Multi-benefits of small-scale farm forestry in south-western Victoria, Australia and factors influencing farm forestry development

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SUMMARY

This paper describes examples of typical small-scale farm forestry in south-western Victoria, located in south east Australia. It outlines how small scale farm forestry can provide multi-benefits for farmers and for catchments and how the amount of public good afforded by farm forestry is reflected in government incentive programs. Recent changes in rural land use and their implications for small-scale farm forestry development are also discussed.

BACKGROUND

Forestry production

Australia has 21% of its land mass under forest (including woodlands, plantations, open and closed forest). Most forest production is derived from plantations and native forests in high rainfall areas adjacent to the east, southern and south-western coastlines.

Australia has a AUS$2 billion ((E 1.2 billion) trade deficit in forest products. A national 2020 Vision policy statement launched in 1997 has a goal to treble the plantation estate in Australia by the year 2020. It aims to do this primarily by promoting a market free of impediments to plantation forestry investment, in order to encourage plantation investment by private investors. Since the launch of this policy, private plantation establishment has increased markedly and approximately 60% of Australia's timber comes from plantations (Bureau of Rural Sciences 2004).

Timber production in the state of Victoria reflects national trends, whereby 60% of timber production is derived from plantations (including sawn wood, engineered wood products, paper and paper products, woodchips, pulp and roundwood). Production from state owned native forest accounts for 39% (approximately 2.7million m^3 per annum) of Victoria's wood products.

Both nationally and in Victoria, small-scale farm forestry is still in its infancy. Production from these forests and private native forests accounts for just under 1% of Victoria's wood products (Department of Primary Industries 2005).

Environmental degradation

In Victoria the state government and Catchment Management Authorities have a vested interest in working with communities to improve catchment health. It is estimated that in the order of 10-20% of cleared agricultural land (depending on land type) needs to be revegetated by woody plants in south-western Victoria to control environmental degradation. Degradation includes salinity and erosion, poor water quality, declining biodiversity and increasing greenhouse gases.

Revegetation needs to be targeted in areas that will have the greatest impact on degradation problems. Areas of high priority for revegetation have been identified and extension efforts and financial incentives are generally centred on these areas. Approaches have mainly involved encouraging landholders to integrate revegetation into their properties.

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There has been a realisation by governments that small-scale farm forestry is a form of revegetation that has the potential to improve catchment and farm outcomes, as well as potentially contribute to rural development. As a consequence there is a range of government funded extension and incentive programs that support farm forestry.

FARM FORESTRY EXTENSION AND SUPPORT

Support and extension for small-scale farm forestry has been provided primarily by the Victorian state government, with increasing input from federal government. Extension and support has taken a multi-pronged approach incorporating elements of capacity building, communication, facilitation, technology transfer and financial incentive programs.

Financial incentive programs

Increasingly financial incentive programs have developed to more accurately reflect the extent of public good, or off-site benefits that they can provide.

The West RFA Sawlog Farming Project initiated in 2002 by the state government is an example of an incentive program designed to promote development of a hardwood sawlog resource in cleared agricultural land, whilst improving environmental and social outcomes. To compensate for reduced logging in state owned native forests, funding of AUS$1.45 million (E 0.87 million) over 3 years was designated to inspire hardwood sawlog plantations.

A steering committee made up of stakeholders from the hardwood timber industry, local and state government, catchment management authorities, farm forestry networks and plantation companies was set up to oversee project development.

A large proportion of the funds were used to identify priority zones for plantation establishment that would ensure the greatest public good, with respect to salinity control, improved biodiversity and weed control.

The project also attempted to include stakeholder and 'wider community' perceptions and aspirations for forestry development on cleared agricultural land. To this end stakeholder interviews, as well as phone surveys and a community forum designed to investigate 'wider community' perceptions were carried out (Dimopoulus et al. 2001). The outcomes of the social research indicated that community members were supportive of sawlog farming development especially when it was integrated into, not replacing farming activities.

Incentives were offered to interested landholders for:

1. Plantation establishment - a minimum of 10 ha had to be established. State government extension workers provided advice and landholders were responsible for sourcing seedlings, site preparation, planting, follow up weed control and silvicultural management. Landholders entered into a 30 year agreement with government that they would manage the plantation for sawlog production
2. Silvicultural management of existing plantations – subsidies for thinning and pruning to ensure quality sawlog production

Incentives for plantation establishment varied from Aust$100 to $700/ha (E 60-420) according to the public good (or environmental benefits) they were likely to achieve.

