

Submission No. 118

Inquiry into the Australian forest industry

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

Inquiry into the Australian forest industry

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This submission provides input to the inquiry into the Australian forest industry on social and economic aspects of the industry. It draws principally on research undertaken over the last seven years examining the socio-economic dimensions of Australia's forest industry, as part of the 'Communities' project of the Cooperative Research Centre for Forestry (CRC for Forestry). A list of the references drawn on in the submission is provided at the end of this document.

The 'Communities' project is the first research project involving long-term, sustained examination of the social and economic costs and benefits of Australia's forest industry, including impacts of the industry's operations on rural and regional communities; community attitudes to forest operations; and improving community engagement by the forest industry. Our research is respected and used by a wide range of stakeholders with various perspectives on forestry-related issues. We provide a unique view on key forest industry issues, particularly those over which there is often considerable debate and conflict, having undertaken independent research that provides an objective voice on some of the forest industry issues that are often associated with community conflict and debate.

I would be happy to present further on the content of this submission to the Committee.

The following parts of the Inquiry's Terms of Reference are discussed:

- Opportunities for and constraints upon production
- Social and economic benefits (and costs) of forestry production
- Potential energy production from the forestry sector, focusing on carbon sequestration
- Land use competition between the forestry and agriculture sectors (implications of competing land uses for the cost and availability of timber, food and fibre; harmonising competing interests; opportunities for farm forestry)

Opportunities for and constraints upon production

Over recent decades, one of the greatest constraints faced by the forest industry has been its failure to achieve a 'social license to operate' for many of its operations. In particular, distrust of the forest industry by the broader public has played a key role in reduced access to publicly-owned native forest resources for timber harvest. It has also in some cases led to reduction in access to land for plantation establishment and harvesting (Schirmer 2007).

While some dismiss community concerns about forestry as the views of a 'minority', this is demonstrably not the case. Several studies have identified that negative views about various aspects of the forest industry are widespread, not only in urban but also in many rural communities. While it is true that many people have positive or relatively neutral views about the impacts of forestry, the substantial proportion expressing negative perceptions have a large influence on the operation of the forest industry (see for example Williams 2009; Williams in press). This presents an important social constraint on current and future operations of the industry.

Any investment in new forestry operations must carefully consider and develop proactive community engagement strategies that assist the development of a social license to operate. Achieving this social license requires listening and responding to concerns raised by stakeholders; this in many cases requires going beyond disseminating information about the activities of industry, with some change in these activities often needed to achieve a social license. The industry needs to invest in ongoing work training its members in proactive community engagement, as well as embedding an ethos of public consultation and engagement in management at all levels (see for examples Dare et al. 2011b).

Social and economic benefits (and costs) of forestry production

Like any industry, the forest industry has potential to provide social and economic benefits to the communities it operates in; it also has potential to result in social and economic costs. It is essential to identify how to best design forestry operations and associated processing to maximise potential for benefits, and minimise potential for costs.

Research conducted by the 'Communities' project in recent years has focused on the social and economic benefits and costs of plantation forestry established on cleared agricultural land, and this is the area discussed in this submission. Based on this research, comment is provided on some specific social costs and benefits of plantations, particularly:

- Impacts on employment
- Impacts on population & on social cohesion of rural communities

This is followed by a brief discussion of the impacts that recent downturn in the forest industry has had on rural and regional communities.

Impacts of plantation expansion on employment

The eucalypt and softwood plantations making up the majority of Australia's current plantation estate generate more jobs in total than broadacre sheep and beef grazing and cropping. However,

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

Three aspects of the impact of plantation forestry on employment in rural and regional communities are described below: the comparative employment generated by plantations versus other land uses; the point in the chain of production at which most jobs are generated by plantations; and the location of plantation-based versus traditional agricultural jobs.

Table 1 compares the employment generated by plantations to typical alternative land uses, to comparable points in the chain of production. The table includes the employment generated before the farm gate (where produce such as trees, sheep, crops are being grown on farms) and beyond the farm gate (defined as the stage at which these products are transformed into processed products or exported).

