Inquiry into food production in Australia - Impact of Managed Investment Schemes

Submission to Senate Select Committee on Agricultural and Related Industries

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Background

This submission summarises recent research on the impacts of Managed Investment Scheme (MIS) plantation forestry on rural communities and economies, drawing in particular on work undertaken by the 'Communities' project of the Cooperative Research Centre (CRC) for Forestry since 2006. This research enables identification of the impacts of the expansion of MIS-funded plantations on rural communities in Australia, based on independent evidence.

The information presented here is drawn from a large body of research. I would be pleased to expand on the submission at a public hearing if desired by the committee.

The research drawn on in this submission has focused on the plantation industry (see page 10 for a full description of the research drawn on in this submission, and how its quality has been ensured). The results therefore only apply to MIS investment involving plantations, primarily eucalypt plantations. Other MIS investments, for example in horticulture, are not examined in this submission.

The impact of MIS on land and land prices

Recent research indicates that MIS-driven expansion of plantations has contributed to higher than average land price growth during periods of rapid plantation expansion. The effect is usually limited to periods of rapid plantation expansion, and land prices in regions with few or no plantations typically achieve similar rates of land price growth over a slightly longer period.

The impact of plantation expansion on land prices was explored by Schirmer (2005a) in Western Australia, and by Schirmer (2009a,b) in Western Australia and Tasmania. In each case the research identified how recent expansion of eucalypt (hardwood) plantations influenced rural land prices. As such, the analysis largely reflects the impacts of MIS-funded plantations on land prices, as the large majority of hardwood plantation expansion (over 90% in recent years) has been funded by MIS.

The key findings of these studies were consistent across the different regions studied. The studies found that during periods of rapid plantation expansion, MIS companies have paid higher than average prices for rural land, and there has been somewhat higher than average land price increase in regions where large areas of plantation are being established.

Land prices have, however also increased rapidly in many other rural areas. In particular, regions where there is considerable demand for 'rural residential' or 'seachange' properties have often experienced greater land price growth than regions where rapid plantation expansion is occurring.

In high rainfall regions, even where few/no plantations are established, there have been some periods of rapid land price growth in the last 20 years similar to those seen in plantation regions during rapid plantation expansion phases, driven by demand from industries such as the dairy industry. This indicates that in the absence of plantation expansion, land prices would have grown but perhaps not as much as particular points in time.

Areas with no or low rates of plantation expansion and low rainfall have typically also experienced land price growth, which is often only slightly slower than that in areas experiencing rapid plantation expansion.

When plantation expansion slows, land price growth also slows in plantation regions (except where other factors are causing high demand for land). In most cases land price growth in non-plantation regions 'catches up' to that in rapid plantation expansion regions within two to four years.

These results suggest that MIS-based plantation expansion does lead to higher than average land price growth. However, it remains 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 rapid rates, with land price growth often only slightly slower than in regions experiencing rapid plantation expansion.

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. This suggests that the impact of MIS on land prices has been positive for some and negative for others.

The impact of MIS on production of food

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 occurred[1], 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 production of these commodities, representing well under 0.05% of sheep, lamb and cattle numbers nationwide.

Other agricultural production did not change differently to the average in rapid plantation expansion regions. Dairy, viticulture, and horticultural production have generally expanded in areas experiencing rapid plantation expansion regions in recent years, with only a small number of exceptions.

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

The impact of MIS on the social fabric of rural and regional communities, particularly jobs

1. Employment

MIS plantations 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.

Three aspects of the impact of MIS 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.

Employment generated by plantations compared to traditional agriculture

The majority of MIS plantations are eucalypt plantations. Eucalypt plantations generate similar numbers of jobs in rural communities whether or not they are managed by MIS companies; therefore the research reported here does not distinguish between jobs generated by MIS and non-MIS plantations.

Table 1 summarises the employment generated by different land uses, to comparable points in the chain of production, in typical regions where MIS plantations have been established (data are generally based on regions with > 600mm rainfall and soils suitable to support plantations). 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).

Eucalypt plantations (of which a majority have been established using MIS funding) generate less employment before the 'farm gate' than most other land uses. However, they generate more employment 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 plantations than broadacre grazing and cropping, with much of this employment generated by the harvest, haulage and processing of plantation products.

At what points in the chain of production are most jobs generated by plantations?

The majority of jobs generated by eucalypt plantations are generated after the 'farm gate' – in other words, they are generated by the harvesting, haulage and processing of eucalypt 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.

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 he 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

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. 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).