Plantation applications were rated according to:

- Demonstration value (taking into account access for future field days, visibility from significant roads and willingness of the landholder to make the site accessible to others)
- Salinity benefit (taking into account geology, soils, landscape position. Hence the ability of plantations to control recharge or intercept groundwater)
- Biodiversity benefit (taking into account whether the plantation can act as a buffer to existing remnant vegetation, thus enhancing biodiversity)
- Weed control (whether the plantation can reduce the spread of priority weeds)
- Potential productivity of proposed site (recognising that one of the project goals is sawlog production)

500 ha of plantations were established over the 3-year period and a further 500 ha of existing plantations have been thinned and pruned. However, other outcomes from the project include development of a pilot process for identifying zones of opportunity for plantation establishment, development of a sliding scale for incentives that award projects that provide greater public good and adapting a process the incorporate community perceptions and aspirations in plantation development.

Incentive programs are just one extension strategy used to encourage adoption and successful management of small-scale farm forestry. Other strategies that ensure ongoing adoption and capacity building include:

General awareness raising

General awareness raising to help create a positive 'environment', in which the wider community is supportive of farm forestry, and to entice new participants.

Activities include actively encouraging mainstream media coverage of 'good news' farm forestry stories, production of curriculum resources for schools and promoting adoption of farm forestry topics in a wide range of tertiary courses.

Background information

A wide range of background and technical information in various forms is available to landholders, including fact sheets, technical publications, websites, and farm forestry journals.

Training

Informal training in the form of field days and use of demonstration sites is used widely as a form of information transfer on an 'as needs' basis.

More formal training for farm foresters is provided in partnership with Melbourne University's Master Treegrower Program, which is a grower led course held in local areas comprising topics such as farm forestry design, silvicultural management and marketing. Other tertiary institutions provide courses such as 'Tree Growing in Rural Landscapes', chainsaw and harvesting courses.

Group support

Supporting farm forestry networks has been an important aspect of farm forestry extension, recognising that enthusiastic and successful farm foresters provide invaluable examples that encourage potential new farm foresters to participate. In south-western Victoria there are four networks comprising voluntary financial members, representing the interests of small scale farm foresters.

SOUTH-WESTERN VICTORIA

Physiography

South-western Victoria comprises some 38 340 square kilometres. It is bounded to the north and south by undulating hills and rises formed mainly on sedimentary rock. They consist of the Western Uplands to the north and the Otway Ranges to the south. Gently undulating to flat Western Volcanic Plains occur in between.

The climate can be described as Mediterranean, with cool wet winters and hot, dry summers. Average annual rainfall varies form 530 mm/year on the plains to greater than 1200mm/year on the ranges to the south and north.

Past land use

Prior to European settlement, tall forests dominated by Eucalypts occurred on the uplands and ranges to the north and south, whilst open woodlands and grasslands were common across the plains.

European settlement in the early 1800's brought widespread clearing for agriculture particularly across the plains, which were keenly sought after by graziers. The subsequent discovery of gold and associated closer settlement in 1850 brought further clearing. Clearing, mining and agricultural practises often unsuited to local landscapes, are responsible for environmental degradation problems.

Land degradation

Approximately 36 000 ha of agricultural land is affected by secondary salinity, which is a consequence of tree clearing since European settlement. This along with damage to roads and infrastructure is estimated to cost the region some AUS$52 million (E 31.2 million) annually.

In addition to this, more than half the streams in the region are in a marginal condition with respect to water quality and stream bank condition, and the survival of 45 flora and fauna species is considered threatened.

Forestry

State managed native forest comprises 103 300 ha in the Midland forest to the north and 92 900 ha in the Otway forest to the south. Community concern over logging methods, sustainability and nature conservation has resulted ultimately in reduced timber production from these forests. Harvest volumes in the Midlands forest have been reduced by 79%; going from 72 000 m^3 in 1997 to volumes of 8600 m^3/year. There has been 25% reduction in timber production in the Otways forests, with logging to be completely phased out by 2008.

