Carbon Farming Initiative, as discussed in Chapter 3.

Management

- 5.64 As frequently discussed during the inquiry, plantations must be carefully and actively managed over their life-cycle to produce particular timber and wood-products: this management is commonly referred to as 'silviculture'. As noted in the next chapter, farm forestry can be a tool of land management, ensuring that agricultural land is both productive and kept in good condition. Plantations can be used in the same way, assisting with the management of salinity for example.
- 5.65 Management must be specific to the product being produced. Submissions to the inquiry noted that many plantations have not been managed for sawlog production.⁴⁹ The Department of Agriculture, Fisheries and Forestry submitted that 'Less than 10% of hardwood plantations, perhaps no more than 5%, are managed for sawlog production.'⁵⁰ The remaining 90% or 95% of hardwood plantations are managed for lower-value products, such as woodchips.
- 5.66 There is considerable silvicultural expertise in Australia, but, as discussed in Chapter 8, Australia is continuing to rely on foreign-trained forestry professionals. Improving the domestic interest in forestry careers will help to ensure that Australia maintains the necessary skills to manage plantations for all kinds of products. This section of the chapter will discuss the role of thinning, the impacts of plantations on the local environment, and the impacts of plantations on the local community.

Thinning

- 5.67 Plantations that are managed for sawlogs are typically thinned at least once. Thinning involves the selective removal of some trees in a plantation in order to manage the growth of the remaining trees. According to the Institute of Foresters of Australia, 'softwood plantations need to be thinned at least once during the rotation to produce quality sawlogs of reasonable sizes, and the best sawlogs are produced from plantations that are thinned two or three times.'⁵¹ Many submissions discussed thinning trials and experimentation with different thinning regimes.⁵² Certain

49 Submission 23, Dr Glen Kile et al, p.3; Submission 70, NSW Forest Products Association, p.14.

50 Submission 59, DAFF, p.15.

51 Submission 84, Institute of Foresters of Australia, p.11.

52 Submission 36, Mr John Lord, p.5 & 13; Supplementary Submission 59.1, Department of Agriculture, Fisheries and Forestry, pp.1-6; Submission 39, CSIRO, p.9.

species being grown for 'appearance-grade' timber must also be pruned during the rotation.⁵³

5.68 The CSIRO submitted that, whilst there is considerable knowledge about suitable thinning and pruning regimes, the application of this knowledge to plantation management has been limited.⁵⁴

5.69 This is an important part of the plantation management, but it also means that plantation owners must find a use for 'thinnings'. Associate Professor J. Doland Nichols noted that:

A major challenge for us is to convince forest owners to thin - currently there is no market for wood chips within close proximity to most of these plantations. We also have no know uses for small logs. Thus the plantations stay unthinned, meaning that they are unlikely ever to produce good sawlogs.⁵⁵

5.70 At the moment, thinnings are often exported as woodchips, without any further processing in Australia.⁵⁶ New technology allows logs to be 'peeled' much earlier, providing a new market for thinning. New technologies will enable plantations to be more profitable and encourage improving management. This issue will be discussed further below, in the final section of the chapter.

Environmental impact of plantations

5.71 As noted in the first section of this chapter, there is some community concern about the impact of plantations on competition for water. Additional concerns have been raised about the impact of plantations on the local environment, including specific concern about single-species plantations (monocultures). However, plantations can also play a positive role in improving the local environment.

5.72 One submission alleged chemical contamination of water catchments as a result of aerial spraying of plantations.⁵⁷ Another submission stated that:

the impact of the toxic products released by large acreages of monoculture exotic eucalypt plantations on ecosystem health and

53 Dr Christopher Harwood, *Committee Hansard*, 22 June 2011, p.3.

54 Submission 39, CSIRO, p.9.

55 Submission 32, Associate Professor J. Doland Nichols, p.4.

56 Submission 70, NSW Forest Products Association, p.17.

57 Submission 100, Western Rivers Preservation Trust, p.5.

water quality has not been addressed with full and contemporary risk assessments.⁵⁸

- 5.73 However, there is no simple rule for or against monocultures as opposed to mixed plantings. The appropriateness of a particular kind of plantation will depend on its location and context. As noted during a public hearing:

We tend to the view that diverse systems are always more robust and better to have than single monocultures, but that does not mean to say that there are not places where single species plantations can play an important role in a range of areas. The important issue with that is around making good, wise, sensible location decisions, and those decisions need to take consideration of the other impacts...and things like other pollutants – like the management of nutrients, pesticides and the like into adjoining waterways.⁵⁹

- 5.74 Some submissions discussed the possibility for plantations to have a positive effect on biodiversity:

plantations of all sorts can provide habitat for native birds and mammal species associated with forests, woodlands and open country. Plantations can make a positive contribution to biodiversity conservation and hence sustainable landscapes. These contributions can be enhanced through measures such as planting blocks, planting close to remnants, retaining remnants within the plantation, harvesting in patches to retain connectivity and including some rough barked species and understorey.⁶⁰

- 5.75 The Department of Sustainability, Environment, Water, Populations and Communities agreed with this notion, but emphasised that the opposite could also occur if plantations are not properly managed:

Well managed plantations can contribute to maintaining biodiversity and providing ecosystem services...there is potential for the Australian forestry industry to extend environmental benefits through plantation configuration (for example, expanding biodiverse native tree plantings where appropriate), the location of plantations in the landscape (for example, to provide additional ecological connectivity) and their on-going management. Conversely, poorly implemented plantations may have negative

58 Submission 97, Tasmanian Public & Environmental Health Network, p.2.

59 Mr Mark Flanigan, *Committee Hansard*, 6 July 2011, p.6.

60 Submission 15, North East Firewood Strategy Implementation Committee, p.5. See also Submission 50, *Farmed Forests of the North East*, p.7;

impacts on biodiversity, such as native vegetation clearing and ecosystem fragmentation.⁶¹

- 5.76 The CSIRO also pointed out the potential for plantations – planted in the right area – to increase available freshwater by reducing salinity:

Plantations can also impact on salinity and have been suggested as an attractive tool to help manage salinity in land and rivers.

Plantations established in salt source catchments such as those in the headwaters of major river systems, may have a net positive impact on freshwater supplies.⁶²

- 5.77 Australian Forest Growers note that plantations can play other positive roles, including reducing runoff during storms, which can ‘lessen flood damage, landscape erosion and river siltation.’⁶³

- 5.78 Above all, it is clear that there is no simple, straightforward way to characterise the impact of plantations on the local environment. There are obviously some places where plantations are not suitable land-uses. In places where plantations are suitable, each plantation must be carefully planned, and sensitively integrated into its local environment. Dr Charles Zammit, of the Department of Sustainability, Environment, Water, Populations and Communities, summed up some major considerations:

The first part is the mix of plantings – the biodiversity versus the monoculture. Encouraging the industry to, where it can, mix the plantation species has an environment benefit. It can also allow you to get a diversity of product. If you structure it carefully there is room for diversity of product mix from a more diverse pool and different species of trees. [The second part is]...around planning in the region and the careful location of plantations in the context of regional land use planning for a range of benefits, including things like corridors, adaptation to climate change and so on. The third [part] is the ongoing efforts around stable forest management – thinking about the systems for managing fire, weeds, water runoff and all of those sorts of questions.⁶⁴

61 Submission 71, Department of Sustainability, Environment, Water, Populations and Communities, p.3.

62 Submission 39, CSIRO, p.10.

63 Submission 81, AFG, p.12.

64 Dr Charles Zammit, *Committee Hansard*, 6 July 2011, p.9.

Community impact of plantations

5.79 Two major community impacts from plantations will be discussed in this section – the impact on economic growth, and the impact on social dislocation. As noted in other sections of this report, it is essential for the forestry industry to maintain and improve its social licence. In order to ensure a viable future, the industry must have the support of the Australian community.

Economic growth

5.80 A case study from the *State of the Forests Report 2008*, based on the ‘great southern region’ of Western Australia, suggested that plantations had both a direct and indirect regional economic impact:

...it is estimated that 17 jobs are created for every \$1 million spent in the forest industry. In addition, each direct job produces 0.7 indirect jobs in the region, as well as employment outside the region when goods and services are imported from elsewhere. The region generally experienced either rural population growth or reduced rates of rural population decline between 1991 and 2004 due to the expansion of the plantation estate...The supply of local independent employment in the forest sector and the integration of plantations with multiple forms of land use have contributed to a diverse economic base that has helped stabilise the population and improved prospects for long-term economic growth in the region.⁶⁵

5.81 Australian Forest Growers submitted that ‘plantation establishment can contribute significantly to stable economic growth while at the same time conferring added environmental protection in regional areas.’⁶⁶ However, Farmed Forests of the North East suggest that ‘this growth tends to mainly accrue in regional centres and where plantation expansion is rapid, may be perceived negatively by the community and give rise to social conflict.’⁶⁷

5.82 Dr Jacki Schirmer cautioned against viewing economic benefits in simplistic ways:

The eucalypt and softwood plantations making up the majority of Australia’s current plantation estate generate more jobs in total

65 *State of the Forests Report 2008*, p.170.

66 Submission 81, Australian Forest Growers, p.19.

67 Submission 50, Farmed Forests of the North East, p.5.

than broadacre sheep and beef grazing and cropping. However, they only generate more jobs once plantations are mature and enter a cycle of harvesting and replanting, and when the downstream processing generated after harvest is included in the analysis. Jobs in the plantation industry are typically located in regional towns and cities, whereas agricultural jobs are typically located in smaller towns and on rural land, indicating that a shift to plantations is accompanied by a change in the location of employment. This means that there is no simple 'positive' or 'negative' impact of plantation expansion on jobs: some regions will benefit from job growth, and others will experience net loss of jobs, as a result of the establishment of plantations on land previously used for agriculture.⁶⁸

Social dislocation

5.83 Some submissions have spoken of the social dislocation that can follow plantation expansion. Examples include Private Forests Tasmania:

Plantation developments have often caused localised levels of concerns in rural communities due to concerns about the loss of agricultural land and social dislocation as farming families move from the area impacting on the viability of local community services.⁶⁹

Australian Forest Growers:

a key area of identified concern is the social dislocation of communities purportedly as a result of the establishment of broad scale plantations. While AFG continues to hold the view that these concerns are at least overstated it remains the case that substantial variation to traditional land use 'offends' many rural communities.⁷⁰

And Timber Queensland:

Recent expansion of the plantation estate in some regions has caused friction with other traditional industries and resulted in generally poor community acceptance of plantations. These

68 Submission 118, Dr Jacki Schirmer, p.2-3.

69 Submission 92, Private Forests Tasmania, p.7.

70 Submission 81, Australian Forest Growers, p.20.

conflicts have been particularly prevalent in north Queensland, where plantations have been established on former cane land.⁷¹

- 5.84 Timber Communities Australia has cited research undertaken by Dr Jacki Schirmer, finding that:

plantation establishment on a large scale does have some social impacts in the short term but this has to be weighed against the fact that rural populations are declining in many areas, regardless of the establishment of plantations...Where plantation establishment is accompanied by wood processing industries, the socio-economic benefits to the region can be significant. Schirmer has identified the timber industry as a significant factor in population increases in Tumut and Adelong, at a time when many other towns in the region are suffering declines.⁷²

- 5.85 The impact of plantations on local communities is varied, and as noted at the start of the chapter, the forestry industry must actively work to ensure that the negative impact is minimised, and the positive impact amplified. If the community sees financial benefits for the region as a whole, it will be more prepared to accept well thought-out plantation enterprises.

Committee Comment

- 5.86 This report has highlighted a number of important issues for the future of plantation management. Each of these areas is fundamental to both the viability of plantations – including long-rotation plantations – and the necessary improvement in forestry’s social licence.
- 5.87 The active management of plantations through thinning and pruning is central to viable plantations, and it relies on the professional expertise of foresters. It is unfortunate that some plantations have not been properly managed, and that the valuable timber and wood resource therein has not been fully utilised. The Committee values the professional expertise of foresters, and looks forward to seeing that expertise used to remedy some of the poor plantation management of the past.
- 5.88 A plantation can have a real impact on the local community. During one of its site inspections, the Committee was shown a small rural hamlet that was all but deserted, in part due to a new plantation. Social dislocation is not an inevitable result of plantation expansion, and there is no hard-and-fast rule about whether a plantation will be beneficial or detrimental. The

71 Submission 65, Timber Queensland, p.5.

72 Submission 35, Timber Communities Australia, p.9.

plantation sector of the forestry industry must make sure that it is actively engaged with local communities, in order to build trust and make sure that new plantations do not cause social dislocation.

Products and innovation

5.89 This inquiry's terms of reference include 'opportunities for diversification, value adding and product innovation'. Plantations are the source of many varied timber and wood-products, and there is potential for greater and more efficient production through innovation. As noted above by Associate Professor J. Doland Nichols, there are currently by-products of plantation thinning that do not have a market, and hence thinning is not always performed. To be strong, flexible and competitive well into the future, plantation forestry must find new and more efficient ways to process all resources coming out of plantations.

