

FARM

FORESTRY
STRATEGY
FOR NSW



Vision:

In NSW, farm forestry
is regarded as a
mainstream farm
enterprise delivering
commercial and
environmental benefits.



State Catchment Management Co-ordinating Committee
Sustaining our natural resources



Natural Heritage Trust
Natprog Co-ordinator Natprog Australia
A Commonwealth Government Initiative

This document has been published by NSW Agriculture on behalf of the State Catchment Management Coordinating Committee after comment from participants in regional workshops and key interest groups.

The project was partly funded through the Natural Heritage Trust (Farm Forestry Program).

ISBN 0 7347 1493 9

© State of New South Wales
NSW Agriculture (2003)

Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (September 2003). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser.

FOREWORD

On behalf of the State Catchment Management Coordinating Committee (SCMCC), I present our Farm Forestry Strategy for NSW.

SCMCC regards this consensus plan as a key pre-requisite to advancing farm forestry in NSW.

Preparation of this Strategy was funded by the Natural Heritage Trust Farm Forestry Program.

Through discussions with key interested groups plus analysis of all relevant issues, we are now able for the first time to promote a statewide and strategic approach to farm forestry in NSW. It represents and addresses the whole farm forestry sector, presenting a range of outcomes and actions for adoption by industry, government and landholders.

I commend the Strategy to all interest groups with a stake in farm forestry and look forward to assisting the NSW Government to adopt and then support the implementation of this Farm Forestry Strategy for NSW.



John Klem
Chairperson
State Catchment Management Coordinating Committee

Contents

FOREWORD	iii
EXECUTIVE SUMMARY	vii
1. BACKGROUND AND CONTEXT	1
2. A DEFINITION OF FARM FORESTRY	2
3. VISION AND GOALS FOR FARM FORESTRY IN NSW	4
4. OVERVIEW OF THE FARM FORESTRY OPERATING ENVIRONMENT	5
4.1 Policy and program initiatives	5
4.2 Planted farm forestry	7
4.3 Private native forestry	8
4.4 Farm forestry and forest industries	8
4.5 Broader benefits of farm forestry	9
5. FARM FORESTRY STAKEHOLDER PERCEPTIONS	11
6. RATIONALE FOR THE STRATEGY	12
6.1 Community perception	12
6.2 Legislation	12
6.3 Taxation	13
6.4 Planning and support for farm forestry	13
6.5 Markets	17
7. THE STRATEGY	22
7.1 Provide a stable regulatory/legislative environment that supports farm forestry	23
7.1.1 <i>Outcome 1: Farm forestry risk is reduced by appropriate legislative and regulatory regimes</i>	23
7.1.2 <i>Outcome 2: Farm forestry legislation and regulation are simple and easily understood</i>	23
7.1.3 <i>Outcome 3: Farm forestry accreditation procedures are streamlined</i>	23
7.2 Develop effective and coordinated farm forestry support services	24
7.2.1 <i>Outcome 1: A single independent body coordinates farm forestry in NSW</i>	24
7.2.2 <i>Outcome 2: The provision of balanced advice which is clear, accurate and non-contradictory</i>	24
7.2.3 <i>Outcome 3: One initial contact point for farm forestry in NSW</i>	24
7.2.4 <i>Outcome 4: Increased and effective research and development activities</i>	24
7.2.5 <i>Outcome 5: Public farm forestry programs that deliver regional benefits</i>	24
7.2.6 <i>Outcome 6: Affordable farm forestry</i>	25
7.2.7 <i>Outcome 7: Adequate skills to support the farm forestry industry</i>	25
7.2.8 <i>Outcome 8: Regional strategic planning which recognises the role of farm forestry in regional economic development</i>	25

7.3 Facilitate the development of competitive, readily accessible markets for farm forestry	25
7.3.1 Outcome 1: Improved market access and markets for residues/thinnings	25
7.3.2 Outcome 2: More local and regional processing capacity	26
7.3.3 Outcome 3: Effective farm forestry networks	26
7.3.4 Outcome 4: The marketing and pricing of forest products from government trading enterprises is fair and equitable to farm forestry	26
7.3.5 Outcome 5: Improved awareness of the broader benefits provided by farm forestry	27
7.3.6 Outcome 6: Readily accessible and accurate price information for farm forestry products	27
7.3.7 Outcome 7: Improved understanding of the requirements of the growing and the processing sectors of the industry	27
Summary of proposed outcomes and actions	28
8. MONITORING AND EVALUATION	30
REFERENCES	31
APPENDIX 1. STRENGTHS AND WEAKNESSES IDENTIFIED AT STAKEHOLDER WORKSHOPS	33
APPENDIX 2. LEGISLATION IMPACTING ON FARM FORESTRY	35
APPENDIX 3. ORGANISATIONS INVOLVED IN FARM FORESTRY IN NSW	37
ACKNOWLEDGMENTS	39
Figure 1. The relationship between forestry, farm forestry and agriculture	3
Figure 2. NHT funding sources for Farm Forestry Program projects (1998–99)	6
Figure 3. NHT Farm Forestry Programs NSW funding breakdown 1997–99	6
Figure 4. Links between the Farm Forestry Strategy and related strategies	7
Figure 5. Potential benefits of farm forestry to forest industries	9
Figure 6. Broader benefits of farm forestry	10
Figure 7. The current management environment for farm forestry in NSW	15
Figure 8. The structure of the Strategy for Farm Forestry in NSW	22
Figure 9. Summary of proposed outcomes and actions	28

EXECUTIVE SUMMARY

Despite a range of initiatives spanning several decades from both government and non-government agencies, farm forestry in NSW has yet to realise its potential as a mainstream agricultural enterprise and a legitimate component of the forest industry.

Adoption rates have been low and most tree planting activities have been small scale and essentially environmental in focus. The support mechanisms for farm forestry in NSW lag behind those in many other Australian states.

The purpose of this strategy document is therefore to build a vision for the future of farm forestry in NSW.

The vision for the strategy is: 'In NSW, farm forestry is regarded as a mainstream farm enterprise delivering commercial and environmental benefits'.

Strategy elements have been developed that provide a pathway to realising that vision. These strategy elements have emerged following a comprehensive overview of the farm forestry operating environment, including a range of formal and informal stakeholder consultations. The overview section in this document provides the background analysis to support the proposed strategy elements. These strategy elements describe a number of actions and outcomes aimed at delivering an environment conducive to the expansion of farm forestry in NSW.

The strategy consists of three core elements.

1. Provide a stable regulatory/legislative environment that supports farm forestry

While recognising the many significant government and industry initiatives designed to advance farm forestry in NSW, the regulatory/legislative environment is still regarded by many potential investors as unfavourable. There is widespread concern among stakeholders that regulatory instruments such as the Plantation Code of Practice (Plantation and Reafforestation Act 1999) are too stringent and will be too costly for many farm foresters to implement. Similarly, the regulatory uncertainty prevailing over private native forestry is further contributing to landholder reluctance to engage in this land use. As a consequence, potential farm forestry investment may be drawn to other states. Recently released government strategies such as the NSW Salinity Strategy provide a strategic and policy incentive to progress farm forestry. An

enthusiastic response to such policy initiatives needs to be underwritten by a regulatory environment, which engenders a positive attitude on behalf of landholders and potential investors in NSW. The Farm Forestry Strategy for NSW outlines a range of outcomes and associated actions to address these impediments.

Key actions include:

- € fine-tune planning mechanisms which support farm forestry;
- € contribute to reviews of taxation to ensure fair and equitable treatment of farm forestry;
- € refine regulatory and compensation arrangements for both planted farm forestry and existing private native forestry;
- € ensure the availability of user-friendly guides to legislation/regulation and conduct programs on their use for government staff and landholders;
- € investigate self-assessment options and develop recommendations for consideration by government.

2. Develop effective and coordinated farm forestry support services

There are many government and non-government agencies involved in farm forestry regulation, support and advocacy in NSW. These agencies may have very different driving philosophies and their activities are often conducted in isolation, with insufficient coordination between relevant groups and agencies. Conflicting advice can result in confusion among potential and existing farm foresters. There is an urgent need for better coordination of these agencies in NSW.

Arrangements in other states provide some useful examples of what might be achieved. Options for rationalising the multi-agency approach are outlined in this strategy.

Key actions include:

- € identify a coordinating body, define terms of reference and adequately resource;
- € define agency roles/responsibilities and relationships;
- € facilitate effective research and development programs;
- € implement publicly funded programs which acknowledge regional issues;

- € develop training opportunities to improve existing skill levels.

3. Facilitate the development of competitive, readily accessible markets for farm forestry

A lack of market outlets and access to market intelligence for farm forestry products is viewed as a major problem within the industry. This is exacerbated by the virtual absence of markets for forestry thinnings and residues and the perception that market domination by a number of players disadvantages small-scale growers. When combined with legislative uncertainty, this risky market creates an environment in NSW where the economic risks are perceived as high and the economic returns low. This has led to poor adoption rates for farm forestry and a tendency for tree planting programs to be essentially environmental in purpose. Mechanisms for addressing these issues are outlined in the strategy.

Key actions include:

- € pursue market development for residues/thinnings including residues from native forests;
- € facilitate the expansion of the range of joint venture options;
- € promote understanding of the broader benefits of farm forestry;
- € provide accessible farm forestry market intelligence;
- € develop a series of data bases, accessible electronically and in hard copy;
- € facilitate interaction between farm foresters and the processing sector.

Adoption of this strategy would represent a significant step forward in progressing a more cohesive approach to farm forestry in NSW. In proposing a range of essential outcomes and actions, the strategy does not attempt to speculate on implementation responsibilities. 'Who does what' needs to be outlined in a subsequent implementation plan. The identification or establishment of a lead organisation will enable this strategy to be progressed, including allocation of roles and responsibilities. Implementation of the strategy will depend principally on government support. However, advancing this strategic approach to farm forestry in NSW requires the ongoing commitment of all stakeholders within the farm forestry sector.

1. BACKGROUND AND CONTEXT

The purpose of this strategy document is to describe pathways to advance farm forestry in NSW.

The document has been developed by the NSW Farm Forestry Sub-Committee, a sub-committee of the State Catchment Management Coordinating Committee (SCMCC) which represents a range of government agencies and stakeholders with interests in farm forestry. Membership included:

- € NSW Agriculture;
- € State Forests of NSW;
- € Department of Infrastructure, Planning & Natural Resources (previously the Department of Land and Water Conservation);
- € Australian Forest Growers;
- € Plantations Australia;
- € NSW Farmers' Association;
- € Greening Australia NSW, Inc;
- € Forest Products Association;
- € State Catchment Management Coordinating Committee;
- € Private Forestry Development Committees (PFDCs) and Farm Forestry Networks, NSW. (At the time, PFDCs were called Regional Plantation Committees.)

Funding for the consultancy component was obtained from the Natural Heritage Trust Farm Forestry Program.

The strategy draws on information collected at a number of stakeholder workshops across NSW and interviews with people involved in farm forestry (FORTECH 1999). This background material was then supplemented through a report collated by CARE Pty Ltd (2000), which provided a strategic overview plus analysis of farm forestry in NSW. The final strategy was then prepared by the NSW Farm Forestry Sub-committee based on the findings of these reports.

This strategy development process has identified a range of opportunities relating to the further development of farm forestry in NSW, and a range of desirable outcomes to improve the situation.

Issues, impediments and opportunities have been grouped to form the basis of three key strategy elements. For each strategy element, outcomes for farm forestry are identified and, where appropriate, actions have been listed to achieve progress toward those outcomes.

This strategy has been developed at a time of considerable change in the policy arena affecting farm forestry. In particular, the Plantations and Reafforestation Act 1999 (PRA) and the Native Vegetation Conservation Act 1997 (NVCA) appear to have important ramifications for the future of farm forestry in NSW. The recently completed and on-going Regional Forest Agreements (RFAs) also present a range of challenges and opportunities for farm forestry. It is also noteworthy that private native forests were not a part of the RFA process and there is some uncertainty regarding their status for timber production. However, there is an expectation that the forest resource in private ownership will continue to provide substantial timber and wood products.

It is important to recognise that this strategy is only a starting point for progressing farm forestry in NSW. It sets out a range of outcomes and actions but does not attempt to prescribe responsibility for implementation to particular agencies, as this will need to be detailed in a subsequent implementation plan. There is an urgent need for a lead agency to be established in NSW which can progress this strategy and identify roles and responsibilities among existing agencies.

The Farm Forestry Strategy for NSW was developed for the whole farm forestry sector of the state. Now that it has been endorsed by the State Catchment Management Coordinating Committee it is proposed that the strategy be recommended to Cabinet for consideration and adoption by the NSW Government.

Implementation of the strategy will depend principally on government support and commitment. However, advancing this strategic approach to farm forestry requires the ongoing commitment of all farm forestry stakeholders.

2. A DEFINITION OF FARM FORESTRY

For the purposes of this strategy, farm forestry is defined as:

The incorporation of commercial tree growing and management by farmers into farming systems for the production of both wood and non-wood products, increasing agricultural productivity and encouraging sustainable natural resource management.

In this context, the term ‘farmer’ refers to the person who makes the land management decisions. The definition encompasses a range of farm forestry options which could include woodlots, private native forest management, alley farming, joint venture and prospectus investment arrangements, and environmental plantings which have a commercial outcome via a fee for service or some harvestable product. Otherwise the farm forestry terms used in this report and their meaning are those commonly used in the farm forestry sector.