Table 1: Employment generated by plantations compared to other land uses

Land use	Before the ‘farm gate’ (jobs/100ha)	Beyond ‘farm gate’ (jobs/100ha)	Total (jobs/100ha)
Eucalypt plantations - current (when much of the plantation estate is immature)	0.15-0.20*	0.05-0.25	0.20-0.5
Beef	0.22-0.33	0.01-0.07	0.23-0.40
Cropping	0.23 (0.1-0.5)	0.01-0.07	0.24-0.30
Sheep	0.33 (0.2-0.6)	0.01-0.07	0.34-0.40
Eucalypt plantation - at ‘steady state’ (when plantations are mature)	0.20 (0.15-0.25)	0.30-0.45	0.5-0.65
Softwood plantations	0.4	1.0-1.4	1.4-1.8
Dairy	1.4 (0.9-1.7)	0.2-0.3	1.6-1.7
Grapes (large enterprises)	7.7 (5.0-10.0)	6.5-7.0	14.2-14.7

Data source: Data here have been summarised based on a survey of primary producers and plantation companies, the South West Victoria Farm Monitor project, the ABS and ABARE, as reported in Schirmer (2009a,b); and Schirmer et al. (2008c); with data also drawn from Schirmer et al. (2005a,b). Data represent the average across the different regions examined in these studies.

* Range given in figures represents variation in employment generated depending on how an agricultural or plantation enterprise is managed, and variation in land productivity

Eucalypt plantations generate less employment before the ‘farm gate’ than most other land uses, and softwood plantations more than grazing and cropping, but less than intensive agricultural land

uses such as dairy and viticulture. Both eucalypt and softwood plantations generate more employment than grazing and cropping after the 'farm gate' once plantations reach maturity and enter a cycle of harvesting and re-establishment of plantations. This means that once plantations mature and are harvested, greater employment is generated by eucalypt or softwood plantations than broadacre grazing and cropping, with much of this employment generated by the harvest, haulage and processing of plantation products.

The majority of jobs generated by plantations are generated after the 'farm gate' – in other words, they are generated by the harvesting, haulage and processing of plantations, rather than the growing of the plantations. This is quite different to many traditional agricultural land uses, where the majority of the employment is generated before the 'farm gate', and processing beyond the farm gate adds less employment than for the plantation sector.

This means that in early years of plantation expansion, when plantations are being established in a rural region but have not yet reached maturity, the plantation sector will generate less employment than many other land uses, with potential associated negative impacts. Once the plantations reach maturity and are harvested and processed into products such as woodchips, they generate more employment than some alternative land uses, but less than others (Schirmer 2009a,b). With most plantations established on land previously used for broadacre grazing or cropping, in most cases the net impact on jobs will be positive once plantations are harvesting and processed. However, the location of the jobs generated by plantations may be substantially different to the location of those generated by traditional agriculture.

The location of the jobs generated by the plantation industry was compared to the location of jobs generated by traditional agriculture by Schirmer et al. (2009a,b). Compared to agricultural workers, more workers in the plantation industry live in large towns and regional cities (such as Albany in Western Australia, or Launceston in Tasmania), and fewer live in small towns or on rural land.

This suggests that land use change to plantations leads to a shift in the location of jobs, with a shift of employment from smaller towns and rural land to larger towns and regional centres. While this trend is occurring in the traditional agricultural sector as well, with many contractors now based in larger towns, and more farmers shifting to live in large towns, land use change to plantations is likely to accelerate this shift.

Impacts of plantation expansion on population & social cohesion in rural communities

The expansion of plantations on land previously used for agriculture leads to a small net loss of resident population from properties established to plantation via sale or lease of land to a plantation company. The population loss resulting from plantation expansion at the individual property scale is no larger than that resulting from other trends such as farm amalgamation on other properties, and as such there is no observable impact on rural population at scales larger than the individual property. It is, however, common for previous residents to shift away from properties established to plantation, and for new residents to shift onto these properties. This turnover in population can

create significant social change in rural communities, and policy needs to be targeted to helping manage this social change.

A range of views have been expressed in recent years about the impacts of expansion of plantations on the number and type of people living in rural communities. Multiple factors influence trends in rural population. In recent years, rural population has declined in many inland rural areas of Australia irrespective of the extent of plantation expansion, with this decline a result of trends such as increasing efficiency of agriculture and farm amalgamation. Meanwhile, rural population has grown in many coastal regions, and in rural regions within commuting distance of cities, as 'seachangers' shift to small rural properties in these areas.

Plantation expansion may influence the number of people living in rural communities through a number of 'impact pathways', including change in the number of people living on individual farming properties established to plantation, and change in locally available employment (discussed above).