5.90 The submission from the Department of Agriculture, Fisheries and Forestry includes numerous examples of current research into 'diversification, value adding & product innovation', and many of these projects relate to plantation timber.⁷³ This research is vital as it is not possible to simply substitute plantation sawlogs for native forest sawlogs in all cases. For example, the shorter rotation of plantation logs means that they are much smaller than native forest logs. The CSIRO submission points out that native forest sawmills could not always process plantation sawlogs without mill changes. It continues:

Substantial investment is required to modify sawing equipment and drying methods. Appropriately modified processing systems should be able to operate profitably while paying an acceptable log price to plantation growers.⁷⁴

5.91 This was reiterated by Dr Glen Kile et al, who submitted that :

...the properties of the potential [plantation] sawlogs are different from the mature native forest resource and the current processing schedules and technology require further development to enable profitable processing.⁷⁵

73 Submission 59, DAFF, Appendix C, pp.43-51.

74 Submission 39, CSIRO, p.9.

75 Submission 23, Dr Glen Kile et al, p.3.

5.92 And, as the CSIRO also notes, this kind of investment and innovation relies on the security of plantation sawlog supply.⁷⁶

5.93 Some submissions criticised the perceived decline of investment in innovation, particularly in recent years. Dr Glen Kile et al claim that:

The last decade and particularly the last five years have seen a steady decline in investment in forest and forest products research and development capability and capacity. This has occurred in all State Governments, CSIRO, and Universities and in industry. Short sighted cost cutting that targets research capability as the first target has become all too common.⁷⁷

5.94 Professor Philip Evans describes five past 'innovations' were critical to the development of the forest products industry:

- chemical pulping of eucalypts;
- high temperature drying of pine;
- machine stress grading of pine;
- wood-fibre-reinforced cement composites; and
- advanced breeding and selection technology for pine.⁷⁸

However, Professor Evans adds that 'many of the key elements of an 'innovation system' to support the forest products industry were once present in Australia. The same is not true today.'⁷⁹

5.95 There are other trends that underline the need for continued innovation, including the declining value of woodchips,⁸⁰ the export of low value products and the import of high value products,⁸¹ and the difficulty attracting investment to long-rotation plantations. According to evidence from Mr Michael Bayley, further innovation will enable plantation timber and wood-products to be of the highest value possible:

In terms of a priority of plantation processing options we really should be prioritising sawn timber, followed up by engineered products, followed up by a pulp mill with a paper mill attached,

76 Submission 39, CSIRO, p.9.

77 Submission 23, Dr Glen Kile et al, p.6.

78 Submission 29, Professor Philip Evans, p.2.

79 Submission 29, Professor Philip Evans, p.2.

80 Submission 68, Future Farm Industries Cooperative Research Centre, p.1.

81 Submission 14, Mr Andrew Lang, p.2.

followed up by a pulp mill for export pulp, export woodchips, then at the bottom of the barrel is whole log exports.⁸²

- 5.96 In addition, many submissions and witnesses have mentioned the potential for plantation products to be used for energy production: this will be discussed in Chapter 7, below.

Committee Comment

- 5.97 The Committee has discussed innovation in many parts of this report, and it has an important role to play across the forestry industry. Evidence has frequently underlined the dynamic role that innovation plays: finding additional or new high-value uses for a plantation resource not only provides additional income (often long before the plantation is harvested) but it can also encourage better plantation management.
- 5.98 The Committee is keen to see innovation and new technologies developed and taken up across the forestry industry. New technologies including the use of lasers, processing methods for thinnings and prunings and other innovations will continue to make the industry more flexible, efficient and dynamic.
- 5.99 The Committee believes that Australia should make every effort to export high-value products. This is an enormous challenge, particularly when Australian processors and manufacturers have foreign competitors with lower costs (and often lower standards). The forestry industry must rise to this challenge, so that Australia's plantations are not harvested merely for woodchips, which are the lowest value product. Ongoing innovation, driven and led by a competitive and forward-looking industry will ensure that Australia can produce better products in a more efficient way, helping to secure the long-term viability of plantation forestry in Australia.
- 5.100 Australian timbers are unique, and there will be increasing opportunities in future to develop and market specialty products grown in plantations. This will be an opportunity for diversification, giving the forestry industry additional products for both domestic and international markets.
- 5.101 Certification will also enable plantation forestry to increase the value of its products, gaining additional market access both in Australia and overseas. As noted in other parts of the report, certification provides assurance of the sustainability of timber and wood products, and certified plantation products will be more competitive in the marketplace.

82 Mr Michael Bayley, *Committee Hansard*, 1 June 2011, p.13.

5.102 The Committee understands the need for private investment in the forestry industry. Whilst MIS have lost support at the moment, there needs to be a means by which MIS or a new investment scheme can be developed, implemented and overseen to enable the expansion of medium- and long-rotation plantations around Australia.

Farm forestry

Introduction

- 6.1 Farm forestry involves a holistic approach to integrating trees into a farming landscape. Farm forestry has a regional emphasis, with rural and regional Australia well placed to take up the opportunities it provides. In essence, farm forestry provides an opportunity for farmers to get into forestry, whilst continuing to reap benefits from their traditional farming activities.
- 6.2 The Committee took evidence on the opportunities for farm forestry, the benefits it can provide, and mechanisms for encouraging it. Some submitters were practising farm forestry and offered examples of their experiences.¹ The Committee also received evidence from groups that advocated expanded farm forestry.²
- 6.3 This chapter deals with the following areas of farm forestry:
- integrated land use;
 - planting, including species and finance;
 - management, including thinning;
 - benefits, for the farm, the local environment, the local economy and the local community; and

1 Submission 40, NUFG; Submission 42, OAN and MTG.

2 Submission 81, AFG; Submission 14, Mr Lang; Submission 50, FFORNE; Submission 13, South Coast Environment Group, p.1; Submission 107, IFA Western Australia Division, p.8; Ms Carmel Flint, NEFA, *Committee Hansard*, 1 September 2011, pp.9-10; Mr Michael Bayley, TWS, *Committee Hansard*, 1 June 2011, p.7.

- products and processes, including scaling, aggregation and the supply chain.
- 6.4 The conclusion addresses mechanisms for supporting farm forestry, including innovation, financial support for planting, extension services and the Caring for Our Country initiative.

Harvest flexibility

- 6.5 Farm forestry provides harvest flexibility. While plantation forests and agricultural crops have strict harvest timeframes for economic or production reasons, forests on farms do not necessarily have to be harvested in any given year. Farm forestry trees are intentionally integrated into farmland and provide multiple benefits whilst growing, in addition to the potential for harvested timber and wood products. If the harvesting of trees is delayed, they continue to grow, often becoming more valuable, and continue to provide incidental benefits to the farm.

Integrated land use

- 6.6 Integrating different land uses – particularly forestry and agriculture – is a way of maximising productivity and minimising risk. Well-planned integration of trees or forests can compliment agricultural systems.³ The Committee heard evidence that integrating different land uses is an ongoing activity, not a ‘trees in, trees out’ equation.⁴ The Committee heard evidence that these land uses should not be considered to be in competition.⁵
- 6.7 The Committee received evidence from Mr Andrew Lang, Director of the SMARTtimbers Cooperative, that integrated farm forestry could substantially increase the forest area in Australia:

We can develop a model of integrated farm forestry that would result in up to 10 million ha of dispersed woodlots being planted across existing farms ...⁶

- 6.8 In addition, Mr Lang contended that farm forestry increased land productivity:

³ Submission 39, CSIRO, pp.15-16.

⁴ Mr James Williams, NUFG, *Committee Hansard*, 10 August 2011, pp.27-28.

⁵ Submission 40, NUFG, p.5; Submission 81, AFG, p.27; Submission 92, PFT, p.11.

⁶ Submission 14, Mr Andrew Lang, p.1.

Where the planting is integrated into a farm layout as a multi-purpose planting (a wide strip woodlot possibly with some mixture of species) for shelter, habitat, aesthetics, wood, biomass, salinity mitigation, carbon sequestration, etc) the space planted should be more than offset by a lift in overall farm productivity.⁷

6.9 Mr Lang also noted that as trees are not a single-year crop, farm forestry has the potential to:

... provide an alternate income that is not [linked] to regular agricultural cycles.⁸

6.10 This element of risk management was reiterated to the Committee by Mr Andrew Stewart, Coordinator of the Otway Agroforestry Network (OAN). Mr Stewart also noted the multiple benefits of integrated land uses:

As a farmer I am probably more passionate about agroforests than at the beginning because I now see more advantages coming out of the woodwork in different ways. It is just a fantastic opportunity; if we can get the policy settings correct we can have all these wonderful advantages in a multidimensional landscape which has food security and robust and resilient landscapes in the face of climate change, and that whole risk management perspective would be catered for.⁹

6.11 The submission by Australian Forest Growers (AFG) concluded that farm forestry is:

... an elegant solution.¹⁰

6.12 A representative of Private Forests Tasmania (PFT) reiterated that private forestry has the potential to make a substantial contribution to the Australian forestry industry, and called farm forestry:

... 'a sleeping giant'.¹¹

⁷ Submission 14, Mr Andrew Lang, p.3.

⁸ Submission 14, Mr Andrew Lang, p.6.

⁹ Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.24.

¹⁰ Submission 81, AFG, p.17.

¹¹ Mr Tom Fisk, PFT, *Committee Hansard*, 28 June 2011, p.22.

Planting

- 6.13 Farm forestry demonstrates that trees can and should be planted for multiple purposes, including the harvesting of timber and wood products. The Committee heard that the key issue for farmers when considering planting trees for production farm forestry was the confidence or certainty in a market.¹² This will develop with time. This aspect is discussed in the scaling, aggregation and the supply chain section of this chapter. The Committee also heard evidence relating to species and finance.

Species

- 6.14 The Committee heard evidence on species selection and breeding. Species need to be suitable for the location and conditions in which they will be grown. The Committee heard numerous examples of species selection and viability. Some examples of this came from farm forestry groups in Victoria, providing evidence on suitable species for their regions. This demonstrates that species selection is a complex and important issue for farm forestry.
- 6.15 Mr Phil Dyson, Technical and Scientific Program Leader of the Northern United Forestry Group (NUFG), indicated that *Eucalyptus occidentalis* (Flat-topped Yate or Swamp Yate) is productive in saline areas.¹³ Mr James Williams, Member of the NUGF, also nominated *Eucalyptus cladocalyx* (Sugar Gum) as a versatile structural timber product.¹⁴
- 6.16 The submission from Farmed Forests of the North East (FFORNE) noted that farm forestry could grow the major plantation species in Victoria, *Eucalyptus globulos* (Tasmanian Blue Gum) and *Pinus radiata* (Radiata Pine), as well as *Eucalyptus cladocalyx* (Sugar Gum, particularly in low rainfall areas), *Corymbia maculata* (Spotted Gum), *Eucalyptus muellerana* (Yellow Stringybark), *Acacia melanoxylon* (Blackwood), *Eucalyptus tricarpa* (Red Ironbark, also in low rainfall areas) and *Eucalyptus camaldulensis* (River Red Gum).¹⁵
- 6.17 The Committee heard from Mr Lang that research and development into seed production has not been consistently supported.¹⁶ Mr Stewart noted

12 Mr Andrew Lang, SMARTtimbers, *Committee Hansard*, 10 August 2011, p.36; Submission 81, AFG, p.5, p.7.

13 Mr Phil Dyson, NUGF, *Committee Hansard*, 10 August 2011, p.29.

14 Mr James Williams, NUGF, *Committee Hansard*, 10 August 2011, p.29.

15 Submission 50, FFORNE, p.3.

16 Mr Andrew Lang, SMARTtimbers, *Committee Hansard*, 10 August 2011, p.35.

that the OAN maintains a seed orchard, with some trees also being managed for sawlogs.¹⁷ Mr Rankin indicated that there were seed orchards in the Bendigo area.¹⁸

- 6.18 The CSIRO provided evidence on the work on species that it has been involved with:

CSIRO and others have invested in testing and domesticating tree species suited for farm forestry beyond the traditional plantation regions over the last 15 years, especially in the temperate wheat-sheep belt. Parallel work has been carried out to develop appropriate silviculture, and to match the species under development to different site types. Improved breeds of trees now exist that are suited to a diverse and geographically large area of farmland in southern Australia (Harwood et al. 2007).¹⁹

- 6.19 The evidence that the Committee received about species selection demonstrates the need for further research and development to indicate appropriate species for different locations and to continue tree breeding to improve the characteristics of available species.

Finance

- 6.20 The Committee heard evidence that farmers are held back by the cost of planting trees. Estimates varied depending on requirements such as fencing, but Mr Dyson and Mr Lang both indicated a cost of \$2,000 per hectare.²⁰ Mr Perry noted that small plantations, which farm forestry focuses on, have proportionally higher costs than large plantations.²¹

- 6.21 Representatives of the OAN noted that although there might be a large initial outlay, a narrow focus on harvest yield is not as applicable to multiple-use forests as it is to single-use forests.²² Mr Reid noted that farm forestry can be envisaged as a natural capital asset:

... if you look at the trees as part of the farming infrastructure – like putting in a laneway or even building a shearing shed – the structure of the forest on the property reduces the risks of the

17 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.18.

18 Mr Ian Rankin, NUFG, *Committee Hansard*, 10 August 2011, p.32.

19 Submission 39, CSIRO, pp.15-16.

20 Mr Phil Dyson, NUFG, *Committee Hansard*, 10 August 2011, p.32; Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, p.35.