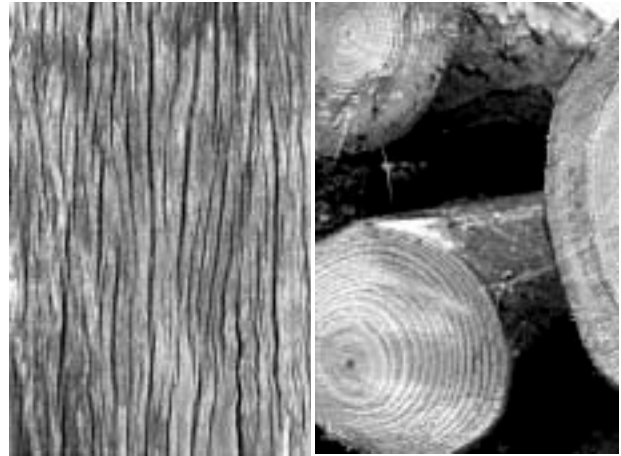
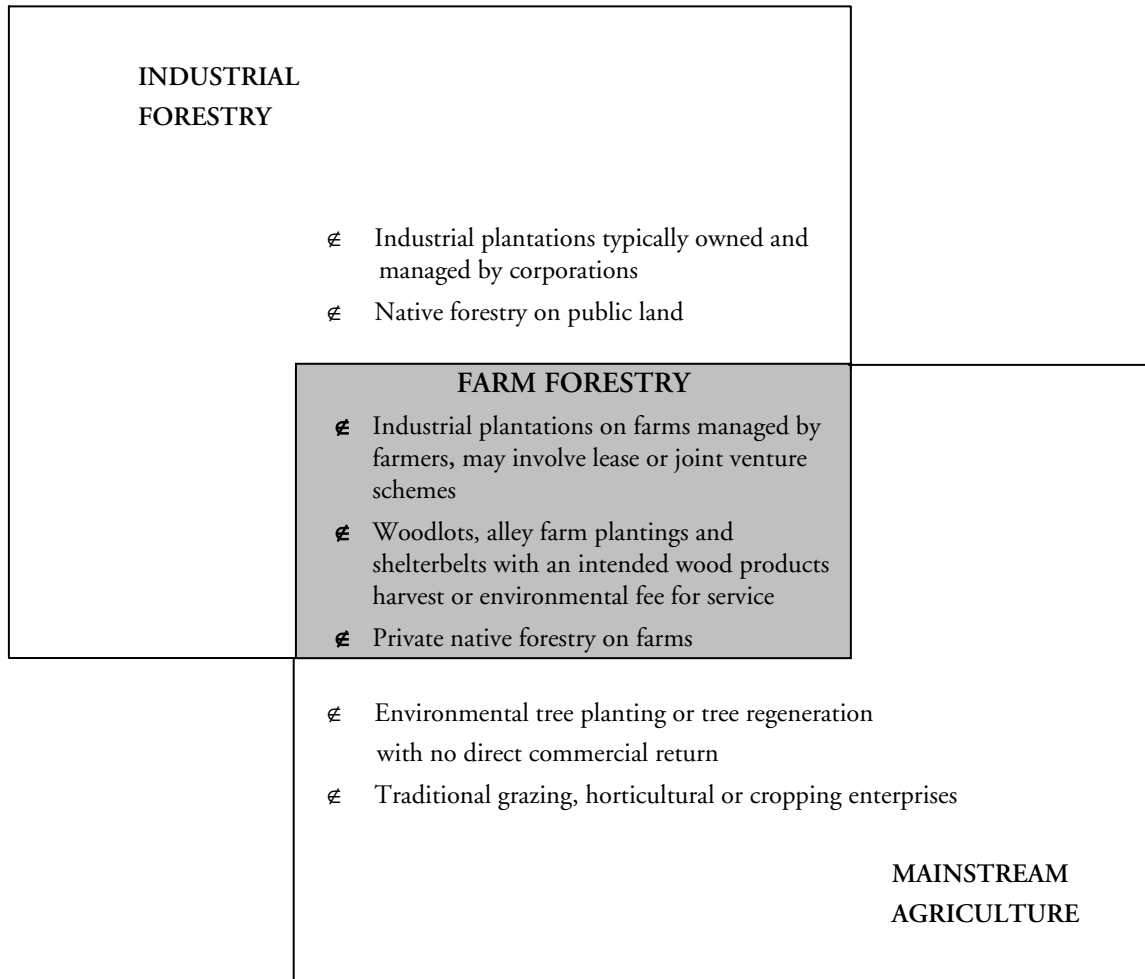


Figure 1 (over) provides a diagrammatic representation of the role of farm forestry as a land use and its relationship to private forestry, mainstream agriculture, joint ventures and environmental plantings.



Figure 1. The relationship between forestry, farm forestry and agriculture



3. VISION AND GOALS FOR FARM FORESTRY IN NSW

The vision for the strategy is:

In NSW, farm forestry is regarded as a mainstream farm enterprise delivering commercial and environmental benefits.

This statement excludes terms like ‘profitable’ and ‘ecologically sustainable’ because the strategy recognises that farm forestry options lie on a continuum from highly commercial to primarily environmental in their intent (recognising that environmental implies some fee for service or harvestable product). Some farm forestry options will be clearly more ecologically sustainable or profitable than others.

The vision statement also recognises that there will be trade-offs between commercial and environmental benefits depending on where an option lies on the continuum.

The primary goal of the strategy is to address these questions:

What are the strengths and opportunities within the existing farm forestry sector that can be built on in NSW?

What actions need to take place to remove the barriers and provide incentives and support to advance farm forestry in NSW?

To answer these questions, several key themes have been identified at the stakeholder workshops and during general consultation. They include:

- € the perceptions of the general public about the benefits of farm forestry;
- € legislation impacting on farm forestry development;



- € the management framework (both public and private) in which the farm forestry industry operates;
- € markets for farm forestry products and the role of farm forestry as a farming enterprise;
- € the role of farm forestry in providing environmental services and the demarcation between the private and public benefits flowing from farm forestry;
- € education and skills within the farm forestry sector.

It is these key issues that in fact set the framework for the analysis contained in this strategy. The strategy outcome is therefore to identify pathways and actions to overcome the impediments, build on the opportunities and fill information gaps, so improving the prospects for farm forestry in NSW.



4. OVERVIEW OF THE FARM FORESTRY OPERATING ENVIRONMENT

In order to propose a strategy to progress farm forestry in NSW, it is beneficial to describe the past and current features, policies and structures that operate in and influence the sector.

4.1 POLICY & PROGRAM INITIATIVES

A range of policy and program initiatives have been undertaken over time to foster farm forestry in NSW.

The first program to target farm foresters was the Forestry Commission's 'Farm Woodlot Loan Scheme'. It provided loan money for woodlot establishment, to be repaid at the time of first thinning. About 3000 ha of pine and 200 ha of poplar were planted between 1966 and 1980. The program lapsed due to lack of farmer interest because of poor opportunities for thinnings at that time.

The Trees on Farms Program (1983–91) was a joint program between the Soil Conservation Service, NSW Agriculture & Fisheries and the Forestry Commission. The program's aim was to provide a joint advisory, education and research program to promote planned tree management on farms. Farm forestry advice was principally provided by the Forestry Commission's Extension Foresters. The program consisted of farmer tree groups, specialist Trees on Farms Coordinators, seven Regional Committees and a state level Coordinating Committee. The Trees on Farms Program was considered very successful both in terms of farmer acceptance and effective collaboration and coordination between state government agencies.

In 1987–91 the Commonwealth National Afforestation Program (NAP) provided significant funds to the states in support of plantation development. Some 470 ha of eucalypts were planted in eastern NSW with a further 40 ha of red gum in a trial at Deniliquin. The NAP also provided almost \$1 million for woodlot and windbreak plantings on the Northern Tablelands of NSW centred on Armidale.

The State Forests Joint Venture Program (1993) was created to develop eucalypt plantations with funding provided by state government. This was to include plantation development on private land in joint venture arrangements with landholders. Initial

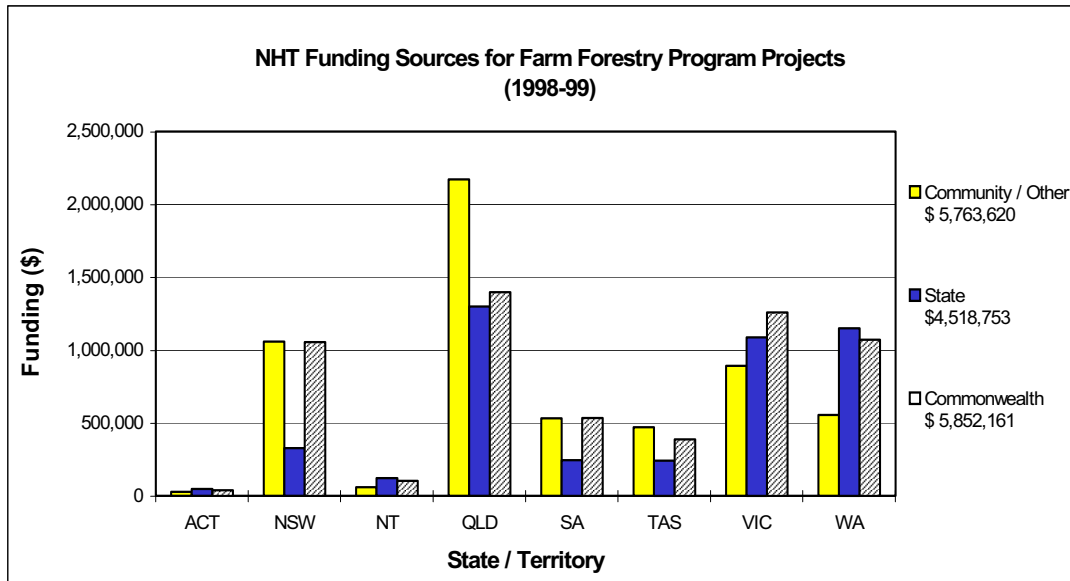
funding was provided by a \$1 million Treasury grant and a \$1.1m contribution by State Forests of NSW. The NSW Government's Forest Policy of 1995 included in its objectives the enhancement of the existing sharefarming program for eucalypt plantations. By May 2000, over 8,500 ha of eucalypt and 1,600 ha of pine plantations had been developed on private land in joint venture arrangements with landholders. New joint ventures are now funded by industry, with investors paying annuities to landholders for the lease.

The CaLM Farm Forestry Program (1995) provided funding to landholders for the establishment of farm forestry on cleared agricultural land in the >500 mm rainfall zone. The \$1.8m program, administered by the Department of Conservation and Land Management, aimed to meet the government's commitment to expand eucalypt plantations under the National Forest Policy Statement by bridging the gap between existing Landcare programs (which exclude commercial tree planting) and State Forests' hardwood (eucalypt) joint venture scheme.

The Natural Heritage Trust Farm Forestry Program is the most significant funding source for farm forestry initiatives in NSW. FFP funding has been used to fund Private Forestry Development Committees, Farm Forestry Networks and community based trials and demonstrations. For the period 1997 to 1999, NSW State Government contributed \$531,700 in funding to the NHT Farm Forestry Program, compared with \$1,672,000 in Commonwealth funding and \$1,631,000 in community funding. The ratio of NSW State Government funding to Commonwealth funding for the Farm Forestry Program is comparatively low, compared with other Australian states (see figure 2 below).

A Memorandum of Understanding (MOU) between the Minister for Forestry, Minister for Agriculture and Minister for Land and Water Conservation (1999) was signed to develop a coordinated approach for the expansion of new planted forests to help manage dryland salinity. The MOU demonstrates the shared commitment of State Forests of NSW, NSW Agriculture and the Department of Land and Water Conservation (now called the Department of Infrastructure, Planning and Natural Resources) to undertake research and

Figure 2. NHT Funding Sources for Farm Forestry Program Projects, 1998–99



Source: NHT Farm Forestry Program, Department of Agriculture, Forestry and Fisheries Australia, 2000.

Figure 3: NHT Farm Forestry Programs NSW funding breakdown 1997-99

NSW	Community/Other (\$)	State (\$)	Commonwealth (\$)
1997-98	573,239	204,020	616,283
1998-99	1,057,922	327,684	1,055,713
Total	1,631,161	531,704	1,671,996

Source: NHT Farm Forestry Program, Department of Agriculture, Forestry and Fisheries Australia.

development and extension in the re-establishment of forests and woodlands in the tablelands and slopes of NSW, particularly relating to salinity management. There is also an MOU between State Forests and NSW Agriculture concerning farm forestry (1999) which commits both agencies to assisting rural landholders who would benefit from coordinated tree planting and forest and woodland conservation programs.

The NSW Agriculture Agroforestry Unit (formerly the Farm Forestry Advisory Unit) provides extension services, collaborative research and policy advice for the appropriate adoption of farm forestry, including new tree planting and private native forestry. The Unit is identifying how farm forestry can be of most benefit to agriculture and aims to objectively communicate the options, procedures and likely outcomes.

The Office of Private Forestry (1999) provides a single point of reference within NSW Government on private forestry issues. Its functions are to promote the social, economic and environmental benefits of plantations and private forestry, provide information, act as a one-stop shop for investors and advise the Minister on private forestry matters.

Legislative initiatives include the Timber Plantations (Harvest Guarantee) Act 1995 and the Plantations and Reafforestation Act 1999 (see Appendix 2 for more information).

Environmental Service Initiatives are where a landholder/organisation gains a direct financial return for appropriate land and water management practices, including farm forestry, which provide a significant environmental benefit. Such market based mechanisms are currently being explored as a result of the NSW Salinity Strategy where salinity credit

trading schemes will be encouraged. Farm forestry may also benefit from carbon trading under the Kyoto Greenhouse Protocol.