Where are jobs generated by plantations?

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 MIS 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.

2. Population and communities

The expansion of plantations, whether MIS funded or otherwise, 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.

A range of views have been expressed in recent years about the impacts of expansion of plantations, including MIS funded 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 (Hugo 2005).

To understand the extent to which plantation expansion influences the number of people living in rural communities, it is necessary to analyse what happens to the people living on individual farming properties established to plantation, and then to identify if the number of people living on these properties changes differently to the trend that would occur in the absence of plantation expansion.

Schirmer et al. (2008d) surveyed landholders who had established their own farm forestry[2], leased part or all of a farming property to a plantation company, or sold land to a plantation company. MIS funded plantations have predominantly been established on land directly purchased from landholders, and somewhat less commonly on land leased from landholders.

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

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

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.

When rural population trends are compared at a larger scale, no relationship can be found between the rate of plantation expansion and extent of change in rural population (Schirmer 2005a; Schirmer 2009a,b). This suggests that 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 on plantation properties is therefore no greater than the loss of rural population resulting from other 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.

Schirmer (2008d) also examined whether landholders who shifted away from plantation properties changed their membership of local community groups as a result of shifting off the property. The study found that of landholders who sold land to plantation companies:

- 20-30% ceased their membership of rural fire brigade, service groups such as Rotary, or sporting groups as a result of the land use change to plantations.
- 20-30% changed the location of their membership.
- 40-60% did not change their membership.

It is not known how many of the new residents who shifted onto plantation properties joined local community groups.

The results of this research suggest that the expansion of MIS plantations leads to as small net loss of population on properties sold for plantation establishment, but that this net loss is relatively similar to that which would be expected from other trends such as ongoing farm amalgamation in many rural areas. There is however a high turnover of population living on these properties, which leads to social change in rural communities.

The impact of MIS on returns to farmers

Schirmer (2008d) identified whether farmers who had leased or sold their land to plantation companies (which were predominantly MIS funded companies) were satisfied with their decision to lease or sell land. Over 70% of landholders indicated they were satisfied or very satisfied with their decision to lease or sell land to a plantation company. This indicates that farmers who have interacted directly with the MIS sector through leasing or selling land to an MIS company have mostly experienced positive benefits from this activity, and experienced improved personal and financial wellbeing as a result of their decision to sell/lease this land.

Impacts of Timbercorp and Great Southern Ltd entering administration/ receivership

The recent entry of two large MIS companies into administration and receivership has been associated with considerable concern about how rural communities will be impacted by these events.

Table 2 indicates the proportion of the total eucalypt (hardwood) plantation estate managed by Timbercorp and Great Southern Ltd (GSL) in 2008, in different areas of Australia. The financial collapse of Timbercorp and GSL affects a significant proportion of activity in the hardwood plantation industry, particularly in the Northern Territory, Western Australia, South Australia, Victoria and Queensland. Table 2 also shows the estimated number of jobs potentially affected by the collapse of the two companies, based on data collected by Schirmer (2008a,b) and analysis of the relative maturity of the plantation estate managed by the two companies in different regions. The numbers of jobs indicate how many people are potentially directly impacted by the collapse of the two companies. Of the jobs potentially affected, the majority still exist but face an uncertain future (although a small proportion of these workers have lost their jobs, as is discussed further below).

Table 2: Estimated proportion of hardwood plantations in different regions managed by Timbercorp and GSL, and estimated jobs potentially affected

Region	Total hardwood plantation estate, 2008	% managed by TC and GSL, 2008	Jobs affected
NSW	81,667	4%	7-10
NT	27,299	100%	55-80
QLD	59,298	39%	45-70
SA & VIC	58,426 (SA) 200,739 (VIC)	50%	260-300
TAS	217,068	5%	20-30
WA	305,007	44%	530-570

Data sources: Gavran and Parsons (2009); Timbercorp and Great Southern Limited Annual Reports; Forest Industry Survey data provided as part of the surveys reported in Schirmer (2008a,b).

The entry of the two companies into administration and receivership will affect both the direct management of their plantations, and the downstream industries that depend

on the plantations. The estimate of jobs affected includes all jobs in businesses that depend directly on the two companies for part or all of their business activities. They primarily include nurseries, silvicultural contractors, the two companies themselves, harvest and haulage contractors, and woodchip processors and exporters. Many of the businesses affected are small businesses that have been established to service the plantation sector as it has grown.