21 Mr Howard Perry, NUFG, *Committee Hansard*, 10 August 2011, p.32.

22 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, pp.20-21; Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.21.

farming system and complements the farming system. It is therefore a capital asset.²³

The Committee notes that there are some areas needing further clarity about the treatment of such assets by the taxation system, including in relation to depreciation.

6.22 Mr Lang also noted that the economics of farm forestry is different to the economics of landscape forestry, as farm forestry does not displace production.²⁴ This view that farm forestry is a capital investment and not simply a crop is linked to the concept of integrated land use and the multiple benefits farm forestry can provide.

6.23 Private Forests Tasmania (PFT) advocates the use of joint ventures to make it feasible for landholders to engage in private forestry (farm forestry and other private forest developments):

Developing new forests requires considerable upfront investment and the maintenance and protection of these forests can also be expensive. Many landowners do not have the financial resources to sustain this type of development on their farms. For many years industrial forestry companies developed joint ventures with private landowners whereby proportional ownership of the forest crop was based on the relative value of inputs to the development by each party, including the value of the land. Importantly, the resulting link with a market gave the landowner some confidence to participate in this style of forestry.²⁵

6.24 To increase farm forestry planting, Australian Forest Growers (AFG) suggests possible options such as 150% tax deductibility, infrastructure or plantation bonds, direct grant funding, concessionary taxation provision at for-harvest income.²⁶ Mrs Diana Lloyd, Director of AFG, explained why the organisation supports a greater level of tax deductibility:

AFG promotes a model whereby integration of trees into existing and ongoing farming systems would attract a greater level of tax deductibility to offset the disincentive of the establishment cost and long period until harvest.²⁷

23 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.20.

24 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.36.

25 Submission 92, PFT, p.6.

26 Submission 81, AFG, p.16.

27 Mrs Diana Lloyd, AFG, *Committee Hansard*, 24 June 2011, p.14.

- 6.25 The Committee received evidence to suggest that joint ventures or leasing land to forestry companies could provide the required finance for farm forestry investments.²⁸ This would assist in the expansion of the farm forestry estate, however it may not suit all farmers. The Committee encourages multiple approaches to farm forestry finance, depending on the requirements of individual farmers.

Management

- 6.26 The management of farm forestry plantings has two facets – management for production and management for the farm. The Committee heard that management is essential if the aim is to produce high quality sawlogs. Thinning and pruning are most important for high value products such as sawlogs, and less important for low value products such as pulp.²⁹
- 6.27 Farm forestry has harvest flexibility when compared to industrial forestry, as trees are providing multiple benefits while growing. The Otway Agroforestry Network (OAN) particularly noted that time is not a constraint for sawlog production.³⁰
- 6.28 The Committee also received evidence that a well-managed farm forest can be ‘worth owning’ as a forest, providing benefits to the farm while appreciating in value. The potential for production remains, but there is not a predetermined time for harvesting:
- If silvicultural management (thinning and pruning) complements other values (biodiversity, fires protection, grazing, aesthetics etc) there is little cost in maintaining the option of a future harvest of high quality logs. Indeed, if a forest is worth owning, there is less pressure for a premature harvest.³¹
- 6.29 The potential for production farm forestry depends on effective management techniques. These techniques can be taught through farm forestry extension services, which are often provided by local organisations. This will be discussed towards the end of the chapter.

28 Submission 81, AFG, p.16; Mr Phil Townsend, DAFF, *Committee Hansard*, 15 June 2011, p.12.

29 Mr Philip Dyson, NUFG, *Committee Hansard*, 10 August 2011, p.27; Mr Howard Perry, NUFG, *Committee Hansard*, 10 August 2011, p.32.

30 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.18, p.25.; Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, pp.18-19.

31 Submission 42, OAN and MTG, pp.10-11.

Thinning

6.30 The Committee received evidence regarding thinning practices, markets and machinery. Mr Lang indicated that thinning could and should be done sustainably, to protect the surrounding environment:

... if you are going to be thinning those trees, you want to have the shelter in them. [in one example] the farmer has put two rows of biodiverse plantings that will stay there when the inner trees are thinned, so the wind is still going up and over the top.³²

6.31 Mr Lang also noted that a market is developing for thinning products:

We know we have worked out a system for thinning, for marketing and for getting some money back – and there is light on the horizon for getting money back from thinning, maybe through bioenergy or through a better way of selling firewood and other material. That first and second thinning is selling into either the firewood market or the post and pole market; there is scope.³³

6.32 A concern raised by other farm forestry organisations regarded the machinery required for thinning. Mr Ian Rankin, President of the Northern United Forestry Group (NUFG), explained that he had needed to adapt machinery to perform small-scale thinning:

... I ended up managing to purchase a second-hand piece of equipment and having it reengineered to make it into a small harvester so I could then mount it onto a smaller excavator, which I run as an earthmoving business. It would be great if some of these other companies that bring in the big industrial equipment started focusing on the smaller-scale harvesting and smaller-scale machinery, because it is starting to get more popular and it will become more popular for the smaller plantations.³⁴

6.33 The relative absence of machinery for small-scale farm forestry operations, particularly for thinning, reveals a gap in the market. While the Committee encourages adaption and innovation, this machinery is available overseas. One way of purchasing machinery could be for farm foresters to form cooperatives and share the machinery as it is required.

32 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.37.

33 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.36.

34 Mr Ian Rankin, NUGF, *Committee Hansard*, 10 August 2011, p.32.

Benefits of farm forestry

6.34 The Committee found that there are many, varied benefits of farm forestry. The Committee is encouraged by the opportunities that farm forestry can provide to farms, as well as the local environment, economy and community. Additionally, farm forestry provides an opportunity for farmers to improve resilience and sustainability through diversification, innovation and risk management.

6.35 Mr Andrew Stewart, Coordinator of the Otway Agroforestry Network (OAN), stated that farm forestry provided flexibility for farmers as well as benefits to multiple sectors:

So over time you get this mosaic of different activities suiting the needs of the farmers, industry gets its scale, government gets its outcome and we retain our rural communities and they are supported.³⁵

Farm benefits

6.36 Farm forestry has many benefits to individual farms. These fall into three categories: land and water quality, economic and aesthetic.

6.37 Land and water quality benefits include:

- improving biodiversity and ecology;
- reducing windspeed;
- preventing and mitigating wind erosion;
- protecting crops and providing shelter for stock;
- producing seed and controlling pests;
- reducing evaporation;
- preventing and mitigating water erosion;
- addressing excess groundwater and dryland salinity;
- preventing and mitigating land degradation; and
- sequestering carbon.³⁶

35 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.23.

36 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.18, p.21; Submission 81, AFG, p.2; Submission 40, NUFG, p.5; Submission 39, CSIRO, pp.15-16; Submission 14, Mr Andrew Lang, p.3; Submission 42, OAN and MTG, p.5.

- 6.38 These land and water quality benefits then flow on to the local environment, as discussed below.
- 6.39 Economic benefits include an opportunity for diversification, risk management, innovation, longer rotation crops and superannuation.³⁷ Another economic benefit is the appreciating value of well-managed forests:
- We argue that, rather than just being a crop, forests are a capital asset, part of the landscape or farm infrastructure.³⁸
- 6.40 The submission from Northern United Forestry Group (NUFG) highlights the diversification opportunities available to farmers through farm forestry:
- Farm forestry, as opposed to broad acre plantation forestry, affords landholders the opportunity to have ‘a foot in several camps’.³⁹
- 6.41 Aesthetic benefits include making the farm a ‘nicer’ place to live and work, which can also have financial benefits, as indicated by NUGF⁴⁰. This was also noted by Mr John Lord:
- Dr Jacki Schirmer and her students from the Australian National University conducted research that showed that well placed plantings of trees on farms around Canberra added 30% to the capital values of the farms investigated. They found this increase in value had nothing to do with any change in the farms’ productive capacity: it was due to the aesthetics. This (at least) 10% is available “for free” because of the non wood benefits, notably the shelter effect the trees provide. These benefits become apparent from when the trees are only a few years old. A farm with shelter belts is a much nicer environment in which to work on a bad weather day. The livestock and grass and crops behave as though they appreciate it too.”⁴¹
- 6.42 Farm forestry affords farmers the opportunity to build resilience through land and water quality, economic and aesthetic benefits. These benefits also apply more broadly to the local environment, local economy and local community.

37 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.21.

38 Submission no. 42, OAN and MTG, p.7.

39 Submission no. 40, NUGF, p.5.

40 Submission no. 40, NUGF, p.5.

41 Submission 36, Mr John Lord, p.12.

Local environmental benefits

6.43 Farm forestry provides various benefits to the local environment. In addition to the benefits briefly mentioned above, the Committee heard evidence on wildlife corridors, salinity mitigation and waterway restoration.

6.44 Wildlife corridors enable animals to more easily move from one habitat to another.⁴² As noted, this is a public benefit of farm forestry:

Enhanced protection of flora and fauna is a public benefit. All of the discussion around those public benefits at the moment is looking at corridors of vegetation that link this bunch of public land with that bunch of public land and provide the ability for flora and fauna to move across the landscape.⁴³

6.45 Mr Lang also noted that the planting of wood lots has seen the return of resident populations of grey kangaroos to areas around Ballarat.⁴⁴

6.46 The Committee heard evidence from Northern United Forestry Group (NUFG). The organisation rehabilitated land affected by dryland salinity at Kamarooka, Victoria. The saline water table had risen, degrading the landscape and preventing crops from growing. NUGF planted halophytic (salt-tolerant) vegetation on the most saline land, and mixed acacia and eucalypt plantations on the less saline land. These plantings lowered the water table, reducing the salinity of the land and restoring agricultural productivity.⁴⁵ NUGF emphasised the environmental and community success of the ongoing project:

The NUGF Kamarooka project demonstrates that production can be achieved through the integration of trees, halophytic vegetation and traditional agriculture. Moreover, it demonstrates what can be achieved when local communities work together to restore the land.

6.47 Waterway restoration is another environmental benefit that can be provided during thinning or at harvest. Mr Reid explained the principle of harvesting trees and leaving the top of the tree in the creek to restore degraded waterways:

42 Submission 92, PFT, p.8.

43 Mr Philip Dyson, NUGF, *Committee Hansard*, 10 August 2011, p.27.

44 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.35.

45 Submission 40, NUGF, pp.9-10.

We could probably sell the top for pulp, but it is hardly worth doing. [...] Research from CRC for Catchment and Hydrology has proven that we do not have enough deadwood [large woody debris] in our waterways to create the habitat elements and the stream dynamics traditionally there. Planting trees alone on the banks does not create that; it has to be created either through time or management. And there is no reason why management of this type cannot hasten the period it takes to get that woody debris in the waterway.⁴⁶

- 6.48 As Mr Reid noted, this is a practice suited to the management of creeks that run through privately owned farmland. Improving the ecological health of waterways has wider environmental benefits. These examples show that carefully managed farm forestry can have positive impacts on the local environment.

Local economic benefits

- 6.49 Farm forestry also provides benefits to the local economy, particularly additional income for farmers and employment for locals.⁴⁷ These employment opportunities are generally located in rural and regional Australia. Mr Lang indicated that the SMARTtimbers Cooperative generated extensive economic benefits for the local area:

... we have generated maybe \$1 million worth of gross income for the product, but we have spun off another half a million to the truckers, the fellers, theprofilers, the mills and so on. It shows that a very, very small production can still have a major impact. People react to seeing that genuine product flow rather than just talk about a product flow sometime in the distant future.⁴⁸

- 6.50 Developing local industries and economies can provide positive local community benefits.

Local community benefits

- 6.51 Farm forestry provides benefits to the local community, particularly in rural and regional Australia. Community engagement is a vital component of ecologically sustainable forest management. Farmed Forests of the North East (FFORNE) advocates involving the community in farm

46 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.18.

47 Submission 81, AFG, p.2; Submission 92, PFT, p.11.

48 Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, p.37.

forestry, stating that farm forestry can reduce conflict over land and water.⁴⁹

- 6.52 Another community-based farm forestry group, NUFG, emphasised the local scale and local initiative that was important to that community's success with farm forestry:

We are fairly passionate about community based farm forestry. What does that mean? It means groups like ourselves actually take the initiative and go out there and try to bring it all together at a local community scale, because that is the scale that we work at and we are quite good at that.⁵⁰

- 6.53 FFORNE also indicated that an increase in farm forestry would improve the level of understanding of the forestry industry and its benefits, thus reducing conflict between the industry and the community. Additionally, FFORNE stated that rural communities see farm forestry as beneficial and positive.⁵¹ Farm forestry not only benefits the community, but community involvement and integration has real benefits for the forestry industry. The Otway Agroforestry Network (OAN) and Master TreeGrower Program (MTG) also stated that involving the farming community would generally build community support for the forestry industry.⁵²

Products

- 6.54 Various harvested wood products can be produced through farm forestry, as one of the end benefits of integrated land use activities. The Tasmanian Farmers and Graziers Association's (TFGA) view on production forests was that trees provide benefits over their lifespan, but that trees must be seen as ultimately a crop to be harvested. Replanting after harvest makes forests sustainable.