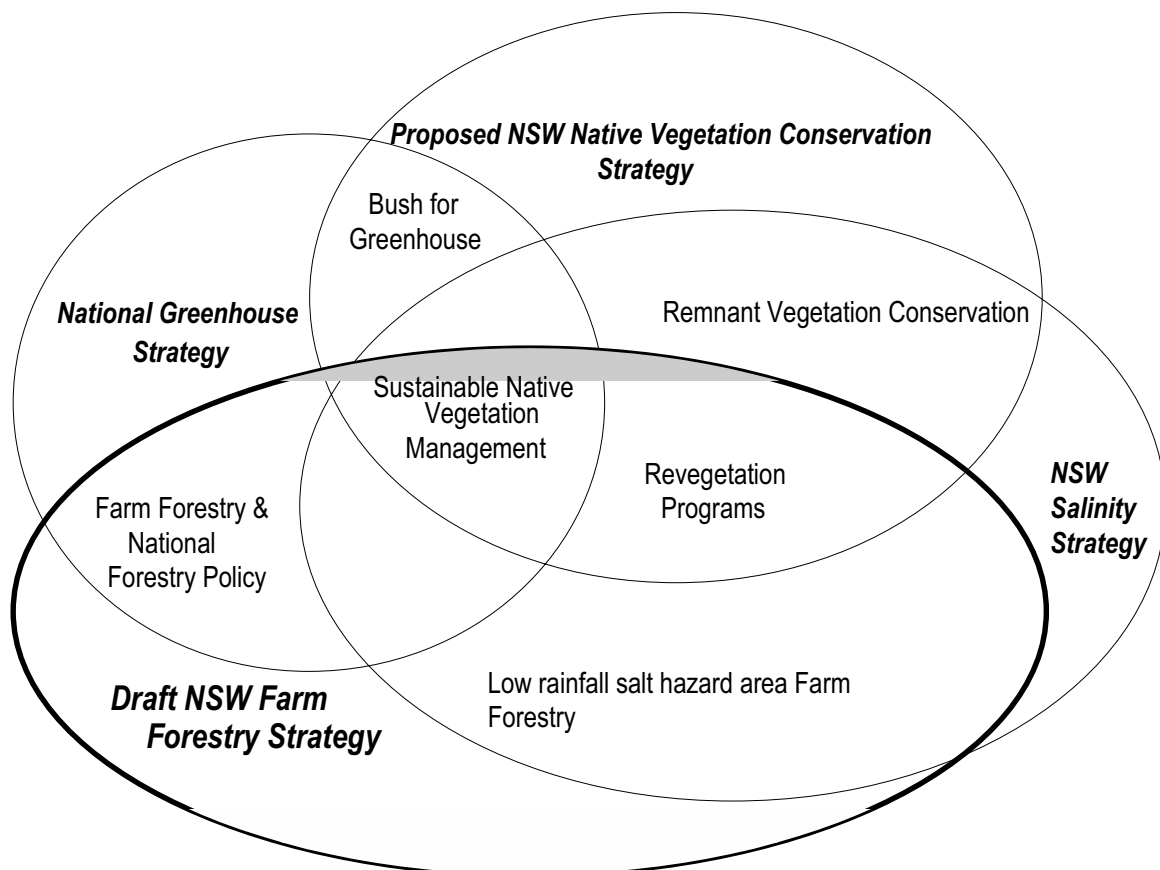
Natural Resource Management Strategies. The recently released NSW Salinity Strategy highlights the need for land use systems that use water more efficiently. Not only will farm forestry provide a significant tool in managing salinity hazard landscapes but it also represents a potential market solution to the problem as advocated in the Strategy. Likewise, the Draft Murray–Darling Basin Commission (MDBC) Basin Salinity Management Strategy reinforces the role and opportunity for sustained public and private investment in reforestation, vegetation management and land rehabilitation. The proposed NSW Native Vegetation Conservation Strategy also promotes the sustainable management and use of native vegetation to enhance farm productivity and diversity of farm production. The use of farm forestry as an important salinity hazard management tool will be further enabled by the National Action Plan for Soil and Water Quality. Despite this range of initiatives, the farm forestry sector of NSW still does not have the critical mass to be an enterprise which contributes significantly to the financial performance of most farm businesses.

However, these initiatives have been instrumental in developing trials, baseline information and landholder skills on which to build a viable and prosperous farm forestry sector in NSW. See figure 4.

4.2 PLANTED FARM FORESTRY

It is difficult to get an accurate picture of the farm forestry sector in NSW. Given the definition of farm forestry adopted for this strategy, quantifying such a broad-spectrum activity where mainstream forestry and agriculture overlap is difficult (see Figure 1). Many studies have shown that there are substantial areas of essentially cleared land physically capable of planted farm forestry. However, as with any rural land use activity, adoption is more a case of land suitability rather than just land capability. The suitability of land for farm forestry includes features such as landholder interest, access to markets and the presence of processing infrastructure. Recent studies (BRS 2000 b, c, d and BRS and ABARE 2001) have shown that there is considerable potential for expansion of the plantation resource on cleared private land in NSW.

Figure 4. Links between the NSW Farm Forestry Strategy and related strategies



The total public, private and joint venture plantation resource in NSW has been estimated at 44,451 ha for hardwoods and 246,934 ha for softwoods in 1999. The private plantation resource in NSW is estimated at 1,422 ha (or 3.2%) for hardwoods and 35,716 ha (or 14.5%) for softwoods (BRS 2000 a). This is considerably smaller than the private native forest resource and the majority of plantations included in these figures are industrial style as opposed to farm forestry plantings.

While Australian hardwood products from native forests have occupied something of a market niche, products from NSW hardwood plantations are yet to identify specific markets. To date, plantation wood has used existing hardwood markets but it must be anticipated that future larger volumes of plantation hardwood, particularly thinnings, will have to compete internationally in the same way that softwood plantation products meet a global market. Such a market requires growing and production costs to be internationally competitive.

4.3 PRIVATE NATIVE FORESTRY

Private native forests on farms represent a substantial and under-used resource for farm forestry in NSW. In many areas of NSW, where timber buyers and processors are experiencing contraction in their usual supply, there may be significant opportunities for private native forestry. Private native forestry provides an immediate entry point for farmers to gain skills and knowledge of farm forestry and financial return from forest products.

The Department of Infrastructure, Planning & Natural Resources has developed guidelines for landholders seeking to remove trees selectively from native forests on private land. The Interim Best Operating Standards for Private Native Forest Harvesting will assist landholders in the adoption of appropriate and sustainable practices.

In NSW, there are approximately 15.1 million ha of native forests. Of this, 5.3m ha is under private freehold tenure with a considerable proportion on farm land and amenable to management for farm forestry purposes, assuming the adoption of sustainable management practices. There are 2.1m ha of State Forests of NSW native forest, 3.6m ha on leasehold land and 4.1m ha in parks and reserves.

In general terms, the Regional Forest Agreement (RFA) process has increased forest industry interest in the private native forest resource. This has important implications for the future of farm forestry in NSW.

In NSW, RFAs have been completed for the Upper and Lower North East and Eden regions and are ongoing for the Southern region. A state-based forest agreement has commenced for the Brigalow Belt south region and is being discussed for the Riverina.

The outcome of the completed RFAs has been a considerable reduction in the public native forest resource available for logging as large areas have been placed into new national parks and reserves. Since 1995, the public resource available for timber production in NSW has been reduced by around 1.4 million ha through the creation of new national parks and reserves and a further 400,000 ha of the resource protected from logging within State Forests (RACAC 2000). The restructuring of the NSW forestry industry provides opportunities for farm forestry to become a significant supplier of wood products.

4.4 FARM FORESTRY AND FOREST INDUSTRIES

Farm forestry has the potential to benefit forest industries by providing a much needed land resource for joint venture programs and by contributing to regional wood flows. A range of benefits resulting from an expanded farm forestry sector are shown in figure 5.

Figure 5. Potential benefits of farm forestry to forest industries (modified from AACM et al., 1996)

Economic	<ul style="list-style-type: none"> € Cost-effective and accessible land to expand the current forest resource € increase production of both quality sawlogs and short rotation pulpwood crops € provide a larger supply base € increased quality of resources € retention/expansion of small business sector of forest industries
Environmental	<ul style="list-style-type: none"> € Diversify the resource base € integrated forest resource with agriculture, creating sustainable land use
Social	<ul style="list-style-type: none"> € Improved profile of forest industries within both rural and urban communities as providers of sustainably produced products € expansion of small business sector of forest industries in the rural community

Farm forestry presents numerous challenges to the forest industries, notably the complexities of sourcing supplies from a larger number of growers of varying knowledge and skills level, with product of varying age and log classes. In addition, harvesting a large number of small areas potentially results in increased overheads and there is often difficulty in ensuring a consistent supply of resource. The role of farm forestry co-operatives is often promoted as one means of effectively overcoming these challenges and providing a point of reference for timber buyers and processors. The forest industries argue that forest products on farms cannot be realistically recovered under existing log pricing policies. Furthermore, niche markets for farm forestry products which may be able to absorb the higher production costs are more susceptible to over-supply and subsequent downturn in prices.

4.5 BROADER BENEFITS OF FARM FORESTRY

It has long been recognised that farm forestry generates a range of other commercial benefits to agriculture and the broader landscape.

Farm forestry can offer both on-farm or private benefits and off-farm or public benefits. As a consequence, the distinction between who the benefits accrue to can be very blurred. This ambiguity needs to be recognised when formulating a policy and planning framework for farm forestry NSW.

These broader benefits are summarised in the extract from the Greening Australia Report 'Farm Forestry in Australia, Integrating Commercial and Conservation Benefits' (1996).

It should also be recognised that farm forestry can have perceived and tangible negative impacts at a local and regional scale. These include:

- € loss of traditional agricultural landscapes where joint venture plantation schemes have replaced pastoral landscapes with single species plantations;
- € reduction or loss of traditional agricultural employment where farm forestry has displaced traditional agricultural land use;
- € competition for water resulting in reduced flows to creeks and rivers;
- € increased fire hazard to adjoining properties;
- € lower levels of rural tourism.

Careful planning and comprehensive community consultation will assist in minimising potentially negative impacts of farm forestry.



Figure 6. Broader benefits of farm forestry

Economic

AACM et al (1996) estimated total net benefits to Australia from commercial farm forestry on cleared agricultural land over 40 years to be in the order of \$3 billion per year, with additional downstream processing benefits of about \$26 billion per year. The study also predicted additional employment for over 54 000 people over 40 years.

These figures are derived from the following distribution of benefits:

- € annual average value to farmers of timber production from farm forestry (~\$1 billion);
- € annual average value to farmers of agricultural production increases due to services from farm forestry (~\$1.5 billion);
- € community benefits due to downstream effects (~\$370 million p.a.);
- € carbon sequestration benefits (~\$180 million p.a.);
- € other national benefits – biodiversity and preservation values (~\$190 million p.a.); and
- € regional benefits (~\$5 million p.a.).

Regional Economic Development – In 1993 the Commonwealth announced a major policy emphasis on regional economic development. Farm forestry has the potential to produce timber products for value adding processing, leading to increased employment, social stability and regional growth.

Catchment Management – Integrated catchment management policies have been adopted by most states. These policies recognise the importance of a catchment as a hydrological unit, and its relationship to vegetation, land and water protection and enhancement. Strategic implementation of farm forestry within an integrated catchment framework is more likely to maximise its multiple (private and public) benefits.

AACM Report as quoted in *Greening Australia*, 1996

5. FARM FORESTRY STAKEHOLDER PERCEPTIONS

Studies have shown a significant range of views about the nature of farm forestry in Australia.

Alexandra and Hall (1996) for example, determined that lack of farm forestry culture among farmers, agricultural and forestry professionals and state government agencies was hindering the development of the sector.

The AACM study, Commercial Farm Forestry in Australia (1996), identified a whole range of benefits to the community flowing from farm forestry including:

- € regional development and employment;
- € greater social stability from economic security of rural communities;
- € health and wellbeing benefits.

Within the context of NSW, the stakeholder workshops and interviews conducted for this strategy verified many of these observations. Stakeholder workshops were held at Tumut, Port Macquarie, Dorrigo, Goulburn and Wellington.

The outcomes of these workshops included the development of a list of strengths and weaknesses of farm forestry in NSW, which are listed in Appendix 1.

The stakeholders' views highlight the characteristics of an investment environment that is favourable to farm forestry. In order of importance the environment could be described as having:

- € a stable regulatory/legislative environment, supportive of farm forestry;
- € timber prices that resulted in comparable or better returns than afforded by the long-term trends for their existing agricultural enterprises;
- € better coordinated agency roles with an overarching body to act in a 'gate-keeper' role;
- € ready access to a range of markets for varying size parcels of timber;
- € readily available, accurate price information;
- € capacity to manage price risk effectively;
- € ready access to a range of support services.

6. RATIONALE FOR THE STRATEGY

In this section of the strategy document, a brief overview of the main opportunities for and impediments to the expansion of farm forestry in NSW is provided. This is by no means an exhaustive coverage, but highlights the main strengths the sector can build on while proposing options to address problems facing the industry. This analysis provides the supporting evidence for the strategy directions and actions outlined in the strategy itself (section 7). Again, most of these issues were identified in the stakeholder workshops and through other stakeholder discussions.

PROPOSED STRATEGY ELEMENT

Note: To assist the reader to better understand the development of the strategy as outlined in section 7 the proposed strategy elements are identified at the end of the relevant discussion in this section

6.1 COMMUNITY PERCEPTION

There are a number of compelling opportunities which an expanding farm forestry sector could seek to capitalise on, for example:

- € the shift from the public to privately owned forest resource;
- € growing interest in farm income diversification;
- € market incentives for tree plantings as per the NSW Salinity Strategy.

Yet, farm forestry is still not well established nor is it commonly regarded as a legitimate agricultural pursuit. The stakeholder workshops and interviews highlighted that the regulatory environment for farm forestry should be consistent with that generally affecting agriculture. On the other hand, many people in the community believe that forestry and certain aspects of agricultural practice are environmentally damaging and unsustainable and therefore require regulation. Additionally, the regulatory environment affecting farm forestry related activities in NSW is also commonly interpreted as being the most stringent in Australia.