Schirmer et al. (2008d) surveyed landholders who had established their own farm forestry¹, leased part or all of a farming property to a plantation company, or sold land to a plantation company. The study found that on the properties where trees were established:

- Between 50-60% of properties had people living on them in the five years before trees were established. In 40-50% of cases no-one lived on the property. This reflects that many landholders manage multiple properties, and some of these have no residents.
- Where there were people living on the property:
 - When farmers established their own farm forestry, there was no change in the number of people living on the property.
 - When farmers leased land to a plantation company, the existing residents shifted off the property in 10% of cases, and new residents then shifted onto the land in just over half these cases, resulting in a net loss of about 3-4% of the population living on leased properties.
 - When farmers sold land to a plantation company, the previous residents shifted off the property in 75% of cases. By two years after the plantation was established, new residents had shifted onto the land in 80% of the cases where the previous residents had shifted away. This means there was a net loss of 7% of the original population living on properties sold to plantation companies, although in the period immediately after plantation establishment, population loss was as high as 19%.

The majority of plantation companies either rent the housing on plantation properties, or subdivide the house and a parcel of land around it and sell it to a new owner. This explains why new residents shift into housing on plantation properties in most cases where previous residents have shifted away. There is therefore a small net loss of population from properties established to plantations, particularly when the land is purchased from the landholder for the purpose of plantation establishment. In addition, as identified earlier in this submission, establishment of plantations is

¹ Farm forestry is defined as landholders planting trees on part of their land for commercial wood production using their own labour and resources

associated with a net decline in employment in early years of plantation establishment, followed by employment growth in larger towns and regional centres, suggesting that plantations are associated with population decline on rural land and in small rural towns.

However, when rural population trends have been compared at a larger scale, no relationship has been found between the rate of plantation expansion and extent of change in rural population (Schirmer 2005a; Schirmer 2009a,b). This is because factors such as farm amalgamation, urbanisation of population, and influx of 'seachangers' onto rural properties have a greater influence on rural population levels than the expansion of plantations. The small net loss of population associated with plantation expansion is no greater than the loss of rural population resulting from other ongoing trends such as farm amalgamation.

The results of this research do, however, suggest that there is sometimes considerable change in the population living on rural properties, with previous residents shifting away and new residents shifting onto plantation properties. These new residents may not always integrate well into rural communities, and a key issue is encouraging new residents to join local community groups and take part in community activities. Unless new residents do integrate successfully, there can be dislocation of local community networks and loss of wellbeing for both existing residents, who lose part of their social network, and new residents, who may feel isolated or unwelcome in the communities they have shifted into.

Impacts of downturn in the forest industry for rural and regional communities

Recent Tasmanian experience highlights the negative impacts that are often associated with a downturn in the forest industry, and demonstrates the importance of ensuring the industry makes ongoing investment in technology, market development and responding to changing global trends in social acceptability of and markets for forest products. Schirmer (2010) and Schirmer et al. (2011) found that the global financial crisis, appreciation of the Australian dollar, collapse of managed investment schemes, ENGO campaigns targeting Tasmanian woodchip markets, and closure of older, less competitive forestry processing facilities, amongst other factors, led to a rapid decline in forest industry jobs in Tasmania, with 3,500 forest industry jobs lost between August 2008 and May 2011. This rapid decline has had a range of significant negative impacts for people employed in the industry, their families, and the businesses and communities that depend on the forest industry. This experience demonstrates that some rural communities are highly dependent on the forest industry and are highly vulnerable to decline in the industry; particularly some smaller rural and regional centre in areas with a strong history of dependence on the forest industry. Avoiding this type of decline requires constant investment in market development, improved efficiency of production, and responding to social concerns about forest products, all areas that need to be focused on for a successful forest industry future.

Potential energy production from the forestry sector, focusing on carbon sequestration

Considerable attention is currently being given to the idea that tree planting for carbon sequestration may have benefits for both climate change mitigation, and providing a new economic activity in rural and regional communities. For this activity to be successful on a large scale requires achieving access to cleared agricultural land, something that depends on the willingness of

landholders to consider undertaking this activity on their land, or allowing another organisation to undertake it.