Our philosophy is that, if you have to plant a tree, eventually, when it comes to the end of its life or its most optimum time, it should be able to be utilised for some income. That way it becomes a perpetual business.⁵³

49 Submission 50, FFORNE, p.1.

50 Mr Philip Dyson, NUFG, *Committee Hansard*, 10 August 2011, p.29.

51 Submission 50, FFORNE, p.5.

52 Submission 42, OAN and MTG, p.2.

53 Mr Ian Dickenson, TFGA, *Committee Hansard*, 28 June 2011, p.23.

- 6.55 As Mr Dickenson, Member of the Forestry Reference Group, TFGA, added, farm forestry and private forestry cannot rely on government or philanthropic support for tree planting.⁵⁴ Farm forestry can produce rough-sawn and finished wood products such as firewood, decking, boardwalks, building poles, jetty poles, posts, fencing, pulpwood and veneers.⁵⁵ Wood waste can also be used for bioenergy, for example, local wood waste could be used to generate electricity for local towns or cities.⁵⁶
- 6.56 Mr Reid notes the opportunities for farmers to provide high-value products such as sawlogs, because of the harvest flexibility:
- With regard to plantations, I have done a lot of work with various people right around Australia on growing eucalypt sawlogs. It is clearly possible but, when it comes to long rotations, we know that time improves the quality of timber and it improves the economics with regard to the viability of harvesting. Time is clearly the issue that confronts many investors in forestry: they are not prepared to do it. My view has always been that we need to find people in the community prepared to wait. We have suggested that farmers might be the ones. We also need to find people prepared to wait for durable timbers in marginal areas, which may take longer. So if they are prepared to wait, we can get a suite of values that cannot be delivered by conventional forestry in plantations.⁵⁷
- 6.57 In addition to wood products, farm forestry can also produce non-wood forest products, such as seed, honey and mushrooms.⁵⁸

Scaling, aggregation and the supply chain

- 6.58 The small scale of farm forestry can mean that relative costs are higher and outputs are lower than large scale forestry. Small scale productions face increased costs along the entire production chain.⁵⁹ The success of farm forestry also depends on access to markets.⁶⁰ This is particularly difficult for small, diverse and dispersed farm forestry operations, as domestic and

54 Mr Ian Dickenson, TFGA, *Committee Hansard*, 28 June 2011, p.23.

55 Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, pp.34-35; Mr Philip Dyson, NUFG, *Committee Hansard*, 10 August 2011, p.27; Submission 50, FFORNE, p.3.

56 Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, p.35; Mr Philip Dyson, NUFG, *Committee Hansard*, 10 August 2011, p.27.

57 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.18.

58 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.18.

59 Submission 92, PFT, p.5.

60 Submission 81, AFG, pp.6-7; Submission 40, NUFG, p.5.

export wood processing industries seek large, ongoing resource supply and security.⁶¹ Boral Timber confirmed that it does source some timber from farm forestry, but noted that this option was constrained by the fragmentation of the resource and the lower management standard compared to state forests.⁶² Additionally, inadequate infrastructure in rural and regional areas can inhibit production.⁶³

- 6.59 However, targeting niche markets and engaging in value-adding practices can provide farm forestry with a competitive advantage in the market.⁶⁴ Dr Jacki Schirmer provided a summary of the economic advantages and disadvantages of small scale farm forestry:

In general, farm forestry presents challenges for economies of scale. It can be highly successful for growing small scale high quality products sold into niche markets, or lower cost products that are easily harvestable and/or sold into local markets. It is unlikely to be able to compete in terms of large scale wood production for commodity products, due to difficulty in achieving the economies of scale required to lower production costs to a level where farm forestry wood products are competitive.⁶⁵

- 6.60 Mr Lang gave the example of small scale farm forestry in Scandinavia and noted the absence of machinery required for this type of forestry in Australia. He stated that SMARTimbers has:

... been looking at the machinery and other gear for doing thinning, lift pruning et cetera [...] I am in Scandinavia once a year at the moment. Scandinavian forestry is generally small scale, harvests of one to two hectares, using these thinning-size machines that there is only one of in Australia. It was brought out on the initiative of the owner. The sorts of machines that are available in Sweden and Finland are the sort of thing that we need to get. That has to be done preferably by a contractor. It needs to be an owner-operator. It is a bit tricky moving things from place to place."⁶⁶

- 6.61 The Committee heard that cooperative approaches to localised farm forestry are gaining momentum. These approaches mean that equipment

61 Submission 99, A3P, p.41.

62 Mr Keith Davidson, Boral Timber, *Committee Hansard*, 21 September 2011, p.7.

63 Mr Warwick Ragg, AFG, *Committee Hansard*, 24 June 2011, p.15.

64 Submission 50, FFORNE, p.4.

65 Submission 118, Dr Jacki Schirmer, p.10.

66 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.35.

can be shared and tasks can be contracted out.⁶⁷ Representatives from the OAN noted that cooperative approaches have the added benefit of building a sense of community.⁶⁸

Case study—Otway Agroforestry Network

6.62 The Otway Agroforestry Network (OAN) is a community landcare organisation that promotes the integration of trees into farms through education and awareness programs. The Committee heard evidence from representatives of the OAN, farm foresters themselves, providing an overview of the organisation's aims and progress:

... we always focus on looking for opportunities to fit forestry – or multipurpose tree growing, we like to say – within the farming landscape rather than replacing the farming landscape, which has been a bit of the model to date.⁶⁹

6.63 This approach focuses on improving the sustainability and resilience of farms and farmers:

Our emphasis has always been on looking at the farming issues first, such as erosion, and saying how could forestry actually deliver outcomes that the farmers want, so what you see is forests almost in the mirror image of where a plantation forester would put them and manage them for multiple outcomes through that process. The real question is: can that be commercial? In marrying these two or three benefits – agricultural, environmental and timber production – this is the point that we are currently at.⁷⁰

6.64 Mr Stewart also reiterated that the organisation has demonstrated that forestry can be complimentary to agriculture, giving the example of increases in production on his farm:

We are producing the same number of livestock and the same quantity – 90 tonnes – of sheep meats and so on, but we are also producing 200 tonnes of trees for commercial benefit into the future; and there is a complementarity there.⁷¹

67 Mr Ian Rankin, NUFG, *Committee Hansard*, 10 August 2011, p.33.

68 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.24; Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.24.

69 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.17.

70 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.17.

71 Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, pp.18-19.

Case study—SMARTimbers Cooperative

- 6.65 The Committee heard evidence from Mr Andrew Lang, Director of the SMARTimbers Cooperative, explaining the Cooperative's creation of a localised forestry sector. Mr Lang provided a brief history of the Cooperative:

SMARTimbers started in 2002. It had a prior process going back to about 1996 through the Colac office of the DPI, where we were looking at sugar gum. This is a very successful lower-rainfall species that was growing all around us, and no-one was using it for anything other than firewood. It proved that you could grow quality saw logs on poor country with lower rainfall without a problem, even when it was unmanaged. We began buying logs off woodcutters and we would get them milled up. We turned them, firstly, into furniture timbers and then we realised that the market was really in the decking, flooring and cladding area, where you could produce with a much larger process. Where we start the tour tomorrow looks at that side of it.

- 6.66 Mr Lang noted that it was difficult to get funding, but explained that the existence of a market led to an increase in farm forestry plantings in the local area:

The outcome was that from 2002 until about 2008 this timber – this particular species that had not been planted in farm forestry across southern Australia since 1936 – became the most planted lower-rainfall eucalypt species in WA, South Australia and Victoria to the extent that about 8,000 hectares has been planted off a base of zero. It just shows what the response is when landowners or maybe state government or the networks get a sign that there is some reason to have confidence in a timber species and an approach.⁷²

- 6.67 The Committee conducted inspections in the Ballarat area in the company of Mr Lang. These included visits to a sugar gum seed orchard, various farm forestry operations, a mill and an electric gasifier. These inspections demonstrated that a local cooperative can plant, manage and harvest trees for farm, environmental, economic and community benefits, as well as to produce forest products and generate energy.

72 Mr Andrew Lang, SMARTimbers, *Committee Hansard*, 10 August 2011, p.34.

Conclusions—supporting farm forestry

6.68 The Committee heard evidence indicating that the take up of farm forestry has been limited, despite government investment.⁷³ As noted above, the provision of and access to appropriate regional infrastructure is fundamental for commercially viable farm forestry to be widespread. This is a matter that will need a cooperative inter-governmental approach, and the Committee believes that COAG is best placed to agree a national plan for the provision of, and access to, enabling infrastructure for farm forestry.

Recommendation 12

6.69 **The Committee recommends the Australian Government, through COAG, lead a process to agree a national plan for the provision of, and access to, enabling infrastructure for farm forestry.**

6.70 Less tangibly, the expansion of farm forestry will also rely on further innovation, and the provision of extension services to increase farmers' knowledge of farm forestry practices, and opportunities to get involved. Supporting farm forestry particularly involves engaging with local community organisations and using existing Government programs, such as the Australian Government's Caring for Our Country initiative.

Innovation

6.71 The Committee received extensive evidence suggesting different priorities for innovation, particularly through research and development.⁷⁴ Much of this evidence emphasised the need for research to be practical and outcome-focused, such as species selection, harvesting practices and development of suitable machinery. Mr Reid indicated that research did not necessarily have to be expensive, original research, but needed to utilise existing resources and form practical solutions:

We need to engage the research more with the farming community, looking at what some of the issues are. For example,

73 Submission 75, Professor Peter Kanowski et al, p.3; Submission 11, Mr Peter Rutherford, pp.4-5; Submission 27, Heartwood Plantations, pp.4-5; Submission 59, DAFF, p.22; Submission 118, Dr Jacki Schirmer, p.10.

74 Mr Andrew Lang, SMARTtimbers Cooperative, *Committee Hansard*, 10 August 2011, p.35; Mr James Williams, NUGF, *Committee Hansard*, 10 August 2011, p.31; Ms Lisa Marty, VAFI, *Committee Hansard*, 10 August 2011, p.9; Submission 14, Mr Andrew Lang, p.2; Submission 81, AFG, p.29.

the harvesting of trees in sensitive land care planting is a research question about how you can do it in a way that enhances outcomes rather than threatening some of the biodiversity outcomes. These questions are still there. It should pick up from hydrology, salinity and biodiversity research [...] It is a matter of bringing information together and engaging with the farming community to explore how that might be relevant to them. That is really important.⁷⁵

- 6.72 The Committee was encouraged by local organisations that had conducted research and engaged with the local community about results. Members of the Northern United Forestry Group (NUFG), for example, report on environmental data collected in the local area at the organisation's monthly meeting. Due to high levels of interest, the organisation is investing in an education centre to further connect research with the community.⁷⁶

Financial assistance for planting

- 6.73 The Committee received some evidence indicating that direct incentives are not the best way to support farm forestry; rather that government support needs to be indirect and delivered over time. One suggestion from OAN was to support 'peer group mentoring' through the Master TreeGrower Program.⁷⁷ This is a way of providing financial assistance to existing local organisations. However, larger organisations called for financial incentives for establishment, as farm forestry is a 'sunrise' industry.⁷⁸ Some evidence expressed support for joint ownership structures to encourage investment.⁷⁹

Extension services

- 6.74 The Committee heard evidence calling for improved extension services for farm forestry, utilising state agencies or organisations, and existing localised support networks.⁸⁰ The Committee heard evidence on the benefits of the Master TreeGrower Program. This is an initiative that:

75 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.20.

76 Mr Philip Dyson, NUFG, *Committee Hansard*, 10 August 2011, pp.31-32.

77 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, p.19; Mr David Curry, OAN, *Committee Hansard*, 10 August 2011, p.20.

78 Mr Warwick Ragg, AFG, *Committee Hansard*, 24 June 2011, p.16.

79 Submission 42, OAN and MTG, p.12.

80 Mr Andrew Lang, SMARTimbers Cooperative, *Committee Hansard*, 10 August 2011, p.34, p.36; Mr Ian Rankin, NUFG, *Committee Hansard*, 10 August 2011, p.30; Mr Howard Perry, NUFG,

... trains leading tree growers and pays them to support others in their community through the development and management of multipurpose forests has proved popular with farmers and appears to be delivering real on-ground impacts.⁸¹

- 6.75 The Master TreeGrower Program is aimed to 'build capacity' and aims to involve the community in developing concepts and making decisions about land management.⁸² It also involves 'peer group mentoring', a way of enhancing knowledge and skills as well as building relationships in local communities.⁸³ Mr Peter Rutherford highlighted the importance of engaging farmers and building relationships:

A lack of the necessary understanding of how integration can be achieved is not widely held in the broader farming community. An aging farming population exacerbates this situation. Successful examples commonly involve landowners who have an enthusiasm for the diversification and integration of farming operations and who also establish alliances with likeminded farmers and with potential purchasers of the forestry outputs.⁸⁴

- 6.76 The Institute of Foresters of Australia supports this program, and called for its expansion:

The Master Tree Growers programme has been successful training for farmers but limited in extent. Support of expansion and acceleration of the Master Tree Growing programme potentially in collaboration with Universities should be encouraged.⁸⁵

- 6.77 Other groups, such as Private Forests Tasmania (PFT), provide one-on-one extension as well as holding open days to showcase integrated land use:

There are many farmers who are aware of the value of private forestry and the potential for that to contribute to their farming businesses and to their communities, but there are far more who are still, I believe, unaware of that opportunity. One of the objectives I have for our organisation is to operate at a higher level, where we work with progressive farmers who have adopted

Committee Hansard, 10 August 2011, p.30; Submission 90, VAFI, p.14; Submission 92, PFT, p.5; Submission 99, A3P, p.12. Submission 42, OAN and MTG, p.16;

81 Submission 42, OAN and MTG, p.16.

82 Submission 42, OAN and MTG, p.16.

83 Mr Rowan Reid, OAN, *Committee Hansard*, 10 August 2011, pp.19-20; Mr Andrew Stewart, OAN, *Committee Hansard*, 10 August 2011, p.20.