The risk is that despite the many opportunities favouring the expansion of the farm forestry sector, a regulatory environment perceived to be too onerous will be interpreted as an obstacle for potential new investors. The benefits of expanding farm forestry in NSW will therefore not be fully realised.

For farm forestry to become a mainstream farm enterprise in NSW the community needs to be well informed of the positive and negative impacts of farm forestry developments in their region.

6.2 LEGISLATION

An overview of the key legislation in NSW which impacts on the planning and management operations for farm forestry is provided in Appendix 2. Some important implications and issues relating to the legislation are discussed below in sections 6.2.1 and 6.2.2.

6.2.1 Planted farm forestry

The most influential legislation affecting planted farm forestry is now the Plantations and Reafforestation Act 1999. The objectives of this Act are summarised in Appendix 2.

The implementation of the Plantations and Reafforestation Act is reliant on the state-wide Code of Practice for both plantation operations and environmental plantings. As already stated, the stakeholder workshops and interviews identified the existing complexity of planning and approval requirements as a disincentive for farm forestry investment. An evaluation of the Code of Practice in operation will help determine whether the Plantations and Reafforestation Act has provided clear guidance to landholders and facilitated investment in farm forestry in NSW.

6.2.2 Private native forestry

Regulation of private native forestry in NSW is still very complex and uncertain. By way of illustration, the State Forests' Code of Practice for timber harvesting in native forests makes reference to 21 different Acts, highlighting the legislative complexity surrounding native forestry operations in NSW. Some of these include:

- € National Parks and Wildlife Act 1974;
- € Protection of the Environment Operations Act 1997;

- € Threatened Species Conservation Act 1995;
- € Environmental Planning and Assessment Act 1979;
- € Native Vegetation Conservation Act 1997.

There is considerable public debate about what determines sustainable native forest management. Private native forestry is recognised as a legitimate land use as per its exemption under the NVC Act. However, until the current policy review commenced by the Department of Infrastructure, Planning & Natural Resources has been completed, the uncertainty surrounding the practical implications of this exemption for sustainable native forestry will continue to act as a deterrent to landholders interested in taking up this opportunity. Regional Vegetation Management Plans prepared under the NVC Act, in particular, need to identify private native forestry as a legitimate activity, thereby devising workable guidelines for sustainable logging. The potential need for compliance and hence additional regulation of their activities will be perceived by many landholders as yet another impediment to their involvement. This will be especially the case for those landholders unfamiliar with land use regulation.

Timber production from private native forests still does not receive harvest guarantees as will be the case with authorised plantations under the Plantation and Reafforestation Act.

The result of the current legislative uncertainty combined with other factors such as market uncertainty leads to an understandable reluctance by farmers to become involved in private native forestry.

6.3 TAXATION

Taxation is a federal government issue, but is still worthy of mention because the role of taxation as an impediment to farm forestry has been raised repeatedly by stakeholders. The taxation system is currently undergoing considerable reform and until the final arrangements are set in legislation, it is difficult to ascertain their impact on farm forestry.

There are two issues remaining from past tax legislation which still act as important impediments to markets for farm forestry. These are:

- € The tax treatment of immature plantation purchases; and
- € The granting of the right to harvest timber from someone else's land (profit à prendre).

PROPOSED STRATEGY ELEMENT 7.1
Provide a stable/regulatory/ legislative environment that supports farm forestry

6.4 PLANNING AND SUPPORT FOR FARM FORESTRY

The organisational and support structures for farm forestry in NSW are shown in Figure 7.

In examining the situation in NSW, there are some lessons to be learnt from other Australian states where a more unified and proactive approach, especially on behalf of government, has benefited farm forestry.

In the following discussion, the NSW situation is contrasted with the situation in other Australian states. Elements of farm forestry planning and support from Tasmania, Victoria and Western Australia provide possible models for NSW because they have either a significant farm forestry sector, an agreed strategic approach or a relevant organisational model which could be adopted for NSW.

6.4.1 New South Wales

In NSW, a large number of organisations, both government and non-government, are involved in the farm forestry arena in some way. They include:

- € State Forests of NSW (SFNSW);
- € Department of Infrastructure, Planning & Natural Resources (DIPNR);
- € Regional Vegetation Management Committees (RVMCs);
- € Planning NSW;
- € Greening Australia (GA);
- € Environment Protection Authority (EPA) (to be included from late September 2003 in the new Department of Environment and Conservation);
- € NSW Agriculture (NSW Ag);
- € Local government;
- € Agriculture, Fisheries and Forestry Australia (AFFA);
- € Private Forestry Development Committees (PFDCs);
- € Research organisations (e.g. RIRDC) and Universities;
- € Australian Forest Growers (AFG);

- € National Association of Forest Industries (NAFI);
- € New South Wales Forest Products Association Ltd (FPA);
- € Office of Private Forestry;
- € Department of State and Regional Development (SRD);
- € National Parks and Wildlife Service (NPWS);
- € State Catchment Management Coordinating Committee (SCMCC);
- € Australian Taxation Office (ATO).

Refer to Appendix 3 for a brief discussion of the roles of the organisations.

The relationship between these organisations and farm forestry is shown in Figure 7.

This complex and fragmented picture of NSW demonstrates the need for a more strategic framework for farm forestry to enable a more consolidated and effective sector capable of capitalising on the interest in and opportunities for farm forestry. Optimal implementation of any proposed strategic framework requires a high level of government support, a peak coordinating group, a lead organisation for implementation and a champion for the sector.

6.4.1.1 Marketing, technical and financial services

The lack of a critical mass in farm forestry has resulted in a corresponding lack of farm forestry support services. Within the forestry sector, SFNSW, for example, source the majority of their expertise in-house and have provided some fee for service operations to private producers. NSW lacks the diverse range of brokers and other marketing consultants, technical and financial advisers servicing a prosperous forest product industry such as occurs in New Zealand. The relatively low level of private forestry development (including both planted farm forestry and private native forestry on freehold land) in this state has resulted in a market for these services that is too small to support more than a small number of service providers to the farm forestry sector.

6.4.1.2 Research, development and advisory services

The majority of farm forestry research in NSW is funded by Commonwealth funds, principally via the RIRDC/LWRDC/FWPRDC Joint Venture Agroforestry Program (JVAP) and the Farm Forestry Program. Until 1998, NSW had direct input to determining JVAP research funding priorities but the disbanding of Research Working Group 11 (Farm Forestry) in 2000 has meant that NSW no longer has membership in this decision-making forum. NSW Government agencies are relatively inactive in farm forestry research and development.

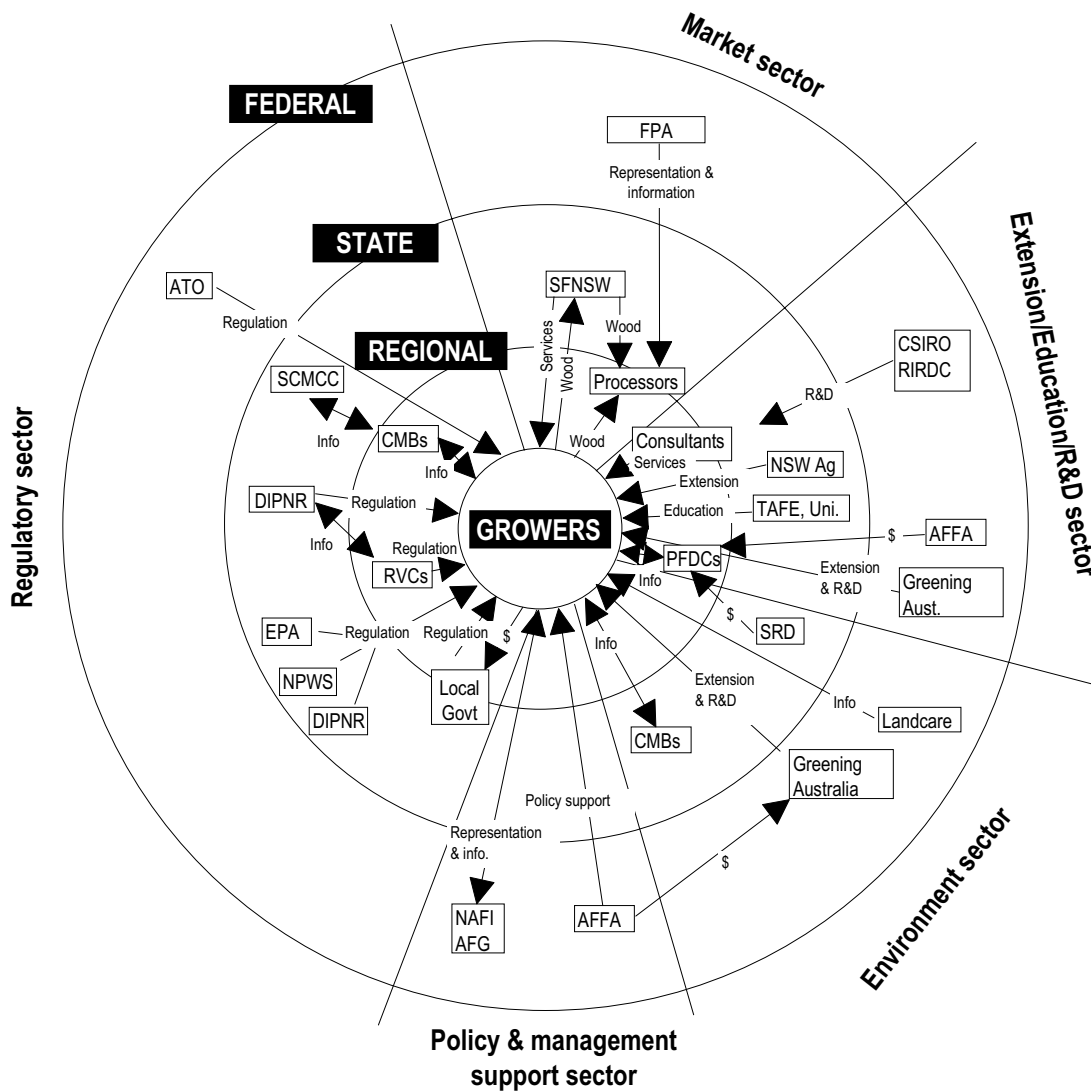
There are only two advisory officers in NSW agencies dedicated to providing farm forestry advisory services. Executive Officers and Project Coordinators of Farm Forestry Networks and Private Forestry Development Committees have in the majority of cases undertaken an advisory role since the advisory services are either non-existent or insufficient in these areas. Greening Australia has provided much-needed advisory services but the two agencies with the greatest research and development capacity — NSW Agriculture and the Department of Infrastructure, Planning & Natural Resources — have only minimal resources in farm forestry. There are numerous situations where farm forestry research must be targeted to NSW land use systems and natural resource management imperatives and research findings integrated to agriculture.

6.4.1.3 Education and training

There is a major need to improve the opportunities for landholders to gain the skills required to implement farm forestry. Tertiary level studies are readily accessible for those wanting formal qualifications and a vocation in this area, but there is a scarcity of applied courses in farm forestry aimed at the landholder.

Three tertiary institutions conduct regular undergraduate and/or postgraduate courses in forestry: the Australian National University, University of Melbourne, and Southern Cross University. There are three degrees and two postgraduate courses available with a significant farm forestry component.

Figure 7. The Current Management Environment for Farm Forestry in NSW (for descriptors see Appendix 3)



Apart from limited components of the Advanced Diploma of Forestry Management available from the School of Forestry at Creswick in Victoria (University of Melbourne), there is no diploma or certificate level course specific to farm forestry. The Diploma in Landcare and Natural Resources (such as offered by CB Alexander Agricultural College) has a planning for trees component but this lacks the focus required for farm forestry.

The Coombell Forestry Centre in northern NSW offers a 2-day practical course, and the University of Melbourne facilitates the Australian Master Tree Grower course in partnership with regional networks. The latter, however, is not an introduction to farm

forestry, but is practitioner-driven as a means of improving skills and networking. No other courses were available at the time of writing, aside from those in southern Queensland, which vary in relevance or accessibility for NSW landholders. Significantly lacking is applied instruction on farm forestry planning and design, management, silviculture, harvesting and marketing. The success of farm forestry will depend heavily on the skills gained by landholders. These are acquired partly through the limited extension services available, but mostly through trial and error, a clearly unacceptable situation.

6.4.2 Support for farm forestry in other states

6.4.2.1 Victoria

In Victoria, the Private Forestry Council is responsible for implementing the Victorian Private Forestry Strategy. Private forestry in Victoria includes trees grown in plantations, on farms and in native forests on freehold and private tenure.

The Council is made up of ministerial appointments from state and local governments and industry representatives from sawlog processing, pulpwood processing, investment/finance, small growers and the Private Forestry Development Committees (PFDCs). The Council is chaired by the head of Plantations Australia. The Private Forestry Council though focussing on plantation development is able to provide general leadership to the sector.

The Victorian Private Forestry Strategy aims to:

- € achieve broad public support for private forestry;
- € provide clear roles for state and regional bodies to facilitate private forestry;
- € identify suitable land for private forestry;
- € strengthen local government support for regional private forestry development;
- € encourage investment in private forestry; and
- € increase the competitiveness of the private forestry sector.

There are four PFDCs in Victoria and nine Farm Forestry Networks. The PFDCs and Farm Forestry Networks are involved in the implementation of the State Private Forestry Strategy and Council initiatives in their respective areas.

6.4.2.2 Tasmania

Legislation most relevant to farm forestry in Tasmania, is the Private Forests Act 1994. This Act sets up Private Forests Tasmania (PFT). The role of PFT is to:

'Provide leadership and support to ensure a positive environment for the private sector to sustainably develop, manage, market and optimise returns from forestry on private lands in Tasmania.'

In this context PFT is able to:

- € be an effective interface and network with private land owners, growers and investors;
- € provide greater industry ownership and commitment to invest in private forestry;
- € ensure a clear separation from the government's commercial forestry arm, Forestry Tasmania.