Industrial plantations, both softwood (*Pinus radiata*) and hardwood (mostly *Eucalyptus globulus*) which are all privately owned, account for approximately 228 000 ha. Hardwood plantations have rapidly expanded across the region from 1500 ha in 1994 to 136 100 ha in 2005. Small-scale farm forestry comprises some 6500 ha.

SMALL-SCALE FARM FORESTRY

Small-scale farm forestry in this paper refers to forestry established on cleared agricultural land, not the management of private native forest. In south-western Victoria it has been developing over the last 15 years and most small-scale farm forests are yet to reach maturity.

Usually farm forests are small in size, varying from 3 to 30 ha depending on the overall property size, and they are integrated into the property in such a way as to achieve multi-benefits, as well as tree products.

Multi-benefits, both on and off-site can include shelter and shade for livestock and crops, salinity and erosion control, improved water quality, weed control, increased biodiversity and greenhouse gas abatement.

Typically, small-scale forests are managed to produce small volumes of high value product, and most landholders concentrate on producing a final crop of clearwood hardwood for specialty markets. This usually requires silvicultural management practises such as thinning and pruning and rotation lengths vary from 20-35 years depending on site quality and rainfall.

Small-scale farm forestry on its own is usually not as economic as the agricultural uses it replaces, but when viewed in combination with agriculture, small-scale farm forestry can actually improve the economics of agriculture and the property (URS Australia Ltd 2003).

CASE STUDIES

Three case studies from different parts of the region illustrate typical small-scale farm forestry ventures. The first two examples describe the activities of primary producers, who derive most of their income from the farm. The third case study is an example of a small landholder, typical of a growing group of new landholders that occur mainly to the east of the region.

Western Plains – ‘Danengate’ and associated properties

The entire farming property of 954ha owned by Don and Jan Jowett (located in 4 locations) is on gently undulating plains and rises with average annual rainfall is 680 mm/year. The main agricultural enterprises are prime lamb and fine wool production. Prior to revegetation, remnant vegetation included old scattered eucalypts that have been gradually dying over the last 50 years.

Nearly 30% of the property has been revegetated. Farm forestry comprises 20% of the revegetation and the intended products will be high value sawn timber market. The remaining 10% of revegetation is indigenous revegetation for conservation.

The main farm forestry species include *Corymbia maculata* (Spotted gum), *Acacia melanoxylon* (Blackwood), *Eucalyptus saligna* (Sydeny Blue gum), *Cupressus macrocarpa* (Monterey Cypress) and *Pinus radiata* (Radiata pine). The landholders have progressively established a minimum of 2 ha per year since 1987. These are being pruned and thinned for high value specialty timber and the Jowetts envisage that they will have to contract out some pruning and thinning as more areas requiring management reach maturity.

Whilst the trees are growing, the Jowetts believe that the increased shelter afforded by revegetation is their main asset. Even though 30% of the land has been taken out of agricultural production to tree planting, the Jowetts have been able to increase their stocking rates. A 15-20% increase in lambing yields has been observed due mainly to increased shelter.

The Jowetts no longer spray for insect pasture pests such as red-legged earth nites and cockchafer grubs because the birds and predatory insects harboured in the plantations have kept them under control. Their soils are noticeably more friable with more earthworms and water quality of runoff from the property has greatly improved, containing less sediments and nutrients. They have observed an increase in native fauna, including more koalas, brolgas, echidnas, wallabies, reptiles and many new species of birds. Don Jowett says that,' Trees have greatly improved the working environment of the farm and they have extended the pleasurable garden environment from the home paddock, across the whole property'.

Future benefits will include timber production contributing to income diversification as well as the long term sustainability of the farm (South West Agroforestry Network 2002).

The Jowett's are an example of early farm forestry adopters. They have collaborated with the state government on a range of species and provenance trials. Incentives from the West RFA Project for thinning and pruning assisted them in getting their silvicultural work done on time. They have coordinated and delivered training for other farm foresters and been invaluable in encouraging greater participation in farm forestry.

Otway Ranges – 'Yan Yan Gurt West'

Yan Yan Gurt West is a 230ha property managed by Andrew and Jill Stewart in the foothills of the Otway ranges. The main farming enterprise is grazing sheep, cattle and alpacas. The farm comprises gentle hill-crests with steep slopes leading to the Yan Yan Gurt Creek. Rainfall averages 700mm/year.