84 Submission 11, Mr Peter Rutherford, pp.4-5.

85 Submission 84, IFA, p.22.

a forestry integrated approach in their landscape and have developed extension type activities, where we can have large field days where we can invite many people to see the benefits of private forests integrated into farming and the benefits that accrue to their other activities so that we can touch the lives of as many farmers as possible.⁸⁶

- 6.78 Furthermore, farm forestry requires local communities to be engaged in decision-making. The Committee received substantial evidence recommending that farm forestry be supported by partnerships between local organisations and natural resource management agencies.⁸⁷
- 6.79 The Committee received evidence calling for governments to support local community organisations or cooperatives as a means of promoting farm forestry, supporting research and development, and providing extension services.⁸⁸

Caring for our Country initiative

- 6.80 DAFF's submission also indicated the broader approach to landscape-scale conservation through the Caring for our Country initiative:

Through the Caring for our Country initiative, in the Sustainable Farm Practices national priority area the Australian Government has committed to improving landscape scale conservation through farmers adopting activities that contribute to the ongoing conservation and protection of biodiversity. Farm forestry, as a land use, is recognised as contributing to this outcome and support is available to groups, including regional natural resource management bodies to assist farmers implement farm forestry.⁸⁹

- 6.81 The Australian Plantation Products and Paper Industry Council's (A3P) submission to the inquiry called for these government initiatives to be promoted and delivered:

... resourcing and implementation of the Farm Forestry National Action Statement, and official recognition that commercial trees in farm forestry enterprises can contribute to achieving the objectives of Caring for Our Country ...⁹⁰

86 Mr Tom Fisk, PFT, *Committee Hansard*, 28 June 2011, pp.22-23.

87 Submission 94, TWS, p.3.

88 Submission 42, OAN and MTG, p.18; Submission 40, NUFG, p.4, p.6, p.10.

89 Submission 59, DAFF, p.30.

90 Submission 99, A3P, pp.18-19.

6.82 Farm forestry supports at least three of the six National Priority Areas of the Caring for our Country initiative:

- sustainable farm practices (as noted above);
- biodiversity and natural icons; and
- community skills, knowledge and engagement.⁹¹

Activities to encourage and facilitate farm forestry should clearly be eligible for funding under this initiative.

6.83 The Committee believes that the Caring for our Country initiative should enable fences funded under landcare programs to be moved further away from riparian zones, enabling additional rows of trees to be planted for agroforestry purposes.

6.84 The Committee believes that the immediate and ongoing funding of extension services is one of the best ways to encourage greater uptake of farm forestry around Australia. The Master Tree Grower programme is a good model for extension, as it uses a peer-support structure, ensuring that knowledge is shared between farm foresters. By funding existing local networks and community organisations, governments can provide the kind of financial support that will enable farmers and farmers groups to drive the expansion of farm forestry across the country. Governments must make sure that the eligibility of farm forestry activities for such funding is explicit and well publicised.

6.85 In respect of the Australian Government, the Committee believes that Caring for Our Country is the best way to deliver this funding, and strongly encourages local organisations, land managers and farmers to engage with the Caring for our Country initiative.

Recommendation 13

6.86 The Committee recommends that the Australian Government, in concert with state and local governments, provide immediate and ongoing financial support to local organisations that provide extension services for farm forestry, particularly through the Caring for our Country initiative.

91 Caring for our Country website <<http://www.nrm.gov.au/about/caring/index.html>> (accessed 06/10/2011)

Recommendation 14

- 6.87 **The Committee recommends that the Australian Government explicitly state that Caring for our Country funding is available for farm forestry activities, and actively promote this fact to the broader community through an extensive information campaign.**

Committee comment

- 6.88 Farm forestry provides an opportunity for farmers to get into forestry. Farmers who integrate forestry into their land management activities are able to access many environmental and economic benefits. Many of the opportunities for farm forestry are substantial, and currently under recognised. There are also considerable benefits that go ‘beyond the farm gate’, including to the local environment, economy and community. Forestry on farms can be seen as a ‘natural capital asset’, and the Committee believes there should be greater clarity about how the taxation system treats this kind of asset, including in relation to depreciation.
- 6.89 There are many ways to encourage the expansion of farm forestry, but the Committee has focussed on two major possibilities: the Carbon Farming Initiative, and Caring for Our Country. In both cases, the Committee believes that further work is needed to ensure that these programs can effectively support farm forestry, and looks forward to seeing this work done.
- 6.90 The scale of farm forestry means that it is not immediately able to contribute a large volume of timber and wood products to the Australian and International market. However, the Committee believes that, given the right infrastructure and coordination, farm forestry can make a substantial contribution to Australia’s timber and wood products supply. In addition, there is a promising role for farm forestry in small, niche markets, as well as providing an opportunity for farmers to diversify, build resilience and invest in long-term assets.

- 6.91 The Committee would like to thank all the farm foresters who made submissions to the inquiry, and those who gave evidence at its hearings. The Committee was impressed by the passion and entrepreneurial spirit of these individuals and groups, and commends them for their contribution to both farming and forestry. Farm forestry is a very promising part of the forestry industry, and the Committee looks forward to seeing more of it in future.



The Committee before a public hearing in Grafton.

Using forestry biomass

7.1 As discussed in other chapters, there are considerable opportunities for some wood-waste products to be used to generate energy and to store carbon. The inquiry's terms of reference instruct the Committee to examine the 'potential energy production from the forestry sector, including:

- biofuels;
- biomass;
- biochar;
- cogeneration; and,
- carbon sequestration.'

7.2 These matters will be discussed in two sections: forestry bioenergy; and carbon sequestration.

Forestry bioenergy

7.3 Bioenergy production from the forestry industry involves biomass and biofuels. For the purposes of this discussion, Biomass refers to organic material – forest residues, trees and woody plants, grasses and agricultural residues – that can be used to produce energy. This can be done in two principal ways. First, biomass can be used as a direct fuel, for example for combustion. Second, biomass can also be used to produce a biofuel – a secondary fuel – such as biodiesel, methane or ethanol.

7.4 As noted by the Department of Agriculture, Fisheries and Forestry:

Biofuels and bioenergy can play an important role in expanding the range of renewable energy sources available in Australia. Australian state and territory governments have adopted comprehensive frameworks to ensure that environmentally responsible forest management practices underpin the use of wood residues for bioenergy.¹

- 7.5 There was considerable evidence to the Committee about the potential for 'waste products' from the forestry industry to be used as biomass or biofuel. There are a number of important aspects of forestry bioenergy that warrant discussion. They include environmental issues, the necessary supply chain to make forestry bioenergy economically viable, and the potential sources of biomass for forestry bioenergy.

Environmental performance

- 7.6 Because new biomass can be grown to replace used biomass, it is considered a renewable energy. As described by Bioenergy Australia:

During the energy recovery process, the carbon dioxide bound in the biomass is released to the atmosphere. Bioenergy is regarded as renewable, when the biomass resource consumed in the energy conversion process is replenished by the growth of an equivalent amount of biomass. Under the Kyoto Protocol bioenergy is regarded as carbon dioxide neutral.²

Hence, whilst biomass emits carbon dioxide when converted to energy, that carbon will be removed from the atmosphere as a replacement crop of biomass is grown. The carbon is in a cycle. This does not, however, account for the other gasses emitted when biomass is converted into energy.

Cogeneration

- 7.7 Cogeneration is the use of technology so that the various 'by-products' of energy production are captured and utilised, rather than being wasted. In the case of mill operations, biomass (waste products from timber processing) are often used as to heat boilers, to produce steam for the mill. However, the steam can also be used to run a turbine, and hence produce electricity.³ Mr Jim Bindon, of Big River Group, described how his mill in

1 Submission 59, DAFF, p.28.

2 Submission 43, Bioenergy Australia, p.2.

3 Submission 54, Ta Ann Tasmania, p.4.

Grafton had used cogeneration to capture extra energy from a forest-waste boiler system:

[We burn] mill waste. We already have a boiler and we already process steam to run our plant. We added a steam engine in the middle, which is the ultimate value-adding of the resource – it was free – in between⁴.

7.8 The Institute of Foresters of Australia submitted that cogeneration can be used to increase the efficiency of a mill, whilst also reducing the consumption of electricity from the grid:

With most mills lucky to recover 40% of log volume, generating power using mill residue as a fuel source creates two economic solutions to what would otherwise be expenses. An expensive aspect of processing in the softwood industry is seasoning and drying, using kilns. The heat generated in cogeneration can be used to drive seasoning plants while augmenting power supplies.⁵

7.9 Mr Andrew Lang, of SMARTtimbers Cooperative, noted that other possibilities exist for biomass to cogenerate electricity and heat. Technologies have been developed and utilised in many other countries:

The pattern in the Scandinavian countries is to use the heat energy for district heating (and for district cooling in summer). In Brazil and India the heat energy is commonly used by the generating industry, as well as some of the electricity.⁶

7.10 According to the Victorian Association of Forest Industries, cogeneration can produce up to 90 percent efficiency in energy generation.⁷ According to Mr Peter Rutherford:

Production of heat and electrical energy from biomass has been operating on a commercial basis in many overseas countries for many years. There are limited examples in Australia, as the relatively mild climate does not present the range of opportunities for combined heat and power plants that are available in cooler northern hemisphere countries.⁸

7.11 Mr Jim Bindon noted the considerable financial investment required to install cogeneration technology, and suggested that such investment relied

4 Mr Jim Bindon, *Committee Hansard*, 1 September 2011, p.48.

5 Submission 84, The Institute of Foresters of Australia, p.18.

6 Submission 14, Mr Andrew Lang, p.6.

7 Submission 90, Victorian Association of Forest Industries, p.32.

8 Submission 11, Mr Peter Rutherford, p.3.

on native-forest biomass being treated as renewable energy.⁹ This matter will be discussed further, in 'Sources of Biomass', below.

Biomass potential and supply chain barriers

7.12 The Future Farm Industries Cooperative Research Centre submission notes the considerable potential of bioenergy:

The potential scale of this new industry is dramatic; dozens of biofuels/bioenergy plants are possible across the Australian agricultural zone as energy tree cropping is developed alongside existing farming activities. Such development will occur over many years, and each new renewable energy/fuel plant will be a major, sustainable, new business in a regional community. It is estimated that fabrication and installation of each commercial plant will provide at least 200 man years of work. Once operational, biomass supply, plant operation and maintenance for each biofuels facility will create approximately 100 permanent jobs (direct and in-direct), including skilled, unskilled and professional roles.¹⁰

7.13 However, as discussed in the Chapter 6, on Farm Forestry, expanding a new sector relies on a number of conditions. These include the quality and provision of infrastructure, access to markets, aggregation of numerous smaller producers, and ongoing resource supply and security. Whether bioenergy production is done at a local or regional level – as baseload power¹¹ or otherwise – these factors will affect its viability.

7.14 As noted by Bioenergy Australia, some individual bioenergy projects are hampered by market uncertainty and supply issues:

The Committee should be aware that there are a number of bioenergy projects that have not as yet gone ahead for a variety of reasons, mainly due to the low and uncertain market for bioenergy and also difficulties and cost associated with fuel supply.¹²

7.15 Addressing these challenges is a central aim of Bioenergy Australia, a 'nation-wide government-industry alliance of some 83 organisations'. Two of its objectives deserve particular attention:

9 Mr Jim Bindon, *Committee Hansard*, 1 September 2011, p.48.

10 Submission 68, Future Farm Industries Cooperative Research Centre, p.6.

11 Submission 68, Future Farm Industries Cooperative Research Centre, p.6; Submission 14, Mr Andrew Lang, p.6; Submission 81, Australian Forest Growers, p.22.

12 Submission 43, Bioenergy Australia, p.13.

Broaden the market for biomass by enhancing opportunities, and by helping to reduce financial, regulatory, fuel supply, technical and institutional barriers to enable widespread adoption of biomass energy.

Facilitate the development and deployment of biomass energy business opportunities and projects.¹³

7.16 Australian Forest Growers have suggested that funding be made available for:

Research, development and extension into biofuel, bioenergy and Biochar technology, including upscaling the technology to a commercial scale. This upscaling must include options for regionally based utilisation of biomass at sufficient scale to be economically viable yet small enough to be effectively utilised locally.¹⁴

Sources of Biomass

7.17 Many submissions to the inquiry note that the viability of bioenergy is dependent on its treatment as renewable energy under the Renewable Energy Target (RET) scheme.¹⁵ Under the scheme, the generation of renewable energy entitles the generator to a certain number of renewable energy certificates. These are then sold to 'liable entities' (usually electricity retailers) who are obliged to acquire and then surrender a certain number of certificates each year.