In 2010, Dr Lyndall Bull and Dr Jacki Schirmer conducted a study examining landholder willingness to adopt tree planting for carbon sequestration, via a postal survey of landholders in NSW. This study (to be published later in 2011) found that a critical barrier to achieving large scale adoption of tree planting for carbon sequestration is landholder willingness to take part in this type of activity. Tree planting in general is a familiar activity for the majority of landholders, with 96.5% reporting having planted trees for various purposes in the past, and most landholders viewing trees as having multiple benefits for their property. Landholders reported a relatively high level of potential interest in tree planting for carbon sequestration, with only 18.6% indicating they would never consider it, 67.2% indicating they might consider it in the future, 10.1% reporting they were currently actively considering it. However, landholders were typically only willing to plant trees for carbon sequestration:

- on their marginal, rather than productive agricultural land
- on small areas of land
- if the trees provide other benefits such as commercial returns from timber harvest, shade and shelter for stock, or environmental benefits, and
- if they can plant locally growing native species rather than species not native to their local area.

Barriers to planting trees for carbon sequestration included concern about having use of land restricted for 100 or more years; lack of information about current programs for planting trees for carbon sequestration; and concern that future governments will change their minds about climate change policy and hence carbon markets.

Landholder's beliefs about climate change did not present either a barrier or a motivation for planting trees for carbon sequestration. However, those who strongly believed that agricultural land should be used to grow food, not trees, were significantly less likely to be willing to consider planting trees for carbon sequestration.

In general, tree planting for carbon sequestration appears to become more acceptable the more it is marginalised from mainstream agricultural production, and landholders are only willing to consider small areas of tree planting. While this suggests clear lessons for designing tree planting programs – adoption will be higher if small areas are planted on marginal land – this model also has high transaction costs, and quite likely the lowest returns in terms of rate of carbon sequestration, with trees likely to grow more slowly on marginal agricultural land compared to more productive land. Therefore while planting small, marginal areas of land is better accepted by landholders, it has potential to reduce the usefulness of tree planting as a climate change mitigation strategy.

If experience in the timber plantation sector is any guide, it is probable that there will be pressure to shift from small scale plantings of trees on marginal land for carbon sequestration, towards larger scale plantings on better land, to improve the volume of carbon sequestered, lower transaction costs, and hence improve economic return. Any such shift is likely to be associated with social conflict, which may in itself hinder communities in developing broader scale adaptive strategies to respond to climate change: a community divided over the merits of tree planting for carbon sequestration – as many have become divided over the merits of tree planting for commercial timber production – is one with lowered social capital, and likely lowered adaptive capacity.

Our findings suggest important questions for consideration by policy makers. Should tree planting for carbon sequestration be promoted by changing the practice of tree planting so it fits with the

strongly held desire of landholders to ensure it does not disrupt their existing agricultural activities or views about appropriate use of land? Or, to ensure the trees planted sequester more carbon, should there be a focus on attempting to change the strongly held views of landholders about what is appropriate use of agricultural land?

Whichever approach is taken, those promoting tree planting for carbon sequestration need to ensure it is compatible with the skills, capacity and existing economic activities of agricultural land managers, and to be aware of the demands placed on these managers by this new economic activity. The approach taken to extension needs to take into account landholder views and attitudes about trusted sources of information, and preferred learning mechanisms, and achieving widespread tree planting for carbon sequestration under any approach requires development of clear carbon markets that landholders believe are stable into the future.

Land use competition between the forestry and agriculture sectors (implications of competing land uses for the cost and availability of timber, food and fibre; harmonising competing interests; opportunities for farm forestry)

i. Impacts of land use competition on food availability

Concern has been raised in a number of rural communities in recent years regarding the impacts expansion of tree planting for commercial timber production or carbon sequestration may have on availability of land for agricultural production. This concern about availability has multiple dimensions: some concerns relate to the area of land available for agricultural production, and others to the cost of accessing land for agricultural production if increased competition for land leads to growth in land prices. In both cases, the concern is typically that agricultural production may be negatively impacted by expansion of the forest industry.

At a large enough scale, it is possible that tree planting could substantially reduce the amount of land available for agricultural production. In reality, however, the areas of land used by the tree plantation industry are typically too small to have a significant impact on agricultural production, even in the region in which the largest areas of plantation have been established. The impact of plantation expansion on traditional agricultural production was examined by Schirmer (2009a,b) in Western Australia and Tasmania. This research examined whether traditional agricultural production grew or declined more than average in regions experiencing rapid plantation expansion.