As an independent authority established under state legislation, the PFT Board's charter ensures industry-based leadership and governance for private forestry in Tasmania. PFT has a five member board, a Chief Executive and 14 staff that work with more than 2000 private forest growers and their employees/contractors in the sustainable management of almost one-half of the state's forests. Landowners dedicate land to private forestry production through the establishment of a forest reserve. The forest reserve system is backed up by legislation that is supported by a code of practice (covering both plantations and native forests). This imparts a significant amount of security to the forest grower.

6.4.2.3 Western Australia

The Western Australian situation provides an example of how government can pave the way for an expansion of farm forestry. In 1987 The WA Department of Conservation and Land Management (CALM) developed sharefarming arrangements for farm forestry. While the nature of these arrangements has varied over time, they have involved incentives such as provision of free trees, annuity payments and shares in harvest net revenues (Ellis 1994).

Important points from the WA experience are:

- € Government funding was used to initiate expansion of farm forestry, with mechanisms to include farmers in the investment.
- € Non-commercial plantings could be included in the investment by simply modifying the share of harvest revenue received by the farmer.
- € Farm forestry is accepted as a viable alternative agricultural enterprise both for environmental and investment reasons.
- € CALM negotiated contracts with overseas buyers of forest products, thereby providing increased investor confidence. Farmers have not had to become directly involved in marketing arrangements themselves.
- € State legislation has been enacted to secure plantation harvest and operation rights (Albany Hardwood Plantation Agreement Act 1993) further aiding investor confidence.
- € Profit à prendre is part of the sharefarming arrangement with separation of title for the trees and the land.

The ability of farmers in WA to participate in farm forestry has been enhanced considerably through state government investment and through a support structure which allows farmers to invest in farm forestry where markets and the legislative environment are more secure.

6.4.3 Lessons that can be applied to NSW

These examples from other states highlight the very significant role of state government in advocating the importance of farm forestry, developing enabling legislation and suitably resourcing research, development and extension.

The combination of state government commitment, a peak level body championing farm forestry, and the adoption of a state level strategic approach has led to an environment conducive to farm forestry.

The review of the NSW situation as detailed in 6.4.1 indicates that some of the critical elements shown to be beneficial in other states could already exist, i.e.

- € There is a high level contact group (Office of Private Forestry).
- € There is an intermediate group that brokers access to land (the Private Forestry Unit).
- € A landholder extension unit exists, as in the NSW Agriculture Agroforestry Unit.
- € government funding has been used to initiate expansion of the plantation sector which may benefit the farm forestry sector.
- € Arrangements exist for the separation of title for the trees and the land (i.e. a forestry right).
- € Harvest guarantee has been provided for certified plantations.

What is missing is a unifying and strategic direction for these disparate entities to ensure a more effective farm forestry sector in NSW.

An analysis of the operating environment in the other states reaffirms the rationale behind the proposed strategy element 7.2

PROPOSED STRATEGY ELEMENT 7.2
Develop effective and coordinated farm forestry support services

6.5 MARKETS

In both the stakeholder workshops and discussions with farmers, lack of market depth, limited market access and lack of readily available market information on timber sales were viewed as major impediments to the serious consideration of farm forestry by prospective investors and/or landholders. When combined with the legislative uncertainties

outlined in section 6.2, farm forestry in NSW was viewed as simply too risky to consider as a mainstream agricultural enterprise.

6.5.1 Market directions for NSW farm forestry

The market for farm forestry products is characterised by the following features.

- € The projected global wood supply deficit over the next 20 years represents an opportunity.
- € Export market opportunities represent a considerable challenge with a high level of international competitiveness needed, particularly for softwoods. A large continuing resource is required to meet export market requirements given the cyclical nature of the market.
- € Pulpwood export markets appear as a future market opportunity, but these are large-volume markets which have stringent species requirements, particularly for hardwood chips.
- € With an Australian \$1.5 billion trade deficit in wood products, there appears to be considerable scope for increased domestic wood production and import substitution. Much of this deficit is in paper products as opposed to sawn timber products and domestic market outlets for pulp wood are limited. Without networking arrangements or the emergence of brokers who can aggregate supplies, it is likely that farm forestry growers will lack market size to meet these domestic market requirements.
- € Unless critical mass can be achieved, the best bet for small-scale operators may well be high value logs produced under a regime which minimises waste wood. In Tasmania, the log market is sufficiently well developed that a farm forester can sell a single truck load of high quality logs (around 20 m³), (Des King, Private Forests Tasmania, pers. comm. 2000).
- € The lack of markets for pulpwood and other forest residues is a considerable impediment to the financial performance of farm forestry. Planted forests with high establishment costs and high planting densities are a long term proposition and the ability to generate revenues from early thinning operations has a substantial positive impact on investment returns. Similarly, the costs of private native forest management could be offset if thinning sales were achievable. The lack of markets for all but the high quality sawlog component of both plantation and native forests is a significant issue in NSW.

- € Location plays a role in determining economic haul distance to processing facilities. The low value for pulpwood and other farm forest products means that returns are rapidly eroded by long haul distances and this poses a problem in many parts of NSW.
- € Private investment is unlikely to generate tree planting on the massive scale necessary to address salinity problems in NSW. There is a role for public funding in establishing arrangements and in developing farm forestry where corporate investment is inadequate.



6.5.1.1 Planted farm forestry

The resource size and residue market issues indicate that opportunities for profitable farm forestry in NSW from planted farm forestry do exist mainly for high value clearwood, sawlogs and peeler logs for local niche markets. There is potential to move to export markets once the supply chain is more robust. The profitability of these ventures will be improved if markets for thinnings and low quality material are developed.

A brief review of the situation in New Zealand (see box) shows that successful promotion of farm forestry is dependent on the creation of strong markets and tailoring production to meet those markets. Farm forestry in NSW is a long way from this situation.

It is important to note that the privatisation of the Victorian resource did not open up the market to smaller farm forestry parcels and has in fact resulted in market domination by private enterprise rather than a government enterprise.

6.5.1.2 Private native forestry

Private native forestry presents another key opportunity for sawlogs and perhaps peeler logs from high quality sites. Minimal establishment costs and the opportunity for immediate cash flow are clear advantages for the native forest option, though merchantable harvest yields are likely to be significantly lower than for a well managed planted farm forest. Again, market development for low quality material would improve the performance of this farm forestry option.

It has been estimated that at the conclusion of the 1998 Comprehensive Resource Assessment (CRA) process in NSW, SFNSW will need to supplement timber from state forest with resource from private property to meet their long term wood supply agreements to industry in NSW. This represents a significant opportunity to owners of private native forests.

There are important differences in the product value chain for hardwoods and softwoods in NSW which will impact on market strategies. Australian hardwoods and, to a lesser extent, cypress pine, are increasingly being used for value added niche markets which attract higher returns than green sawn structural timber.

Some processing operations rely solely on timber from private sources and even those with a high proportion of State Forests timber will supplement with private supplies. This provides some opportunities for farm foresters to sell relatively small parcels of logs, though log quality and ease of site access will be important. For example, a survey of mills on the Northern Tablelands (CARE 1997, unpublished) revealed that smaller mills with an annual log throughput of below 4,000 m³ were willing to harvest parcels of timber as small as 50 m³. At present, most farm foresters supplying this type of market have done so on an *ad hoc* basis, particularly where the timber comes from private native forest. Little or no management of the forest has occurred and opportunistic logging operations take place, usually when the farmer requires extra cash flow

during drought or downturns in commodity markets. Farmer networks for marketing of private native forest products are not well developed in NSW.

6.5.2 Niche markets

Specialised or 'niche' markets provide farm foresters more opportunity and control than commodity markets, especially in areas distant from established timber processing centres. The smaller scale of these markets enables farm foresters to better use their competitive advantages, most importantly the availability of skills and labour. However, the small scale, greater differentiation of products and less well-developed marketing arrangements for most of these products introduce other risks for growers.

The New Zealand private forestry situation provides an interesting contrast to NSW. Deregulation of the NZ economy in the late 1980s saw a range of government support mechanisms for agriculture removed. As a result, the return on investment for forestry (for which incentives were also removed) was shown to be better than much of agriculture. A key driving factor for the expansion of farm forestry in NZ is the highly competitive and active market for logs. The Crown resource in NZ was corporatised and ultimately privatised meaning that there was no dominant player in the market offering long-term supply agreements to industry at discounted prices. Cutting rights to the Crown resource were tendered out. There is a well developed network of brokers in NZ who act as a bridge between growers and buyers, usually via an open tender process. Log prices in NZ are published daily in the press, along with other agricultural commodities.

The dynamic market for logs combined with a log price spike in the Asian market in 1993–94 generated NZ farm forestry plantings of around 90,000 ha in 1996. The Asian economic crisis has since seen this fall to about 30,000 ha per annum but this is still vastly greater than the 1,500 ha planted in NSW in 1999 (BRS 2000a).

The NZ farm forestry sector has targeted high value pruned clearwood logs. At present, *P. radiata* logs are fetching \$150/tonne delivered at the wharf for export. Many NZ farm foresters have adopted a regime of planting 2 ha per year for 25 years, many achieving a 50 ha plantation on a 200 ha farm. Some of these plantations are now in their second rotation and are netting \$NZ50,000/ha. The objective is a sustained forestry yield which can be managed by the farm family. Agriculture is concentrated on the most highly productive parts of the farm, with forestry replacing agriculture on areas where agriculture was marginal (Jeff Tombleson, NZ Forest Research Institute, personal communication).

– CARE 2000

Potential products include the following.

Specialty timbers. There are many potential niche markets for specialty timber products. Most specialty timber species are planted in small lots and managed intensively using techniques such as form pruning to produce a single straight stem with few defects (Bird 1997). Species capable of specialty timber production can be selected for all regions in NSW.

Essential oils. Around 150–200 essential oils are currently traded globally. In Australia, 150 growers produce an annual crop of \$6m in value. Uses for the oils include several foods and drinks, pharmaceuticals and beauty products (RCS Group 1998). Species used for essential oil production grow in lower rainfall areas and on infertile sites, so they can potentially be grown in a number of regions in NSW.

Eucalyptus oil. China currently produces a large amount of the world supply of eucalyptus oil at a low price, making competitive production in Australia difficult (Higgins and Portelli 1998; RCS Group 1998). However, farm forestry for production of eucalyptus oil is well under way in Western Australia, and may be a potentially viable option for tree growing in low-rainfall areas (Curtis and Race 1996). While industrial solvents present a potentially large market, the solvents currently used can be produced far cheaper than from farm forestry activities (RIRDC 1996). As for essential oils, species used for eucalyptus oil production grow in lower rainfall areas and on infertile sites. They can therefore potentially be grown in a number of regions in NSW, including in the Murray-Darling Basin where they may also serve a catchment protection role.

Firewood. Firewood markets in NSW are supplied by woodcutters operating with permits in public forests, and sourcing from private and woodland forests. The combination of environmental benefits with fuel wood production in farm forestry has high potential (Higgins and Portelli 1998). Proximity to a market is the key requirement for economic fuel wood production.

Bio-fuel markets. Following the outcomes of the Climate Change Conference in Kyoto, and the federal government requirement for 2% of energy production to be generated from renewable resources, there is a commercial incentive and strong community support for the forestry industry to support bio-energy facilities. Farm forestry provides opportunities for a sustainable flow of resources to bio-energy production with no net carbon dioxide emissions.

With regard to worldwide developments, it has become feasible to build small-scale combined heat and power plants in the range of 4–20 MW of electricity production. Thermal co-generation power plants have been in operation for over 15 years in Scandinavian countries (Puhakka 1997 reported in FORTECH, 1999). Based on a 1998 study of industry development options in north-eastern NSW, a volume of 80,000 m³ of pulpwood supplied (at economically feasible transport costs) to a bio-energy facility could produce about 6 MW of electrical energy and 12 MW of thermal energy (Enecon Pty Ltd 1998). However, it is estimated that the cost of producing energy from biomass combustion would be more expensive than the rates currently offered by competitive coal based electricity producers, but government initiatives such as ‘Green Power’ are designed to ensure that energy from renewable resources is affordable for customers.

Substantial volumes of woodchips from sawmill residues are currently used for power generation at Wallerawang in central western NSW. Power generation provides a potentially huge market for low-grade timber, such as from thinning pine plantations. A mechanism, such as a cooperative marketing arrangement, to enable farm foresters to benefit from this sort of opportunity may assist development. In WA, the Oil Mallee program is supported by the Natural Heritage Trust (NHT) and is establishing Oil Mallee across the WA wheat belt as part of a program to produce energy in association with Western Power. A similar program based on small trees and shrubs provides potential for the development of farm forestry in the drier regions of NSW.

6.5.3 Environmental services

There are other potential markets for farm forestry other than direct income through timber products. The broader benefits from farm forestry were dealt with in section 4.5.

This section deals with the potential market for environmental services which may be realised by fee for service or the use of credits.

There are suggestions that payments for environmental credits will support farm forestry investment in areas otherwise marginal for farm forestry. However, a number of commentators (e.g. Byron and Coleman 1999) are less optimistic about these markets emerging or the ability of small growers to access them.

Packaging the potential return from environmental services with timber products may in fact tip the balance in favour of farm forestry in those areas otherwise considered marginal for farm forestry.

Further attempts have been made in NSW to develop environmental service markets which have relevance to farm forestry. These include State Forests' successful carbon trade with a Japanese electricity generator and the Macquarie Food and Fibre salinity planting in the Upper Cudgegong catchment in central western NSW.

Environmental services are not limited to carbon and salinity credits. Future payments for environmental services relevant to farm forestry may include watershed management and biodiversity conservation. The state government is proposing a strategic mechanism for promoting these more speculative commercial opportunities through the Experts Group on Market Mechanisms as outlined in the NSW Salinity Strategy.