7.18 The application of the RET to energy created by using native forest wood has been in a state of flux over the course of the inquiry. As noted by the Department of Agriculture, Fisheries and Forestry in April 2011, native forest wood waste was eligible for support under the RET according to the following conditions:

- biomass must be harvested primarily for purposes other than energy production;
- the value of the primary wood products must be greater than the value of other products resulting from harvesting (known as the 'high-value' test); and

13 Submission 43, Bioenergy Australia, p.1.

14 Submission 81, Australian Forest Growers, p.23.

15 Submission 90, Victorian Association of Forest Industries, p.3; Submission 72, Forest Industries Association of Tasmania, p.4; Submission 119, Australian Forest Products Association, p.1.

- forestry operations must be carried out in accordance with the principles of ecologically sustainable management.¹⁶

7.19 However, under the proposed *Clean Energy Future* plan announced in July 2011, native forest wood waste would no longer be an eligible source of renewable energy:

The Renewable Energy Target regulations will be amended to exclude biomass from native forest as an eligible renewable energy resource. This includes products, by-products and waste associated with or produced from clearing or harvesting of native forests, subject to appropriate transitional arrangements for existing accredited power stations.¹⁷

7.20 The legislation for the *Clean Energy Future* plan passed the House of Representatives on 12 October 2011, and will be considered by the Senate in late 2011.

7.21 Some evidence to the Committee criticised the change in policy, and called for native forest waste to continue to be eligible as renewable energy under the RET. The Australian Forest Products Association made a submission to the inquiry which stated:

AFPA is deeply concerned about the implications of this decision as such a policy reversal is not only inconsistent with the international science of the carbon neutrality of biomass - it places local wood based businesses at a competitive disadvantage compared with other renewable energy sources in Australia and with many overseas suppliers who have favourable bioenergy incentives. This is particularly the case in Europe where wood biomass represents a high proportion of total renewable energy. The RECs provide an additional market incentive for the use of wood biomass for renewable energy in Australia. The implications of such a policy would disadvantage native forest growers and managers (both private and public), any processors wishing to utilise native forest wood residues for bioenergy and other renewable energy facilities and producers which rely on such a feedstock.¹⁸

7.22 Similar views were expressed by some witnesses, including Professor Jerry Vanclay:

16 Submission 59, DAFF, p.28.

17 Securing a Clean Energy Future / The Australian Government's Climate Change Plan, July 2011.

18 Submission 119, Australian Forest Products Association, pp.1-2.

I am a little distressed at some of the current signals from government about not allowing the use of wood residues from forests and sawmills. I think that all of those wood residues should be used for bioenergy of one form or another and should be eligible as a renewable energy material. It is really important to get a sensible pathway to greenhouse reduction.¹⁹

- 7.23 Some submissions strongly opposed native forest waste being used to generate energy: 'Under no circumstances [should] such native forests be considered for energy production.'²⁰ According the MyEnvironment Inc, because of the 'lack of governance and sustainability in native forestry it is clear that any use of Native Forests for use in the production of energy would be immoral.'²¹

Committee Comment

- 7.24 The Committee believes that bioenergy from the forestry industry is a promising opportunity for the industry. As well as providing help to deal with climate change, and reducing Australia's reliance on fossil fuels, it provides another way for the forestry industry to diversify and contribute to economic growth in local areas.
- 7.25 Using the principle of cogeneration, it is also possible to ensure that as much energy as possible is captured and used from the use of biomass. This relies on technological innovation, and the Committee was pleased to visit mills during the Inquiry that have invested in this promising approach to energy.
- 7.26 As noted above, there remains a significant amount of work to be done by the industry, in order to identify the barriers to expansion of bioenergy, and to ensure that a secure fuel supply is maintained. Whilst the Government should be supportive of these efforts, the Committee believes that it is up to the industry to develop its own plan for the future of bioenergy, to ensure that it can expand and deliver benefits for the forestry industry and the broader community.
- 7.27 As for the question of native forest waste products being used to produce energy, the Committee is aware that recent policy change is yet to be fully implemented. As noted in Chapter 4, the Committee believes that the future of native forestry in Australia lies in high-value appearance grade

19 Professor Jerry Vanclay, *Committee Hansard*, 1 September 2011, p.2; see also, Dr Douglas Head, *Committee Hansard*, 1 September 2011, p.29;

20 Submission 73, Dr Prue Acton OBE, p.7.

21 Submission 73, MyEnvironment Inc, p.4.

and structural products. By ensuring that high value products are made, the use of native forest waste for energy production will be more viable.

- 7.28 The Committee is of the view that under any version of the RET (or similar scheme), bioenergy sourced from native forest biomass should continue to qualify as renewable energy where the biomass is a true waste product and does not become a driver for harvesting native forests. A workable definition of 'waste product' must also be clearly agreed and enacted, on which a Ministerial discretion can then rely.
- 7.29 If individual native forest bioenergy production satisfies those two criteria, the appropriate legislation or regulation should direct the Minister to grant an exemption from the native forest biomass exclusion.
- 7.30 The production of energy from native forest biomass should be subject to reporting requirements, to ensure that only true waste products are used. This should consist of reporting to the Minister's Department of biomass volumes used, energy produced and income generated. This will ensure that the use of native forest biomass is widely supported in the community, and will help build the social licence of forestry generally.

Recommendation 15

- 7.31 **The Committee recommends that, under any version of the RET (or similar scheme), bioenergy sourced from native forest biomass should continue to qualify as renewable energy, where it is a true waste product and it does not become a driver for the harvesting of native forests.**

Recommendation 16

- 7.32 **The Committee recommends that, if the above principles are adhered to, legislation or regulation direct the Minister to grant an individual exemption from native forest biomass exclusion.**

Recommendation 17

- 7.33 **The Committee recommends that, under any system of exemption from the native forest biomass exclusion, provision be made for reporting on biomass volumes used, energy used and income generated, to ensure that the biomass used is a true waste product.**

Carbon Sequestration

- 7.34 As noted throughout the inquiry, trees present an enormous opportunity to sequester carbon from the atmosphere. Across the forestry industry, there are ongoing efforts by individuals and groups to increase our understanding of how to best prolong the storage of carbon in trees and harvested wood. As noted in Chapter 3, understanding the entire carbon cycle through trees, timber and wood-products is a complex yet necessary task.
- 7.35 There is also a need for greater clarity about the carbon storage profile of old and young forests. The Committee is aware that young forests – growing quickly – sequester carbon more quickly than old forests. However, established forests contain carbon that has been progressively sequestered over a long period of time. Understanding the carbon stored and added to forests over time is important for making good decisions about forestry and climate change.

Biochar

- 7.36 Biochar is produced where biomass is subjected to pyrolysis, also resulting in the production of a secondary fuel gas. The biochar stores carbon, and can be used to improve agricultural soil:

Biochar is produced by burning biofuel in a retort with restricted oxygen supply. Approximately half of the biofuel is converted into a gas which can be used to power generating equipment with the remainder forming a charcoal-like material known as biochar. In agricultural applications this can be incorporated into the soil when sowing seed, and this enables the carbon in the biochar to be

locked up in the soil for many decades, potentially up to 100 years.²²

- 7.37 The Former House of Representatives Standing Committee on Primary Industries and Resources reported on Biochar in its 2010 report titled *Farming the Future: The role of government in assisting Australian farmers to adapt to the impacts of climate change*. That report included discussion of the benefits of biochar for agriculture.²³

Integration of biochar with forestry and agriculture

- 7.38 The submission from the CSIRO detailed current research into biochar, from the points of view of both forestry and agriculture:

CSIRO is currently undertaking research into the potential application of biochar to agricultural soils. This research is addressing both the role of biochar in soil carbon sequestration and as an amendment to improve soil health. An important aspect of the work is assessing differences in the physical and chemical properties of biochar produced from different feedstock sources, including various types of wood based biomass, and how they behave in soil...Understanding the characteristics of biochar is key in matching biochar products to their end-use. There is currently no information available as to the effects of biochar applied to forest soils. This is an important area that needs to be investigated as it would be of interest to avoid large transport distances for biochar made from plantation harvest residues and instead apply it close to its source and production.²⁴

- 7.39 That submission also outlined areas of priority for further research, including:

- Identification of the most cost-effective methods of harvesting and transporting of various biomass feedstocks;
- The potential impact of biorefineries producing high-value petrochemical compounds in addition to energy;
- Further research on the physical and chemical properties of different biomass types, which determine feedstock quality; and

22 Submission 84, The Institute of Foresters of Australia, p.18.

23 House of Representatives Standing Committee on Primary Industries and Resources, *Farming the Future: The Role of Government in Assisting Australian Farmers to Adapt to the Impacts of Climate Change*, p.50-52.

24 Submission 39, CSIRO, p.13.

- Characterisation of chemical, physical and biological properties of biochar products from different types of forestry residues that relate to their potential end uses.²⁵

7.40 There are numerous current research and development projects around Australia, looking into the best way to integrate the production and use of biochar into both forestry and agriculture. For example:

Research at Curtin University has moved close to optimising the production of fuels from mallee biomass combined with a biochar as a potential additive to soils.²⁶

Australian companies such as Pacific Pyrolysis, Crucible Carbon, AnthroTerra are now developing pyrolysis technologies for the co-production of biochar and energy applications (mainly power).²⁷

Greening Australia, with support from a major corporate foundation, is investigating the second generation biofuel potential of locally native eucalypts and acacias in western Victoria. We are also investigating the value of biochar that is commonly a secondary product of pyrolysis that generates biogas (or syngas).²⁸

and

The Renewable Oil Corporation (ROC) is an Australian company that can convert woody biomass into liquid fuels and biochar using fast pyrolysis. ROC proposes to build the first biofuel plant in the South-West of Western Australia, which could lead to multiple plants that use farm grown woody biomass thereby boosting regional investment and employment.²⁹

Committee Comment

7.41 Biochar is an exciting new use for forest by-products, and looks to be of great benefit both to forestry and agriculture. A considerable amount of research is currently being conducted into biochar production and use, and the Committee looks forward to seeing a much bigger role for it in future.

25 Submission 39, CSIRO, p.13.

26 Submission 106, Oil Mallee Association, p.3.

27 Submission 43, Bioenergy Australia, p.12.

28 Submission 31, Greening Australia, p.6.

29 Submission 68, Future Farm Industries Cooperative Research Centre, p.27.

Forestry into the future

- 8.1 Throughout this report, the Committee has focussed on new forestry opportunities, both for today and in the future. The Committee firmly believes that the future of Australian forestry is bright, and looks forward to seeing those in the industry take advantage of those opportunities. This final chapter will outline some of the possibilities for the industry in the future, as well as policies that will be necessary to help the industry fulfil those possibilities.

The future of forestry

- 8.2 Over the course of the inquiry, the Committee has been impressed by the passion and commitment of individuals and groups throughout the forestry industry. This passion and commitment will be key to forestry taking up the opportunities of the future, and many of these opportunities can be found across different parts of the industry.
- 8.3 New methods of forest planning and management are continually making an impact on the forestry industry, and this will enable the industry to be more efficient and flexible in the future. Innovative approaches to planting, thinning and harvesting are presenting forest managers with the ability to grow trees faster, and for different end products than in the past. Ongoing research and development will provide the forestry industry with the most effective and up-to-date forest management practices.
- 8.4 Many Australian timbers are prized for their unique qualities and, over time, further markets for these timbers will develop. In addition to the inherent value of Australian timbers, new investments and new methods of processing will enable the industry to add value to all products that come out of Australian forests. Full realisation of the total value of a tree

will be an important part of the future. Native forestry plays an important role supporting rural and regional communities, providing opportunities for employment, skills development and financial investment. This role can increase in future, given the other trends identified in this section.

- 8.5 The integration of forestry into other land uses is an exciting opportunity to increase the productivity of land, as well as providing land owners with diversification, flexibility, and local economic and environmental benefits. Farm forestry has been described as a 'sleeping giant', and the Committee believes that it has the potential to contribute to every agricultural region in Australia.
- 8.6 The opportunities for timber as a building product will increase, as we move into a more carbon-constrained world. Whilst timber is currently used in certain parts of the building industry, new innovative uses for timber are being created all the time. Timber can be engineered to be used in many different applications, and as a renewable and carbon-storing building material, it has a clear advantage over many other building materials. The demand for timber in the construction industry is expected to increase in the years to come, and the forestry industry is well placed to benefit from this increased demand.
- 8.7 Forestry can play a major role in providing Australia with renewable energy. Forest waste can be used in many different ways to produce electricity, biofuels and to provide cogeneration for other applications. This is an opportunity that is just beginning to develop, and based on examples that the Committee has seen, it has the potential to transform electricity generation around Australia.

Making the future happen

- 8.8 The Committee has made a number of recommendations throughout this report, and they relate to four broad categories:
- security of supply from native forests;
 - addressing incentives in the forestry industry;
 - maturing of policies such as the Carbon Farming Initiative and Renewable Energy Target; and
 - support, information, education and extension services.