The only impacts found occurred at very localised scales. In the local rural regions where rapid plantation expansion has occurred², there was a higher than average decline in sheep and lamb numbers and, in Tasmania, a higher than average decline in numbers of beef cattle, over 1991 to 2006- the period in which most hardwood plantation expansion occurred, a majority of which has been funded by MIS. This is consistent with findings that the large majority of hardwood plantations (MIS and non MIS) have been established on land previously used for broadacre grazing (Schirmer 2008d). This decline affects a small number of local regions, and has negligible impact on state or national scale production of these commodities. Other agricultural production did not change differently to the average in rapid plantation expansion regions. Dairy, viticulture, and horticultural

² Defined as the small number of local government areas in which more than 10% of agricultural land has been established to plantation

production have generally expanded in areas experiencing rapid plantation expansion regions in recent years, with only a small number of exceptions.

Recent research indicates that MIS-driven expansion of plantations during the 1990s and 2000s contributed to higher than average land price growth during periods of rapid plantation expansion. The effect was limited to periods of rapid plantation expansion, and land prices in regions with few or no plantations typically achieved similar rates of land price growth over a slightly longer period (see for example Schirmer 2005a, 2009a,b). Our research results suggest that expansion of the forest industry on agricultural land will, in times of rapid expansion, lead to higher than average land price growth. However, it will likely be only one of multiple drivers leading to land price growth in any region, as evidenced by the fact that land prices in areas with few or no plantations typically grow at rates often only slightly slower than in regions experiencing rapid plantation expansion. It is important not to assume that growth in land prices is a negative trend when it does occur. Increases in land prices typically have positive impacts for landholders wishing to sell land, and negative impacts for those wishing to purchase land in areas where land prices are growing rapidly. There is no evidence that the more rapid growth in land prices has negatively impacted on agricultural production levels.

ii. Harmonising competing interests

Some attempts have been made in the past to harmonise the competing interests of the agriculture and forestry industries for land. Typically these have involved some attempt to restrict access by the forest industry to agricultural land considered highly valuable. These attempts have triggered considerable debate, and varying outcomes. In Tasmania, restrictions preventing use of prime agricultural land for growing plantations in reality had little impact, as most of the land specified was too expensive for use growing plantations, and would not have been purchased to grow trees on in any event. In other regions, attempts to zone land to restrict its use for plantations have been stopped by farmers concerned that such zoning would potentially reduce the value of their land, as well as their flexibility to buy and sell land to optimise their agricultural activities (Schirmer 2005).

Attempts to harmonise competing interests by specifying what land may be used for agriculture, and what for forestry, have therefore been relatively unsuccessful in addressing concerns over competition for land by these two sectors. Instead, they have often been associated with disputes over the extent to which restrictions should be placed on how farmers may use their land.

Internationally, the potential for agriculture and forestry to compete has been addressed successfully in some cases by encouraging direct negotiations between farmers and forestry companies to identify optimal outcomes for both. For example, in Ireland, farmers and forestry companies have negotiated land swaps, in which property boundaries are redrawn so that forest plantations are established on some areas while farmers retain areas most suited to agriculture (Schirmer 2005). This type of approach can be highly successful, but requires high flexibility in land use planning, with the ability to subdivide land and change property titles with ease. In many parts of Australia this is not possible, with restrictions on subdivision limiting ability to achieve negotiated outcomes that reduce the potential for competition between the agricultural and forestry sectors.

iii. Opportunities for farm forestry

Farm forestry has been promoted for some time in Australia. However, there is evidence that when provided the choice between establishing their own farm forestry, leasing their land to a forestry company to plant trees, or selling their land to a plantation company, many farmers opt to sell land. This is for a range of reasons. In particular many farmers prefer to focus on agriculture rather than taking on a new and unfamiliar enterprise such as farm forestry, and also prefer not to have a long-term commitment to growing trees that reduces their land management flexibility on that area of land. When Schirmer et al. (2008) compared the experiences of farmers in the 'Green Triangle' region of south east South Australia and south western Victoria who (i) established their own farm forestry, (ii) leased land to a plantation company, or (iii) sold land to a plantation company, it was found that similar proportions reported being satisfied with their land use decision, with farm forestry not necessarily preferred to the other two options.

In general, farm forestry presents challenges for economies of scale. It can be highly successful for growing small scale high quality products sold into niche markets, or lower cost products that are easily harvestable and/or sold into local markets. It is unlikely to be able to compete in terms of large scale wood production for commodity products, due to difficulty in achieving the economies of scale required to lower production costs to a level where farm forestry wood products are competitive. It is, however, more socially acceptable than larger scale plantation forestry (Schirmer 2007).

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