While many of the plantations owned and managed by the two companies have not yet reached harvest age, in Western Australia, both companies have been harvesting their hardwood plantations over the last six to seven years (Timbercorp began harvest in 2002, and GSL shortly after this). In 2008, GSL produced 600,000 tonnes of woodchips, while Timbercorp harvested 526,000 green tonnes worth an estimated $57 million (GSL 2008, Timbercorp 2008). Therefore the impacts of the collapse differ for Western Australia (WA), where harvesting and processing activity is occurring, compared to other regions where the plantations managed by the two companies have for the most part not yet reached harvest age.

Some, but not all, of the business activities of Timbercorp and GSL have continued since they entered administration and receivership. While some activity continues, however, it is significantly decreased. Recent discussions with WA based businesses suggest businesses affected by the collapse, and the people who work in these businesses, are being impacted in the following ways in the short term since the collapse occurred:

- **Staff lay-offs and redundancies.** Some businesses, particularly those involved in silviculture and harvesting and haulage, have had to lay off staff and sub-contractors. Where redundancy payments are involved, some businesses have reported difficulty making these payments as a result of poor cash flow.

- **Reduced staff hours.** Some businesses have reduced staff hours to ensure they retain staff while also taking measures to adjust to reduced business activity. This involves reduced wages for staff in many cases.

- **Outstanding debt.** Some businesses are owed money by Timbercorp or GSL for services they have already provided, and have no certainty about when or if these debts will be paid. Some of these businesses are in turn finding it difficult to pay sub-contractors for services provided.

- **Reduced use of casual labour.** Some businesses reported hiring fewer casual staff than normal.

- **Shifting to other industries.** Some businesses are looking to increase their activities outside the plantation industry, shifting to providing more services to other industries. This may create difficulties for the plantation industry in the future as, when demand for services increases, fewer businesses may be available to provide those services.

In addition, farmers who have leased land to Timbercorp and GSL – representing the smaller proportion of plantations managed by the two companies – are experiencing uncertainty regarding whether lease payments will be made on time. This presents significant uncertainty for these farmers, especially where they are highly dependent on the income from leases.

These changes apply to businesses directly affected by the entry of Timbercorp and GSL into administration/receivership. Other plantation businesses which have little or no business with these two companies have reported little to no impact on their business resulting from the changes.

These changes will reduce spending in rural communities, and in those communities with high dependence on the plantation industry, will reduce employment opportunities in the short-term.

The long-term impacts of these changes depend largely on how long it takes for the future of the plantations managed by the two companies to be resolved. In the past, collapses of plantation companies (such as Australian Plantation Timber in 2001) were resolved relatively rapidly as new managers took over the plantations and continued managing the for wood production; some of these plantations are now being harvested. Similar experiences occurred when some softwood investments (structured differently to MIS schemes) collapsed in the 1980s, with the majority of plantations going on to be harvested and re-established under new management arrangements.

However, a long period of uncertainty before new management arrangements are put in place will likely lead to many small contracting businesses exiting the industry, whereas a rapid transition to new management would assist small businesses to stay viable, and may allow most current businesses to remain viable. Managing the transition period is therefore crucial to minimising negative impacts on rural communities.

Research drawn on in this submission

This submission draws on research that has been undertaken in recent years, particularly:

- Research undertaken in 2005 (Schirmer et al. 2005a,b) by the Bureau of Rural Sciences, and funded by the Forest and Wood Products Research and Development Authority.
- Research undertaken by the CRC for Forestry's 'Communities' project, funded by a number of groups including the Federal government, State agencies and regulators managing forestry activities, forestry businesses, and universities (Schirmer 2008a,b; 2009a,b). More information on this research is available online at http://www.crcforestry.com.au/research/programme-four/communities/index.html .
- Research undertaken for the 'Land Use Change project', a study funded by a consortium of 11 organisations with differing interests in land use change, including DPI Victoria, local governments, catchment management authorities, and private forestry development committees (Schirmer et al. 2008b,c,d). More information on this research is available at www.landusechange.net.au.
- Research undertaken by the Fenner School of Environment and Society for the Department of Agriculture, Fisheries and Forestry (DAFF), funded by DAFF (Schirmer et al. 2008a).

Every effort has been made to ensure full independence of the research no matter the source of funding, using strategies including independent peer review (see www.landusechange.net.au for a description of the independent peer review processes

utilised), and inclusion of a wide range of stakeholders in the research process with diverse views about the social impacts of plantations. The research drawn on in this submission is currently in the process of being published in peer reviewed journals, again ensuring independent review of the credibility and appropriateness of the research methods used.

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