- 8.9 This report's recommendations must be acted on in order to make sure that the Australian forestry industry can take up the opportunities outlined above. There are also some areas of 'additional support' which will also be discussed. The Committee also makes a final recommendation about important areas for discussion amongst all Australian governments.
- 8.10 If the Australian forestry industry cannot meet the future demand for timber and wood products, continued and increased imports of wood will be necessary. As noted throughout the inquiry, this means that wood grown in less regulated and less sustainable forests overseas will be used to meet Australia's wood needs.

Recommendation areas

- 8.11 In relation to future demand for timber, it is necessary to assess what the likely future demand scenarios might be, and to find consensus on whether Australia should aim for wood supply 'self-sufficiency'.
- 8.12 It is also necessary to promote timber and wood products as replacements for more energy intensive materials. The carbon storage properties of timber and wood products should also be quantified, providing a national standard recognising timber's potential to remove carbon from the atmosphere.
- 8.13 The Carbon Farming Initiative should be developed so that it supports forestry in a nuanced way. A maturing policy could include support for numerous forestry activities. 'Additionality' must recognise the diversity of plantations and farm forestry applications, and 'permanence' could include the sustainable harvesting and replanting of plantations and farm forestry.
- 8.14 Existing RFAs should be renewed, including principles of review, consultation, evergreen extension and concrete timelines. The renewed RFA must be agreed at least three years before the expiry of the existing RFA, and the overall RFA regime must be renewed to ensure ongoing monitoring and periodic assessment of each renewed RFA.
- 8.15 There should be an evaluation of the concept of 'stewardship' payments to reward private forest owners for biodiversity outcomes in their forests. This should be funded through the market, so that wood producers are rewarded for products that come from forests where biodiversity is well managed.
- 8.16 The Australian government should decide whether the encouragement of long-rotation plantations is an appropriate objective of policy. If it is, then

it must be established whether it is necessary and appropriate for government to provide an incentive to meet that objective. It must also be assessed whether MIS is the best mechanism to meet that objective, and if so, whether it needs to be altered to make it more effective.

- 8.17 The expansion of farm forestry will rely on provision of, and access to, enabling infrastructure. This is an important policy challenge for all Australian governments. In addition, farm forestry (and extension services to support it) should be explicitly included for funding under Caring for Our Country.
- 8.18 The use of forestry biomass can be a sustainable way to provide renewable energy. The use of native forest biomass should be supported where it is a true waste product that does not itself drive harvesting of native forests.
- 8.19 These areas of action will help the forestry industry to take up the opportunities outlined throughout the report. In addition, there are priorities for 'additional support' discussed below.

Additional support

- 8.20 As noted above, there are further priorities for support that will enable the forestry industry to take up the opportunities above, and to ensure its viability in the long term. These are
- innovation;
 - professional education and training;
 - social licence; and
 - certification.

Innovation

- 8.21 A persistent theme of the inquiry focussed on the need for research and development in the forestry industry. These calls came from industry, community and environmental organisations, as well as academics. This need was identified across all areas of the industry, including native forestry, plantation forestry, farm forestry, product development and energy generation.
- 8.22 Partway through the inquiry, it was announced that Cooperative Research Centre (CRC) for Forestry was unsuccessful in its application for ongoing funding. The Committee is supportive of the work produced by CRCs and the competitive process for awarding funding to these groups. However, the fact that CRC for Forestry was unsuccessful in gaining ongoing

funding raises concerns that there may be a reduction in forestry research and development activities. This means that the industry must ensure that it continues to invest in forestry research and development, and to set its own priorities for necessary innovation.

Professional education and training

- 8.23 The forestry industry provides employment in rural areas, particularly in regions where the full cycle of planting, managing, harvesting, transporting and producing forest products take place.¹ The Committee heard that forestry is no longer a low-skill, high-risk industry; it is a highly technical and specialised one.² Despite the many and varied careers available in the forestry industry, labour and skills shortages persist. Evidence suggests that this is due to a growing mining sector, the rural and regional location of forestry employment, forestry's fragile social licence and the loss of professional forestry positions in research organisations.³
- 8.24 The Committee notes the importance of encouraging more students to undertake forestry degrees, particularly as the professional forester workforce is ageing.⁴ There is a particular demand for foresters in rural and regional Australia, and at the moment, this demand is being met by workers from countries such as Canada, New Zealand and South Africa.⁵
- 8.25 Evidence suggested that recent forestry graduates found employment in traditional forestry jobs as well as in other land-based agencies, such as Aboriginal land councils, catchment management authorities and national parks.⁶ As farm forestry expands, forestry graduates will be able to increasingly combine expertise in forestry with knowledge about numerous other land uses. Foresters will continue to develop broad, integrated and innovative skill sets, and this will support the future of the industry.

1 Submission 99, A3P, p.23.

2 Mr Bob Rutherford, Tasmanian Department of Infrastructure, Energy and Resources, *Committee Hansard*, 28 June 2011, p.5; Mr Michael Hartman, ForestWorks, *Committee Hansard*, 10 August 2011, p.11.

3 Submission 99, A3P, p.24; Professor Jerry Vanclay, SCU, *Committee Hansard*, 1 September 2011, p.3.

4 Mr Michael Hartman, ForestWorks, *Committee Hansard*, 10 August 2011, p.13; Mr Andrew Wilson, DAFF, *Committee Hansard*, 15 June 2011, p.7.

5 Mr Andrew Wilson, DAFF, *Committee Hansard*, 15 June 2011, p.7; Professor Jerry Vanclay, SCU, *Committee Hansard*, 1 September 2011, p.3.

6 Professor Jerry Vanclay, SCU, *Committee Hansard*, 1 September 2011, p.4.

Social licence

- 8.26 'Social licence' is generally defined as community acceptance of the costs and benefits of an industry's activities. In essence, it means that in addition to fulfilling all legal requirements, the industry has the support of the public.⁷ It was widely accepted that the forestry industry needs to improve its social licence and that this was partially due to the politicisation of forest management decisions.⁸ In the forestry context, this support must come from both rural and urban communities.⁹ A strong social licence could enhance employment opportunities, lessen social conflicts and provide industry with greater certainty. Social licence in the specific context of native forestry was also discussed in Chapter 4.
- 8.27 Social licence is a 'moving feast' – there will always be different opinions in the general community about particular industries, and there will never be absolute agreement about how those industries operate. However, the forestry industry can make a difference to its own social licence. One of the greatest sources of increased social licence can be the income that regional and rural communities see in their economy as a result of a vibrant forestry industry. Additionally, it can be promoted through forest certification.¹⁰ It was also noted that local community support for plantations could be garnered through 'good neighbour' charters.¹¹

Certification

- 8.28 The Committee heard extensive evidence on the merits of certification for forests and forestry products from various industry and community organisations.
- 8.29 Australian Forestry Standard Limited (AFSL) administers the Australian Standard for forest management (AS4708-2007) and for forest products chain of custody (AS4707-2006). Over ninety-five per cent (10.2 million hectares) of Australia's large production native and plantation forests are certified to the forest management standard by independent, accredited auditors.¹² Forest Stewardship Council (FSC) Australia operates interim forest management and chain of custody standards that certify over

7 Submission 35, TCA, p.3.

8 Mr Martin Adams, TCA, *Committee Hansard*, 24 June 2011, p.1-2; Submission 35, TCA, p.5; Submission no. 53, Dr Douglas Head, p.2.

9 Submission 38, Nature.Net Pty Ltd, p.3.

10 Submission 35, TCA, p.4; Mr Jim Adams, TCA, 24 June 2011, p.2, p.4.

11 Submission 35, TCA, p.9.

12 Submission 117, AFSL, p.2.

600,000 hectares of both native and plantation forests in Australia.¹³ FSC Australia is currently developing a national forest management standard that would be endorsed by Australian stakeholders and accredited by FSC International. FSC Australia requires upwards of \$1 million over the next two years to undertake this process.¹⁴

- 8.30 The Committee heard that certification of forest management and chain of custody can provide benefits in areas such as risk mitigation and international trade.¹⁵ Certification is the main way that the forestry industry can tell customers about the environmental, social and economic credentials of its products. It is one of the best ways for the industry to tell the 'good news story' about its sustainable practices. But certification is two-way communication: it also enables the industry to understand what consumers want to buy, the expectations they have about forest management, and the priority they place on intergenerational equity through sustainable forest management. The Committee encourages the industry to listen carefully to what the certification schemes are saying about customer demands, because that will help them to remain competitive into the future.

Committee comment

- 8.31 Given its understanding that the original development of AFS standards relied in part on financial support from the Australian Government, the Committee believes that financial support should be made available for the development of Australian FSC standards. The funding should be made available with the expectation that the standards are fully developed, implemented and approved by FSC International within five years.

Recommendation 18

- 8.32 **The Committee recommends that the Australian Government provide funding to FSC Australia to support the development of the proposed FSC national standard, with the expectation that the FSC national standard will replace the interim standard within five years.**

¹³ Submission 111, FSC Australia, p.2.

¹⁴ Submission 111, FSC Australia, p.3.

¹⁵ Mr Michael Spencer, FSC Australia, *Committee Hansard*, 17 August 2011, pp.2-3, pp.6-7.

A national discussion

- 8.33 As noted near the beginning of this report, the National Forest Policy Statement of 1992 is the fundamental reference point for forestry policy in Australia. The Committee fully supports the Statement, and believes that it has played an extremely important role in forestry in the almost two decades since it was agreed. There are three areas of policy that are not explicitly covered by the Statement, and the Committee believes that all Australian Governments should discuss ways to agree to national policies in these areas. Taken together, the Statement, the recommendations in this report, and the discussion areas below will provide a strong and comprehensive national approach to forestry.
- 8.34 The first area for discussion is the impact of and opportunities from climate change on forestry. It is important that Australia have a national approach to climate change and forestry. As noted throughout the report, there are numerous ways that climate change will impact on forestry, and the Committee is keen to see an agreed national policy that will set the context in which the industry will deal with this impact.
- 8.35 The second area for discussion is a national approach to farm forestry. As discussed in Chapter 6, there are a number of ways that governments can support the expansion of farm forestry. The Farm Forestry National Action Statement (of 2005), combined with the recommendations in this report, provide a good starting point from which to consider further agreement on supporting farm forestry's expansion.
- 8.36 The third area for discussion is around the likely future demand and supply scenarios, and the question of whether Australia should aim for wood supply security. As noted in Chapter 3, finding agreement on these issues will provide additional certainty to the forestry industry, and the Committee believes that these discussions must be considered as part of a national approach to forestry. In addition to the recommendation made in Chapter 3, the Committee believes that all governments should engage in broader discussions about how different demand and supply scenarios will affect the industry, at the local, regional and national level.



The Styx Valley, Tasmania.

Recommendation 19

8.37 The Committee recommends the Australian Government lead a process of discussions with all state and territory governments, to consider national approaches to:

- Forestry and climate change;
- Farm forestry; and
- Future wood product demand and supply.

Conclusion

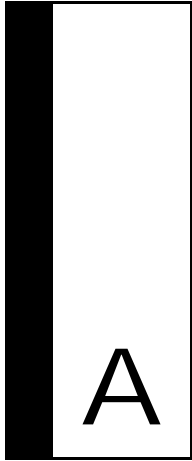
8.38 This inquiry has come at an important time for the forestry industry, and the Committee has been privileged to visit some of Australia's timber communities to talk about the future of the industry. One of the most important aspects of an inquiry is to spend time listening to people about the things they know best, and the Committee is grateful for the

contributions of all those who made submissions and attended hearings. The future of the forestry industry is full of promise and opportunity, and the Committee firmly believes that, with the right policy settings, the industry will be able to take advantage of each and every opportunity. The forestry industry will thus continue to play the important role it does in Australia's economy, particularly in rural and regional areas.