The Environmental Services Scheme was launched in June 2002 with the aim of identifying the environmental benefits of changed land use activities. The eventual goal is to create a market for trading these environmental services.

6.5.4 Resource inventory

To attract further processing capacity to any region, it will be essential to have a good inventory of the existing timber resources as well as estimates of farm forestry suitability. Such an inventory does not exist for NSW. It is needed to provide the basis for industries and government to take full advantage of potential market opportunities by maximising the capabilities of the private native forest and planted farm forestry resource. The Bureau of Resource Sciences currently collects information on the Australian plantation resource (both public and private plantations) and are developing a National Forest Inventory which will also include information on native forests (private and public) and a National Farm Forest Inventory.

PROPOSED STRATEGY ELEMENT 7.3

Facilitate the development of competitive, readily accessible markets for farm forestry

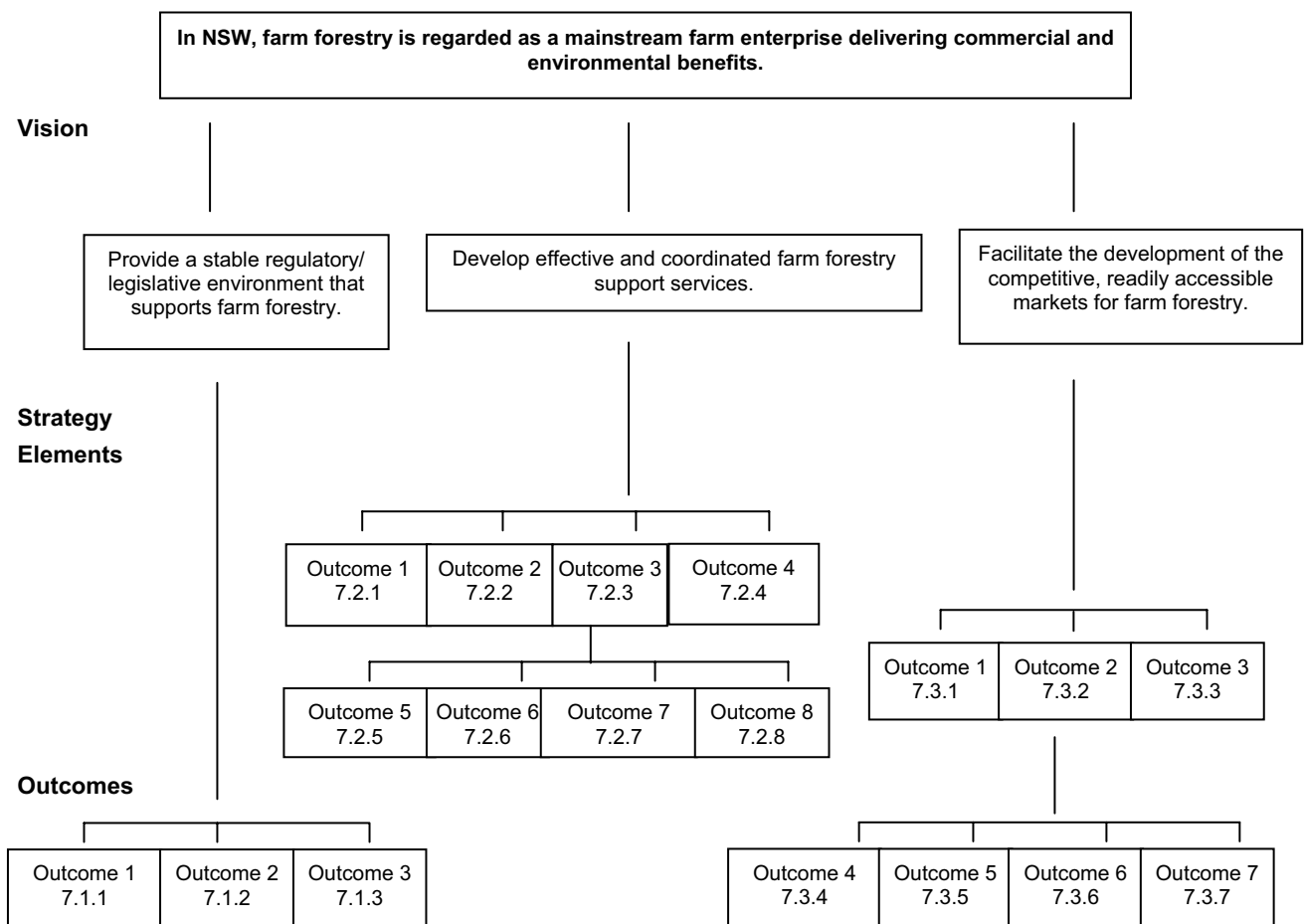
7. THE STRATEGY

The strategy will focus on three key strategy elements:

1. Provide a stable regulatory/legislative environment that supports farm forestry.
2. Develop effective and coordinated farm forestry support services.
3. Facilitate the development of competitive, readily accessible markets for farm forestry.

A graphical representation of the strategy vision, elements and outcomes is provided in Figure 8.

Figure 8. The structure of the Farm Forestry Strategy for NSW



7.1 PROVIDE A STABLE REGULATORY / LEGISLATIVE ENVIRONMENT THAT SUPPORTS FARM FORESTRY

7.1.1 Outcome 1: Farm forestry risk is reduced by appropriate legislative and regulatory regimes

State environmental and planning legislation affecting farm forestry can be further simplified and streamlined in order to provide a more supportive and secure framework for the sector. For farmers to invest in an enterprise with a crop life in excess of 25 years, they need to be confident with the supporting legislation. Any future changes to relevant legislation need to consider the potential negative impacts on long-term investment such as farm forestry.

A forestry right already exists which allows the separation of title to the trees from the land.

ACTION: Ensure that legislation relevant to farm forestry optimises opportunities and minimises negative impacts

At a local government level it is essential to develop planning mechanisms that provide clear and consistent treatment of farm forestry across all of NSW with respect to planning consent and fees. The Plantations and Reafforestation Act 1999 should assist in this matter for plantations and exempt farm forestry, but does not include native forests.

ACTION: Promote planning mechanisms which facilitate farm forestry

Taxation reform should not unfairly penalise farm forestry investments because of the uneven nature of expenditures and revenues.

ACTION: Contribute to reviews of taxation to ensure fair treatment of farm forestry

7.1.2 Outcome 2: Farm forestry legislation and regulation are simple and easily understood

The implementation of legislation and regulation should aim to avoid unnecessary barriers to farm forestry development. It is necessary to ensure uniformity of interpretation of both legislation and the codes of practice among officers in state government agencies.

ACTION: Produce user-friendly overview of legislation/regulation and educate officers in interpretation

7.1.3 Outcome 3: Farm forestry accreditation procedures are streamlined

Consideration should be given to the option of self-assessment in the establishment and management of farm forestry activities subject to compliance with codes of practice in NSW. Codes of practice must not impose unreasonable conditions on farm forestry.

A self-assessment regime would mean that no accreditation process is necessary. This would require the development of very clear guidelines for farm forestry developers with access to the necessary expertise should it be needed. The issue here is one of optional expert input as opposed to a compulsory external audit in achieving accreditation. A state agency audit of self-assessed developments could subsequently be applied.

Farm foresters and regulators should recognise that self-assessment options (leading to accreditation) may lead to positive accreditation options (e.g. Australian Forestry Standard, ISO 14000) in the future.

ACTION: Investigate self-assessment options and develop recommendations for consideration by government

7.2 DEVELOP EFFECTIVE AND COORDINATED FARM FORESTRY SUPPORT SERVICES

7.2.1 Outcome 1: A single independent body coordinates farm forestry in NSW

The state coordinating body will:

- € provide leadership and co-ordination to the farm forestry sector;
- € include representatives from the three tiers of government, the forest industry and the farming community;
- € enable better definition of the roles of service providers and agencies;
- € provide a mechanism to ensure all farm forestry stakeholders are aware of the issues which impact on farm forestry.

ACTION: Identify coordinating body, define terms of reference and adequately resource

7.2.2 Outcome 2: The provision of balanced advice which is clear, accurate and non-contradictory

The roles of the various agencies require clarification and communication channels between agencies must be improved. The functions of the agencies must be more closely aligned with their skills and driving philosophies in the farm forestry area. The development of a NSW coordinating body for farm forestry will provide a vehicle for better integration of the advice from agencies.

ACTION: Define agency roles/responsibilities and relationships

7.2.3 Outcome 3: One initial contact point for farm forestry in NSW

The NSW coordinating body should identify the initial contact point for farm forestry in NSW from the existing agencies. This agency should have clear responsibility for referring inquiries to other agencies/organisations, thereby providing access to information and networks.

ACTION: Identify initial farm forestry contact point

7.2.4 Outcome 4: Increased and effective research and development activities

The state coordinating body has a role to play in the integration of research activities, even where those activities occur on a wider scale than NSW. Funding bodies (e.g. NHT, RIRDC) also have a responsibility in this area.

Improved coordination of the R&D effort between all organisations at the state level, combined with an increase in the level of funding and improved communication of the results, would serve to underpin farm forestry.

ACTION: Increase levels of funding for R&D and improve coordination and communication of R&D outcomes

7.2.5 Outcome 5: Public farm forestry programs that deliver regional benefits

Effective publicly funded farm forestry programs (those that address local issues in the context of regional, state and federal level programs) must take account of regional variation in the value chain for farm forestry.

A strategy for the Private Forestry Development Committees (PFDCs) in NSW has been developed which includes a coordinated approach to undertaking important state-wide projects to fill vital information gaps in the private forestry information set. There are also provisions for region-specific projects to fill local gaps and facilitate the uptake of farm forestry. PFDCs are an important regional resource whose charter extends across all farm forestry stakeholders.

Farm forestry programs also need to link with relevant regional natural resource management and land use planning initiatives.

ACTION: Ensure that publicly funded programs acknowledge regional issues

7.2.6 Outcome 6: Affordable farm forestry

Considerations should be given to a range of initiatives that will support further development of farm forestry. These could include:

- € access to various forms of finance (low-interest loans, grants) to enable farmers to establish farm forestry enterprises;
- € 110% tax deduction for plantation establishment;
- € regional incentive schemes where farm forestry has a large public good component, particularly in those regions with low rainfall and low growth rates;
- € the development of financial incentives which will promote more intensive silvicultural management by small growers to access higher value markets.

ACTION: Evaluate financial options to promote establishment of farm forestry

7.2.7 Outcome 7: Adequate skills to support the farm forestry industry

On-ground skills in farm forestry are required to develop a prosperous farm forestry sector. Training and education in all aspects of farm forestry must be improved. Private forestry consultants and training providers have a role here. Consideration should also be given to running basic forestry management courses through TAFE, which would have application to farm forestry.

ACTION: Develop training opportunities to improve existing skill levels

7.2.8 Outcome 8: Regional strategic planning which recognises the role of farm forestry in regional economic development

Regional economic development strategies should account for the geographic distribution of current and potential future farm forestry investments. Processing facilities must be appropriately located to reflect the reality that transport costs play a critical role in the profitability of farm forestry investments.

ACTION: Include farm forestry in regional development plans

7.3 FACILITATE THE DEVELOPMENT OF COMPETITIVE, READILY ACCESSIBLE MARKETS FOR FARM FORESTRY

Farm forestry must be viewed as a profitable activity which is able to compete with other land uses. There are several outcomes which must be achieved in NSW before this is possible. These include better access to markets, the development of markets for residues/thinnings and local processing capacity, building networks, providing better price information and ensuring that the operations of the public forest estate (both native forest and plantations) do not represent a disincentive to private investment.

7.3.1 Outcome 1: Improved market access and markets for residues/thinnings

Access to a range of markets for timber and timber products, in line with those for existing, mainstream agricultural products would remove a major impediment to the broad scale uptake of farm forestry. Access must be more stable and long-term.

Farmers are accustomed to using brokers to market a range agricultural products. A similar arrangement, where there are a number of brokers providing advice and access to markets, would facilitate the marketing of timber from farm forestry. For many producers, particularly those with small parcels of timber, the current market returns would not justify the time spent undertaking extensive market research and development.

As SFNSW are currently seeking to identify and source hardwood from private property to fulfil their supply contracts, this provides an excellent opportunity to establish a brokerage system in parts of NSW. This is an instance where SFNSW could use its major role in the marketplace to actively assist the development of one of the necessary support services for farm forestry. It is suggested that SFNSW consider outsourcing at least some part of their brokerage activities in order to assist in the establishment of a brokerage network.

ACTION: Promote the activity of brokerage services in farm forestry

The facilitation of markets for low quality wood including pulp, bio-energy, charcoal, ethanol, small sawlogs and reconstituted timber products is critical for the further development of farm forestry in NSW.

ACTION: Pursue long term market development for residues/thinnings including residues from native forests

Joint venture programs involving growers, processors and investors have proved to be a highly successful method of promoting farm forestry ventures. The further development of joint venture options should be encouraged by government and industry. This would improve information flows and develop ongoing relationships that would benefit the industry in the long term.

ACTION: Facilitate the expansion of the range of joint venture options

7.3.2 Outcome 2: More local and regional processing capacity

While joint venture and prospectus-type investments assist private growers by generating critical mass, the regional implications of replacing large areas of farmland with trees can be negative if contracting and processing operations occur outside the region. Essentially, this leaves a region with most of the negative impacts and few of the positive economic benefits. It is important that where achievable, local contracting and processing services are encouraged and links are developed with the local forest resource managers.

Facilitating large scale infrastructure development is difficult for regional forestry interests, such as PFDCs. Increased state government support such as was provided to the Visy Development Project is urgently needed for infrastructure development, perhaps via the Department of State & Regional Development (DSRD).

ACTIONS: Facilitate development of regional processing capacity where appropriate; promote the economic benefits of regional processing activities

7.3.3 Outcome 3: Effective farm forestry networks

Grower networks have proved successful in New Zealand, Western Australia and Tasmania. The factors that underpin the success of these networks include:

- € entrepreneurial skills;
- € business management skills;
- € communication and interpersonal skills;
- € supportive government agencies;
- € access to an adequate resource to provide secure supply of consistent quality.

Better support mechanisms are required for the development of farm forestry networks in NSW.

ACTION: Support appropriate network development structure

7.3.4 Outcome 4: The marketing and pricing of forest products from government trading enterprises is fair and equitable to farm forestry.

One of the key marketing and pricing recommendations of the Plantations for Australia 2020 Vision Report was that the operations of government trading enterprises are consistent with the National Competition Policy.

The National Competition Council is currently reviewing State Forests' application of competitive neutrality principles as part of a nationwide review.

Once this review has been finalised, the impact of State Forests' marketing and pricing policies on farm forestry can be evaluated.

For a prosperous farm forestry sector a fair and equitable marketing environment is necessary.

ACTION: State Forests and the farm forestry sector co-operate to review marketing and pricing policies

7.3.5 Outcome 5: Improved awareness of the broader benefits provided by farm forestry

The public needs to be better informed of the broader benefits provided by farm forestry, such as salinity control and carbon sequestration.

There is also a need to examine public/private cost sharing and public funding arrangements where farm forestry has a lead role in natural resource protection for broader community benefit. This is particularly relevant in regions where farm forestry is currently sub-economic on timber values alone but may well become economic by the realisation of returns for environmental services or a direct fee for service (e.g. from government).

In addition, the NSW Government is committed to investigating market mechanisms that will make it commercially viable for land managers to undertake activities which provide salinity control and other environmental services.

ACTIONS: Promote understanding of the broader benefits of farm forestry; Investigate public and private investment options that improve the commercial viability of farm forestry

7.3.6 Outcome 6: Readily accessible and accurate price information for farm forestry products

Existing price information for farm forestry products is not easily accessed and there is little scope for benchmarking the price information that is available. This reduces the confidence with which farm forestry investments can be compared with alternative enterprises.

The publishing of benchmark information similar to that available for other major commodities (e.g. 19 micron indicator for wool) would provide an indication of price trends and a reference point for local/regional prices. It would also support the perception that farm forestry is a mainstream rather than an alternative enterprise.

ACTIONS: Provide comparative pricing information in each region in electronic form and hard copy using media commonly accessed by farmers

7.3.7 Outcome 7: Improved understanding of the requirements of the growing and the processing sectors of the industry

As much of the growth in timber volumes available to the processing sector will come from private property, both processors and farm foresters would benefit from improved understanding of each other's requirements for profitable operations.

The lack of a well established and accepted method of supplying timber from private property growers to the processing sector has resulted in under-utilisation of the private resource. There is a lack of understanding and trust on the part of the growers and a perception on the part of the processors that accessing private property timber is more expensive and time consuming than dealing with SFNSW.

ACTION: Facilitate interaction between farm foresters and the processing sector

Figure 9. Summary of proposed outcomes and actions

	Strategy Element			Strategy Outcomes	Strategy Actions
7.1	Provide a stable regulatory/legislative environment that supports farm forestry	<i>Outcome 1</i>	7.1.1	Farm forestry risk is reduced by appropriate legislative and regulatory regimes	Ensure that legislation relevant to farm forestry optimises opportunities and minimises negative impacts
					Promote planning mechanisms which facilitate farm forestry
					Contribute to reviews of taxation to ensure fair treatment of farm forestry
		<i>Outcome 2</i>	7.1.2	Farm forestry legislation and regulation are simple and easily understood	Produce user-friendly overview of legislation/ regulation and educate officers in interpretation
		<i>Outcome 3</i>	7.1.3	Farm forestry accreditation procedures are streamlined	Investigate self-assessment options and develop recommendations for consideration by government
7.2	Develop effective and coordinated farm forestry support services	<i>Outcome 1</i>	7.2.1	A single independent body coordinates farm forestry in NSW	Identify coordinating body, define terms of reference and adequately resource
		<i>Outcome 2</i>	7.2.2	The provision of balanced advice which is clear, accurate and non-contradictory	Define agency roles/responsibilities and relationships
		<i>Outcome 3</i>	7.2.3	One initial contact point for farm forestry in NSW	Identify initial farm forestry contact point
		<i>Outcome 4</i>	7.2.4	Increased and effective research & development activities	Increase levels of funding for R&D and improve coordination and communication of R&D outcomes
		<i>Outcome 5</i>	7.2.5	Public farm forestry programs that deliver regional benefits	Ensure that publicly funded programs acknowledge regional issues
		<i>Outcome 6</i>	7.2.6	Affordable farm forestry	Evaluate financial options to promote establishment of farm forestry
		<i>Outcome 7</i>	7.2.7	Adequate skills to support the farm forestry industry	Develop training opportunities to improve existing skill levels
		<i>Outcome 8</i>	7.2.8	Regional strategic planning which recognises the role of farm forestry in regional economic development	Include farm forestry in regional development plans

Figure 9 (continued)

7.3	Facilitate the development of competitive, readily accessible markets for farm forestry	<i>Outcome 1</i>	7.3.1	Improved market access and markets for residues/thinnings	Promote the activity of brokerage services in farm forestry
					Pursue long term market development for residues/thinnings including residues from native forests
					Facilitate the expansion of the range of joint venture options
		<i>Outcome 2</i>	7.3.2	More local and regional processing capacity	Facilitate development of regional processing capacity where appropriate: promote the economic benefits of regional processing activities
		<i>Outcome 3</i>	7.3.3	Effective farm forestry networks	Support appropriate network development and structure
		<i>Outcome 4</i>	7.3.4	The marketing and pricing of forest products from government trading enterprises is fair and equitable to farm forestry.	State Forests and the farm forestry sector cooperate to review marketing and pricing policies.
		<i>Outcome 5</i>	7.3.5	Improved awareness of the broader benefits provided by farm forestry	Promote understanding of the broader benefits of farm forestry
		<i>Outcome 6</i>	7.3.6	Readily accessible and accurate price information for farm forestry products	Provide comparative pricing information in each region in electronic form and hard copy using media commonly accessed by farmers
		<i>Outcome 7</i>	7.3.7	Improved understanding of the requirements of the growing and processing sectors of the industry	Facilitate interaction between farm foresters and the processing sector

8. MONITORING AND EVALUATION



The proposed state level coordinating body will have the responsibility of reporting annually to the relevant ministers on the development and delivery of the implementation plan which will be prepared as a result of adoption of the strategy by the NSW Government.

REFERENCES

- AACM (1996), *Commercial Farm Forestry in Australia*.
- ABARE (1995), *Trees on Farms. Survey of trees on Australian farms: 1993-94*. ABARE Research Report 95.7, Australian Bureau of Agricultural & Resource Economics, Canberra.
- ABARE (1999), *Australian Farm Surveys Report 1999*, Canberra.
- ABARE (1999a), *Forest Products. Long Term Consumption Projections for Australia*. ABARE Research Report 99.5, Canberra.
- ABARE (1999b), *Forest Plantations on Cleared Agricultural Land in Australia*. ABARE Research Report 99.11, Canberra.
- ABARE and BRS (2001), *The Capability, Suitability and Competitiveness of Land for Plantations in New South Wales*. Commonwealth of Australia, Canberra.
- Alexandra and Hall (1996), *Creating a viable farm forestry industry in Australia - what will it take?* The Short Report, RIRDC No 35 Canberra.
- BRS (2000a), *National Plantation Inventory Australia*. Tabular Report, March 2000, Bureau of Rural Sciences, Canberra.
- BRS (2000b), *Identification of Commercial Timber Plantation Expansion Opportunities in New South Wales - Upper and Lower North east CRA*. A project undertaken as part of the NSW Comprehensive Regional Assessments, Report to the NSW CRA/RFA Steering Committee, Draft February 2000, Bureau of Rural Sciences, Canberra.
- BRS (2000c), *Identification of Plantation Expansion Opportunities in New South Wales - Southern NSW CRA*. A project undertaken as part of the NSW Comprehensive Regional Assessments, Report to the NSW CRA/RFA Steering Committee, Draft January 2000, Bureau of Rural Sciences, Canberra.
- BRS (2000d), *Identification of Plantation Expansion Opportunities in New South Wales - Eden CRA*. A project undertaken as part of the NSW Comprehensive Regional Assessments, Report to the NSW CRA/RFA Steering Committee, Draft February 1998, Bureau of Rural Sciences, Canberra.
- Byron, N. and Coleman, A. (1999), *Kyoto Forests - Prospective providers of carbon-sequestration services?* Paper prepared for the Second Australian Emissions Trading Industry Forum: (Emerging Emission Trading Markets) Sydney 24-25 March 1999.
- Cameron, J.N. (1996), *Projected World Wood Supply and Demand*. Paper presented to the 1996 Australian Forest Growers Conference, 'Farm Forestry & Plantations - Investing in Future Wood Supply', Mount Gambier, 9-12.
- CARE (1998a), *Regional Economic Impact Assessment for the Upper North East CRA Region*. Project for the NSW Comprehensive Regional Assessments, Centre for Agricultural & Regional Economics, October.
- CARE (1998b), *Regional Economic Impact Assessment for the Lower North East CRA Region*. Project for the NSW Comprehensive Regional Assessments, Centre for Agricultural & Regional Economics, October.
- CARE (1999), *Role and Function of the Regional Plantation Committees in NSW to 2005*. Report to the NSW RPC Group, Centre for Agricultural & Regional Economics, August.
- CARE (2000), *A Commercial Farm Forestry Strategy for NSW*. Final report to the NSW Farm Forestry Sub-Committee.
- Combe, M. Unwin, G., Dyason, R. and Peacock, R.J. (1998). 'Resource profile of high graded dry hardwood forests: implications for improving productivity'. In Dyason, R., Dyason, L. and Garsden, R. (eds.), *Australian Forest Growers Biennial Conference Proceedings - Plantation and regrowth forestry a diversity of opportunity*, Southern Cross University, pp.11-30.
- Cummine, A. (1996), *Help and Hindrance. A snapshot of government policies that affect farm forestry*. Paper presented to the Yass Region Farm Forestry Conference, 27 March, Australian Forest Growers.

- Curtis A and Race D (1996), *A review of socio-economic factors affecting regional farm forestry developments in Australia*. Report No 69. The Johnstone Centre Charles Sturt University, Albury 29pp.
- de Fegely, Rob. (2000), *Markets & Market Visions*. Paper presented to the National RPC Conference, Coffs Harbour, February.
- Dyason, Rob (1999), *The Penny Drops – Trees are Sustainable*. In 'Dorrigo Farm Forestry Project Annual Newsletter 1998/99', Greening Australia, pp.23-24.
- Ellis, G.R. (1994), *Integrated Commercial Plantations on the Farm - Working in the South Coast Region of WA*. Paper presented to the Faces of Farm Forestry Conference, Launceston, May 2-5, Australian Forest Growers.
- FORTECH (1999), *A preliminary draft Farm Forestry Strategy for New South Wales*. Internal Report to the NSW Farm Forestry Sub-Committee SCMCC, December.
- Gibbs (2000), *New South Wales Softwood Industry Strategy*. Issues Paper, Diana Gibbs and Partners, February, unpublished paper.
- Greening Australia (1996), *Farm Forestry in Australia, Integrating Commercial and Conservation Benefits*.
- Heathcote, R. (1999), *Financial Returns from Eucalypt Plantations*. Paper presented to Plantations and Farm Forestry Financial Returns and Taxation Issues Seminar, Ballina, February.
- Higgins I, and Portelli, M. (1998), *Farming native vegetation for salinity control*. Centre for Land Protection Research, Australia.
- King, D.P. (1996), *Farm Forestry in Tasmania*. Paper presented to the 1996 Australian Forest Growers Conference, 'Farm Forestry & Plantations - Investing in Future Wood Supply', Mount Gambier, 9-12.
- Margules Groome Poyry, Powell, R. and James, D. (1995), *The Economic Impact of the New South Wales Timber Industry*. Report to NSW State Forests, Sydney.
- Parsons, L.J. (1996), *Changing Markets for Sawlogs and Roundwood Products*. Paper presented to the 1996 Australian Forest Growers Conference, 'Farm Forestry & Plantations - Investing in Future Wood Supply', Mount Gambier, 9-12.
- Powell, Roy and Chalmers, Linden, (1997), 'Revisiting old fashions in regional development policy: the case of Oberon, NSW', *Regional Policy and Practice*, 6(1), 19-24.
- RACAC (2000), Resource and Conservation Assessment Council Fact Sheet.
- RCS Group (1998), *A market overview: forest products of relevance to NSW Central Tablelands*. RCS Group, Queensland.
- SFNSW (1999), *Forest Practices Code. Timber Harvesting in Native Forests, State Forests & Crown-Timber Lands*. State Forests of NSW, Operational Circular 98/08.
- Sutton, W. (1999), *Does the World Need Planted Forests*, paper presented at the Inter-sessional Expert Meeting on the Role of Planted Forests, Santiago, April 6-9.
- Thompson, David, Chalmers, Linden and Bailey, Janet, (1997), *Economic Benchmarking for Beef Production and Eucalypt Plantations - North Coast NSW*. Report to NSW State Forests, Centre for Agricultural and Regional Economics, Armidale.