Hon Dick Adams MP

Committee Chair

16 November 2011



Appendix A – Submissions

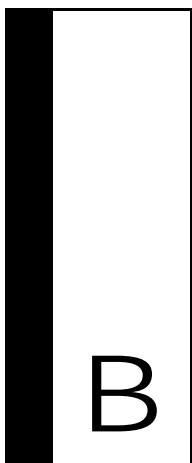
- 1 Dr Judith Ajani
- 2 New Forests Pty Ltd
- 3 FibreCell Australia Pty Ltd
- 4 South East Fibre Exports Pty Ltd
- 5 Clarence Environment Centre
- 5.1 Clarence Environment Centre
(Supplementary to Submission No. 5)
- 6 Name Withheld
- 7 General Engineering Pty Ltd
- 8 Mr Barrie Dexter
- 9 Port Macquarie-Hastings Council
- 10 Ms Bady, Nundra, Gaborov & Davis
- 11 Mr Peter Rutherford
- 12 Western Australian Forest Alliance
- 13 South Coast Environment Group
- 14 Mr Andrew Lang
- 15 North East Victorian Firewood Strategy Implementation
Committee
- 16 Forestry Tasmania
- 17 Mr John Shoobridge OAM
- 18 Prof Jerry Vanclay

- 19 Forests and Forest Industry Council of Tasmania
- 20 Mr Don Milligan
- 21 Dr Ian Price
- 22 South East Forest Rescue
- 23 Dr Glen Kile et al
- 24 Mr Alan Ashbarry
- 25 Huon Resource Development Group
- 26 Northern NSW Division of Timber Communities Australia and
School of Environmental Science and Management at Southern
Cross University
- 27 Heartwood Plantations
- 28 ForestWorks
- 29 Professor Philip Evans
- 30 North East Forest Alliance
- 31 Greening Australia
- 32 Associate Prof J. Doland Nichols
- 33 Mr Don Frankcombe
- 34 Regional Development Australia – Limestone Coast
- 35 Timber Communities Australia
- 36 Mr John Lord
- 37 Ms Lee O'Mahoney
- 38 Nature.Net Pty Ltd
- 39 CSIRO
- 40 Northern United Forestry Group
- 41 Furnishing Industry Association of Australia Vic/Tas
- 42 The Otway Agroforestry Network and the Australian Master
TreeGrower Program
- 43 Bioenergy Australia
- 44 AgriWealth Group

45	Ms Bree and Mr Allen Henson
46	Mr Terry Hunter
47	Mr Geoff Roberts
48	Cr Bob Loone
49	Mr Bruce Robinson
50	Farmed Forests of the North East
51	Delta Electricity
52	Regional Development Australia - Tasmania
53	Australian Solar Timbers
54	Ta Ann Tasmania
55	Mr Rod Henson
56	Big River Group
57	Clean Energy Council
58	Forest Growers' CEO Forum of Australia
59	Department of Agriculture, Fisheries and Forestry
59.1	Department of Agriculture, Fisheries and Forestry (Supplementary to Submission No. 59)
60	J Notaras & Sons Pty Ltd
61	Gippsland Environment Group
62	Mr George Harris
62.1	CONFIDENTIAL
63	Weathertex Pty Ltd
64	Dr Graeme Palmer
65	Timber Queensland Limited
66	Government of South Australia
67	Mr Alex Lindsay
68	Future Farm Industries CRC
69	Mr David Cameron

- 69.1 Mr David Cameron
(Supplementary to Submission No. 69)
- 70 NSW Forest Products Association
- 71 Department of Sustainability, Environment, Water, Population
and Communities
- 72 Forest Industries Association of Tasmania
- 73 Dr Prue Acton OBE
- 74 National Association of Forest Industries
- 75 Professor Peter Kanowski et al.
- 76 Department of Climate Change and Energy Efficiency
- 77 Mr Roderic O'Connor
- 78 Forest Industries Federation Western Australia
- 79 Timber Communities Australia - East Coast Branch
- 80 Timber Communities Australia - Tasmanian State Office
- 81 Australian Forest Growers
- 82 Timber Communities Australia, Bruny Island Primary Industries
Branch
- 83 Tasmanian Government
- 84 The Institute of Foresters of Australia
- 85 Hurford Hardwood Pty Ltd
- 86 Newells Creek Sawmilling Co
- 87 Mr JA Beale
- 88 Timber Communities Australia - Perth Branch
- 89 Construction Forestry Mining and Energy Union
- 90 Victorian Association of Forest Industries
- 91 Cr Lindsay Passfield
- 92 Private Forests Tasmania
- 93 Tasmanian Farmers & Graziers Association
- 94 The Wilderness Society

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- 95 Australian Forest Growers Northern NSW Branch
- 96 NSW Forest Products Association, Upper North East Branch
- 97 Tasmanian Public and Environmental Health Network
- 98 Mr Bernard Mace
- 99 Australian Plantation Products and Paper Industry Council
- 100 Western Rivers Preservation Trust
- 101 MyEnvironment Inc
- 102 Cr Ian Howard
- 103 Boral Timber
- 104 Queensland Government
- 105 Mr Robert Newman OAM
- 106 The Oil Mallee Association of Australia (Inc)
- 107 Institute of Foresters of Australia
- 108 Mr Peter Brenner
- 109 The Wilderness Society, Environment Tasmania and the
Australian Conservation Foundation
- 110 VicForests
- 111 Forest Stewardship Council
- 112 Dr Gordon Bradbury
- 113 Tasmanian Country Sawmillers' Federation
- 114 Dr Stuart Pearson and OFFCDT Nicole Allen
- 115 Victorian Government
- 116 Mr Graham Proctor
- 117 Australian Forestry Standard Limited/PEFC Australia
- 118 Dr Jacki Schirmer
- 119 Australian Forest Products Association (AFPA)
- 120 CONFIDENTIAL
- 121 Victorian Apiarists' Association Inc



Appendix B – Exhibits

- 1 Western Rivers Preservation Trust (WRPT)
Various materials
(Related to Submission No. 100)
- 2 CONFIDENTIAL
- 3 Forest & Wood Products Australia
Review of Policies and Investment Models to support continued Plantation Investment in Australia
- 4 The Wilderness Society, Environment Tasmania and the Australian Conservation Foundation
National Institute of Economic and Industry Research
(Related to Submission No. 109)
- 5 Australian Forest Growers
Material presented, Farm forestry Resource in Australia
- 6 Timber Communities Australia
Evidence of Campaign Against Tasmanian Forest Businesses
- 7 Forests and Forest Industry
Aiden Flanagan, Australian native forest management: Sound or capricious policies
- 8 Tasmanian Country Sawmillers' Federation
S.P & S.E Rice Sawmillers, Log grading for forest industry transition into plantation
- 9 Tasmanian Country Sawmillers' Federation
Ike Kelly OAM, Some history of our industry as I know it.
- 10 Mr Andrew Lang
Improving economics of small scale farm forestry processing for grower groups

- 11 Forest Growers CEO Forum
Future Wood Supplies from Plantations
- 12 Legislative Council Government Administrative Committee
Report - The Impact of the Proposed Transition out of Public Native Forest Management and Harvesting in Tasmania
- 13 Environment Tasmania
Tasmania's Native Forests: Places for Protection
(Related to Submission No. 109)
- 14 Forests and Forest Industry Council Tasmania
Documentation
(Related to Submission No. 19)
- 15 Mr Andrew Lang
Various Documents
(Related to Submission No. 14)
- 16 Forest Stewardship Council (FSC)
FSC International Standard
- 17 Prof Jerry Vanclay
A proposal for Stewardship Support to Private Native Forests in NSW
- 18 Mr Lexie Hurford
Northern Rivers Regional Industry and Economic Plan December 2009
- 19 Ms Janelle Saffin MP
Briefing Paper - A framework for a Sustainable Forest and Timber Industry
- 20 Prof Jerry Vanclay
Action plan for tree farming in Western Australia
- 21 Prof Doland Nichols
Subtropical eucalypts plantations in eastern Australia
- 22 Mr Stephen Dadd
Boral Timber Projects
- 23 Mr Nicholas Roberts
Investing in Forestry



Appendix C – Public Hearings

Wednesday, 25 May 2011 - CANBERRA

Australian Forest Products Association

Mr Allan Hansard, Transitional Chief Executive Officer

Mr Mick Stephens, Manager, Strategic Policy

Australian Plantation Products and Paper Industry Council

Mr Richard Stanton, Chief Executive Officer

Wednesday, 1 June 2011 - CANBERRA

Australian Conservation Foundation

Mr Lindsay Hesketh, Healthy Country Campaign Coordinator

The Wilderness Society

Mr Michael Bayley, Tasmanian Campaign Manager

Wednesday, 15 June 2011 - CANBERRA

Australian Bureau of Agricultural and Resource Economics and Sciences

Dr David Cunningham, General Manager, Climate Change, Land and Forests Branch

Mr Phil Townsend, Senior Economist, Forest, Land and Environmental Analysis Section

Department of Agriculture, Fisheries and Forestry

Mr Ben Mitchell, Manager, International Forestry Branch

Mr Ian Ruscoe, Acting General Manager, Forestry Branch, Climate Change Division

Mr Andrew Wilson, Manager, Domestic Forest Policy - Climate Change Division

Wednesday, 22 June 2011 - CANBERRA

CSIRO

Dr Eric Harwood, Senior Principal Research Scientist, Ecosystems Sciences

Dr John Polglase, Ecosystems Sciences

Friday, 24 June 2011 - CANBERRA

Individuals

Dr Judith Ajani

Prof Peter Kanowski

Australian Forest Growers

Mrs Diana Lloyd, Director

Mr Warwick Ragg, Chief Executive

Cooperative Research Centre for Forestry

Prof Gordon Anthony Duff, CEO

Institute of Foresters of Australia

Dr Ross Florence, Honorary Member

Dr Peter Volker, National President

The Institute of Foresters of Australia (IFA)

Ms Cassandra Spencer, Chief Executive Officer, National Office

Timber Communities Australia

Mr Martin Adams, CEO

University of Melbourne

Assoc Prof Gerd Bossinger, Head of Department, Department of Forest and Ecosystems

Tuesday, 28 June 2011 - NEW NORFOLK**Individuals**

Mr Robert Harris

Department of Infrastructure, Energy and Resources

Mr Bob Rutherford, Deputy Secretary, Energy and Resources, Office of the Secretary

Environment Tasmania

Dr Phillip Pullinger, Director

Mr Russell Warman, Policy Coordinator

Forest Industries Association of Tasmania

Miss Petra Strich, Manager, Technical Services

Forestry Tasmania

Dr Hans Drielsma, Executive General Manager

Mr Ken Jeffreys, General Manager, Corporate Relations and Tourism

Forests and Forest Industry

Mr Aiden Flanagan, General Manager

McKay Timber

Mr Tony Jaeger, Sawmiling Manager

Private Forests Tasmania

Mr Tom Fisk, Chief Executive Officer

Tasmanian Country Sawmillers' Federation

Mr Fred Ralph, Chairman

Mr Shane Rice

Tasmanian Department of Infrastructure, Energy and Resources

Mr Andrew John Blakesley, Director, Forest Policy

Tasmanian Farmers & Graziers Association

Mr Ian Dickenson, Member, TFGA Forestry Reference Group

Mr Brett Hooper, Chairman

Mr Nicholas Steel, Manager, Policy and Advocacy

The New Forest Industry

Mr Robert Woolley, Chair

Timber Communities Australia

Mr Keith Bill, President

Mr Graeme Elphinstone, Executive Member

Mr Brett McKay, President, Southern Tasmanian Branch

Mr Peter Pepper, Secretary

Timber Communities Australia - Tasmanian State Office

Mr Barry Chipman, Tasmanian State Manager

Wednesday, 6 July 2011 - CANBERRA**Department of Climate Change and Energy Efficiency**

Ms Eliza Murray, A/g Director, Land Sector Policy

Ms Shayleen Thompson, First Assistant Secretary, Land Division

Department of Sustainability, Environment, Water, Population and Communities

Mr Mark Flanigan, First Assistant Secretary, Australian Government Land and Coasts Division

Mr Timothy Gordon, A/g Assistant Secretary, Water Resources Branch

Dr Charlie Zammit, Assistant Secretary, Biodiversity Conservation Branch, Land and Coasts Division

Wednesday, 10 August 2011 - MELBOURNE**Individuals**

Mr Andrew Lang

Australian Forest Products Association

Mr Nicholas Roberts, Member Forest Resources Forum

Miss Linda Sewell, Chairperson

ForestWorks

Mr Michael Hartman, CEO

MyEnvironment Inc

Mr Adam Menary, Assistant Director

Ms Sarah Rees, Executive Director

Mr Chris Taylor, Research Assistant

Northern United Forestry Group

Mr Ian Rankin, Chair

Mr Philip Dyson, Technical and scientific program leader

Mr Howard Perry, Member

Mr James Williams

Otway Agroforestry Network

Mr David Curry, Project Officer

Mr Rowan Reid, Founding member

Mr Andrew Stewart, Coordinator

VicForests

Mr David Pollard, Chief Executive Officer

Mr Nathan Trushell, Director, Corporate Affairs

Victorian Association of Forest Industries

Ms Lisa Marty, CEO

Mr Shaun Ratcliff, Public Affairs Manager

Wednesday, 17 August 2011 - CANBERRA

Forest Stewardship Council (FSC)

Mr Michael Spencer, Secretary/Honorary CEO

Wednesday, 24 August 2011 - CANBERRA

AgriWealth Group

Mr Wayne Jones, Chief Executive Officer

Australian Forestry Standard Limited/PEFC Australia

Ms Kayt Watts, Chief Executive Officer

New Forests Asset Management Pty Ltd

Mr David Brand, Managing Director

Mr Keith Lamb, Director, Operations

Mr David Shelton, Director, Investment Programs

Thursday, 1 September 2011 - GRAFTON

Individuals

Mr David Cameron

Mr Rod Henson

Assoc Prof J Doland Nichols

Cr Lindsay Passfield

Ms Janelle Saffin MP

Prof Jerry Vanclay

Australian Forest Growers Northern NSW Branch

Mr Lexie Hurford, Chair

Australian Solar Timbers

Mr Douglas Head, Managing Director

Big River Group

Mr Jim Bindon, Managing Director

BIL Technologies

Dr Graeme Palmer

Clarence Environment Centre

Mr John Edwards, Honorary Secretary

General Engineering Pty Ltd

Mr Bill McKee

Hurford Hardwood Pty Ltd

Mr Andrew Hurford, Chief Executive

J Notaras & Sons Pty Ltd

Mr Spiro Notaras, Managing Director

North East Forest Alliance

Ms Carmel Flint, Coordinator

Wednesday, 21 September 2011 – CANBERRA

Boral Timber

Mr Stephen Dadd

Mr Keith Davidson

Mr Bryan Tisher