APPENDIX 1. STRENGTHS AND WEAKNESSES IDENTIFIED AT STAKEHOLDER WORKSHOPS

Workshop identification:
 D – Dorrigo
 P – Port Macquarie
 W – Wellington
 T – Tumut
 G – Goulburn

Strengths of farm forestry in NSW

Extension

Private Forestry Development Committees, Greening Australia, etc – providing good networking and coordination (P, W, D, T, G)

Tree grower programs that are community driven (P, D)

Changing environmental attitudes – more aware of issues and inclined to consider farm forestry, development of tree planting culture (P, W, G)

Opportunity to work with ‘greens’ (W)

Infrastructure

Access to export markets in 1998 through Port Kembla (T)

Financial Resources

Value-adding opportunities that lead to better management and more money to the grower (P)

Government funding opportunities for Farm Forestry (FFP, NHT, NSW Govt, FF Program) (P, W)

Economic pressure for farmers to diversify (T)

Tax incentives for Landcare (W)

Tax incentives for pine (W)

Long term capital gain (W)

Increased awareness of farm forestry as an investment (G)

Commercial options in lower rainfall areas (G)

Potential for financial returns for non-market benefits (T)

Other

Investment funds from cities (W)

TCM support for Trees on Farms, codes of practice, quality assurance, development of plans that provide a framework for farm forestry (T, G)

Markets

Range of markets already available (W, T)

New market opportunities – Visy (T)

Diversification of tree products (G)

Regulations

Policies and programs that set directions and provide opportunities – National Forest Policy – 1992, State Forests Joint Venture program (P)

Physiological/Biological Resources

Positive growing conditions – good climate, species varieties (P, T)

Shelter benefits – improved production from grazing (W)

Dryland salinity costs (W)

Direct seeding techniques making FF easier (W)

Potential uses for all by-products (T)

State Forests move to plantations on farmlands providing new technology (T)

Control of land degradation (G)

Weaknesses of farm forestry in NSW

Extension

Too many agencies coordinating information, creates confusion, no responsibility (D, T, G, P)

Training courses can lack practical advice (D)

Ventures and schemes that have failed in the past, produced poor image of FF, farmers do not recognise value of FF, risks and long-term crop (T, P, W, G)

Some segments of community threatened by need to plant 30% of trees for land degradation control (W)

Need for funding for PFDCs (P)

Markets

Lack of information about what timber is worth and how to value trees/market data (D, P)

Lack of access to markets (T)

Lack of market for non-benefits (T)

Lack of plantation industry in area – lack of access to markets (W, G)

Infrastructure

Increased demand for road transport, current lack of a good network, rail line closures, equity regarding payment of rates by *all* users (State Forests don't have to pay rates (D, T, W)

Lack of plantation industry in area – lack of access to processing, need for local specialist sawmills (W, G, D)

Regulations

Farm Forestry should be considered as an agricultural land use (D)

Complex planning approval and development consent requirements, lack of consistency/uniformity – creates disincentives (D, T, G)

Financial Resources

Small scale plantings not able to obtain economies of scale (T)

Limited corporate sector support for FF (T)

Ongoing management is often poor, due to financial limitations, costs of establishment and maintenance inputs (D, T, G)

NHT funding does not encourage use of exotic species (T, G)

Lack of cash flow – declining profitability, inability to diversify (G, P)

Lack of cost-sharing framework (G)

Physiological/Biological Resources

Limited information on species, growth and site selection (D, T, W)

Ongoing management often poor due to technical limitations (T)

Limited data on natural resources (T)

Lack of research and development providers (T)

Emphasis on pines R&D (G)

Lack of development of hardwood plantings (G)

Neglect of private regrowth forests (P)

Other

Anti-pine sentiment in some sections of the community (T)

Domination of plantation sector by government agencies reduces private sector involvement, also difficult to produce timber to industry standards on farms (T)

Recognition that plantings are for multi-purpose, farmers can't afford to put trees on their best land; conflict between production and conservation (D, W)

Source: FORTECH (1999) *A Farm Forestry Strategy for New South Wales*

APPENDIX 2. LEGISLATION IMPACTING ON FARM FORESTRY

PLANTATIONS AND REAFFORESTATION ACT 1999

(Administered by the Department of Infrastructure, Planning & Natural Resources.)

The Plantations and Reafforestation Act 1999 aims to boost investment in plantations on essentially cleared land. The provisions of the Plantations and Reafforestation Act 1999 came into operation with the gazettal of the Code of Practice in December, 2001. This Act has the following objectives.

- € To facilitate reafforestation of land.
- € To improve consent timeframes through a process of integration via DIPNR as a single consent authority. Authorised plantations will no longer be subject to the Environmental Planning and Assessment Act 1979 nor certain provisions of the National Parks and Wildlife Act 1974, the Threatened Species Conservation Act 1995, the Local Government Act 1993, the Fisheries Management Act 1994 and the Soil Conservation Act 1938.
- € To codify existing environmental protection standards.
- € Allowing for the provision of industry infrastructure levy arrangements where levies on plantation harvest revenues are made available to local government for infrastructure development and planning.

The Act makes allowances for the work of regional vegetation committees and the regional vegetation management plans formulated under the auspices of the Native Vegetation Conservation Act 1997. Plantations will not be approved where clearing of native vegetation is proposed that is prohibited by the regional vegetation management plan.

The Act makes the distinction between plantations (greater than 30 ha in area) and farm forestry. Exempt farm forestry (less than 30 ha at any one time) is exempt from the Act unless it would otherwise require consent for clearing under the NVCA or where timber harvest exceeds the amount specified in the code of practice.

Under the farm forestry exemption, qualifying farm forestry plantings are exempt from the EP&A Act. Although the Plantations and Reafforestation Act is targeting farm forestry and plantation development on 'essentially cleared land', 'exempt farm forestry' is still potentially subject to a range of other legislation, especially when the clearing of native vegetation is involved. However, if harvest guarantee is to be

extended to these farm forestry plantings, they must go through the formal accreditation process under the Plantations and Reafforestation Act.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

(Administered by local councils.)

Development consent from local councils for farm forestry or plantation operations is sometimes required, depending on the zoning of the land under the relevant Environmental Planning Instrument. If only the clearing activity requires consent from Council and consent for this clearing has been received under the NVCA then additional consent will not be required from Council (s. 15(2) of the NVCA).

State Environmental Planning Policy 44 is triggered when development consent is required from local councils.

NATIVE VEGETATION CONSERVATION ACT 1997

(Administered by the Department of Infrastructure, Planning & Natural Resources.)

The Native Vegetation Conservation Act provides the framework for the management of native vegetation in NSW. The Act requires proponents to seek development consent for clearing which is not otherwise exempted. The Act identifies a number of exemptions from the need to seek development consent which may be amended by a Regional Vegetation Management Plan.

Consent may be required under the NVCA for clearing unless it can be done under exemption. An exemption currently exists for the clearing of native vegetation in the course of it being selectively logged on a sustainable basis, or managed for forestry purposes (timber production). This exemption only applies on non-protected land and consent is required for harvesting of native forest on protected land. The application of this exemption is problematic due to lack of clarity in the definition of 'sustainable'.

The Act provides for Codes of Practice to be developed but these are restricted to applying only on non-protected land.

NATIONAL PARKS AND WILDLIFE ACT 1974 AND THREATENED SPECIES CONSERVATION ACT 1995

(Administered by the National Parks and Wildlife Service.)

These Acts, broadly speaking, require a licence to 'harm, pick or destroy' the habitat of threatened and endangered species of animals, and the destruction of threatened and protected species of vegetation. Whenever an approval to clear native vegetation is issued under the NVCA, destruction of animal habitat and threatened or protected plants is dealt with as part of the approval.

If NVCA consent is not issued, then consideration needs to be given to the need for a licence to harm protected animals or to significantly impact on threatened species.

The National Parks and Wildlife Act makes it an offence to disturb Aboriginal relics or declared Aboriginal places without the consent of the Director-General of the NPWS. Any relic discovered must be reported to the Director-General of the NPWS.

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

(Administered by the Environment Protection Authority.)

The Act provides for the licensing of activities causing air, water and noise pollution. While timber harvesting operations on State Forest tenure are required to be licensed, such a requirement does not exist for similar operations on freehold tenure or for plantation operations. However, if such operations are likely to cause pollution then a licence is required.

RIVERS AND FORESHORES IMPROVEMENT ACT 1948

(Administered by the Department of Infrastructure, Planning & Natural Resources.)

This Act provides for the protection of rivers and lakes from excavation and alteration to the bed and banks. Permits may be required for construction of drainage feature crossings in certain instances.

CROWN LAND ACT 1989 AND ROADS ACT 1993

(Administered by the Department of Infrastructure, Planning & Natural Resources; State Lands Service.)

Unformed Crown Roads are present on many rural holdings. Written approval is required from the District Manager, Department of Infrastructure, Planning & Natural Resources, prior to any works on crown land, including harvesting of trees.

FISHERIES MANAGEMENT ACT 1994

(Administered by NSW Fisheries.)

Under the Fisheries Management Act, it is an offence:

- € to harm any fish or marine vegetation of a threatened species, population or ecological community (s220Z);
- € to cause damage to critical habitat(s220ZC); or
- € to cause damage to the habitat (other than critical habitat) of a threatened species, population or ecological community if the person causing the harm knows that the area concerned is habitat of that kind (s220ZD).

It is also an offence to carry out works of dredging or reclamation in waters without a permit (s198–202).

Approval may occasionally be required when constructing bridges, culverts or other watercourse crossings for roads and trails to ensure that fish passage and aquatic habitat are not affected. NSW Fisheries has issued a policy document which details the implications of the Fisheries management Act for road construction.

HERITAGE ACT 1977

(Administered by the Heritage Council and local government.)

There is an obligation under this Act to notify the Heritage Council of the discovery or existence of a relic. It is an offence to disturb relics without a permit.

Permits are only generally required if a preliminary site inspection and inquiries disclose that relics are present, or if they are discovered in the course of operations.

TIMBER PLANTATIONS (HARVEST GUARANTEE) ACT 1995

(Administered by the former Department of Urban Affairs and Planning, now Planning NSW.)

This legislation provides for the accreditation of timber plantations and has been repealed by the Plantations and Reafforestation Act.

APPENDIX 3. ORGANISATIONS INVOLVED IN FARM FORESTRY IN NSW

In NSW, a large number of organisations, both government and non-government, are involved in the farm forestry arena in some way. The farm forestry roles played by these organisations are described here briefly (refer to section 6.4.1).

State Forests of NSW (SFNSW) has played an advisory, extension and training role, though this has been diminished in recent years as extension staff numbers have been reduced.

Department of Infrastructure, Planning & Natural Resources (DIPNR) is responsible for native vegetation management through the Native Vegetation Conservation Act. This Act has important implications for the management of existing native forest for timber production and includes measures for protecting riparian zones and protected (steep) lands. As of September 2003, DIPNR includes the former Department of Land and Water Conservation.

Regional Vegetation Committees (RVCs), under the auspices of the NVCA, will develop regional native vegetation management plans which may impact on both plantation establishment and private native forest management for timber.

Planning NSW, now a part of DIPNR, developed the Harvest Guarantee Act and plantation accreditation procedures which allow growers to be compensated if an accredited plantation cannot be harvested for environmental reasons.

Greening Australia (GA) has a key charter of tree planting for environmental purposes/revegetation, though increasingly they are moving to an advocacy role for multiple purpose (commercial and environmental) tree establishment.

Environment Protection Authority (EPA) plays a role in setting/enforcing the environmental legislation related to land development.

NSW Agriculture (NSW Ag) has played a limited role to date, largely related to the interaction between trees and agricultural enterprises, but has recently established a Farm Forestry Advisory Unit in Tamworth.

Agriculture, Fisheries and Forestry Australia (AFFA) administers the Commonwealth Farm Forestry Program (FFP).

Local government is responsible for setting the general development application requirements for a proposed land use. These requirements vary from council to council, from no development application required to full environmental impact statements. With the introduction of the Plantations and Reafforestation Act, the DIPNR becomes the single consent authority for plantations.

Regional Plantation Committees (RPCs) were set up under the FFP to encourage industrial plantation and farm forestry development in regional Australia. They are now called Private Forestry Development Committees (PFDCs).

Research organisations (e.g. Rural Industries Research and Development Corporation) and universities conduct research and provide courses on farm forestry.

Australian Forest Growers (AFG) is a voluntary organisation providing an advisory service to private forest growers and lobbying government on legislative issues impacting on farm forestry.

National Association of Forest Industries (NAFI) is a self-funded lobby group for the entire forest-based industry.

New South Wales Forest Products Association Ltd (FPA) is a self-funded group representing the wood processing sector in NSW.

Office of Private Forestry, now a part of DIPNR, was formed out of the Plantations Taskforce and provides a single point of reference within NSW Government on private forestry issues.

Department of State and Regional Development has provided financial support for the PFDCs.

National Parks and Wildlife Service (NPWS) administers several Acts which impact on farm forestry.

State Catchment Management Coordinating Committee (SCMCC) is the umbrella group for regional Catchment Management Boards and house the sub-committee responsible for this farm forestry strategy.

Australian Taxation Office (ATO) administers taxation legislation.

ACKNOWLEDGMENTS

The Farm Forestry Sub-Committee (NSW State Catchment Management Coordinating Committee) managed the preparation of the Farm Forestry Strategy for NSW. Membership included:

Andrew Kennedy (Convenor) (NSW Agriculture)

Dhyan Blore (Project Manager) (NSW Agriculture)

Bill Stanfield, Mark Sandstrom, Gary Allen (Greening Australia NSW, Inc.)

Sue Salvin, Mathew Crozier (NSW Farmers Association)

Elise Newberry, Mark Watt (State Forests of NSW)

Lexie Hurford (Forest Products Association)

Gary King, Peter Wall (State Catchment Management Coordinating Committee)

Richard Papis (Department of Land and Water Conservation, now called the Department of Infrastructure, Planning and Natural Resources)

Lesley Schoer, (Lesley Schoer and Associates Pty Ltd)

Richard Finlay-Jones, Allan Wilson, John Macgregor Skinner (Private Forestry Development Committees and Farm Forestry Networks)

Richard Stanton (Plantations Australia)

Brian Furrer (Australian Forest Growers).

The Sub-committee wishes to acknowledge the contribution made by workshop participants and other farm forestry stakeholders in preparation of the Strategy.