By 1900 most of the original woody vegetation had been cleared for agriculture, with only a few patches of remnant vegetation remaining.

Revegetation and farm forestry began, according to a whole farm plan, in the early 1990's to address the degradation problems caused by tree clearing and over grazing. Problems included salinity, erosion, water logging, poor water quality leaving the farm, lack of shelter and poor ecological balance.

The property now has 16 ha of farm forestry and 14 ha of native revegetation integrated in a way to control environmental degradation and improve farm productivity. Farm forestry includes *Eucalyptus globulus* (Blue gum) shelter belts for short rotation wood chip production grown in a lease arrangement with a plantation company; plantations of *Eucalyptus globulus* (Blue gum), *Corymbia maculata* (Spotted gum) and *Acacia melanoxylon* (Blackwood) for quality timber production adjacent to the creek to improve water quality; and *Pinus radiata* (Radiata pine) plantations for sawlog and Christmas tree production located on slopes to address erosion and salinity problems.

Andrew believes that, 'The farm forestry is growing into a source of income and while the trees are growing they have improved production on the property by providing increased shelter for stock and they have improved environmental outcomes by controlling erosion, improving water quality, soil health and biodiversity.'

As with the first case study, the Stewart's have been involved in coordinating and delivering training and instrumental in encouraging others to adopt farm forestry. Their farm forestry work has largely been carried out with their own funds and under a joint venture scheme with a plantation company.

Western uplands - 'Arcadia'

'Arcadia', a 30ha property owned Chris Roe and Heather Mitchell, is located on fertile red Kraznozem soils fringing the Western Uplands in with average annual rainfall of 1000mm/year.

It is located in an area (within one hour's drive to Melbourne, Victoria's capital city) sought after by 'new' settlers seeking landscape amenity (Barr, 2005).

Potato and other forms of cropping is the traditional agricultural land use of the area and the property was once part of a disused potato farm. The new landholders have established 10ha of farm forestry for quality sawn timber production. Farm forestry species include *Eucalyptus nitens* (Shining gum), *Eucalyptus viminalis* (Manna gum) and *Acacia melanoxylon* (Blackwood). A further 10ha if the property comprises commercial orchards containing olives, apples and walnuts (yet to come into commercial production).

The landholders believe that farm forestry will diversify their income, provide habitat for wildlife, insect control for the orchard (by encouraging increasing bird populations) and increased amenity (Kinghorn et al. 2005).

Farm forestry establishment was subsidised by a government incentive program. As with the other two case studies, Chris has been eager to raise awareness of the benefits of farm forestry to visiting groups.

All three landholders have been committed and inspirational members of farm forestry networks and decision-making committees. The degree to which financial incentives have encouraged participation in small-scale farm forestry varies, suggesting that incentives are just one strategy to encourage adoption. All three farm forestry ventures have provided invaluable inspiration to other potential farm foresters.

CHANGES IN RURAL LAND USE AFFECTING SMALL SCALE FARM FORESTRY

Reduced native forest logging

Reduced logging in state owned native forests has already presented opportunities for small scale farm forestry development and the West RFA Sawlog Farming Project is one direct spin-off that has encouraged increased landholder participation.

However, if private plantations are to go some way to compensate for the reduction in native forest logging, a lot of them will be required. As yet there is no interest form private forestry companies to invest in long-term hardwood sawlog production.

Reasons sited for lack of investment in large-scale hardwood sawlog production are:

- lack of readily availably market information,
- lack of research and development into hardwood sawlog plantations,
- lack of understanding between investors and the forest sector
- tax ruling that prevents Managed Investment Schemes (MIS) companies from offering products that involve the secondary sale of plantations during the rotation
- and until recently, a non market based log pricing (Kelly et al. 2005). Victoria has recently developed a new auction system for hardwood logs sourced from state forests which attempts to reflect the true value of hardwood logs. Small-scale farm foresters have been pressing for this for some time.

With no current investment in large-scale hardwood sawlog plantations and reduced resource coming from native forests, small-scale farm foresters have the opportunity of occupying a market niche. It also appears likely that some farm foresters growing uncommon species such as *Allocasuarina* sp. (Sheoak) and *Eucalyptus sideroxylon* (Red ironbark), will be amongst a select few producing rare Australian timbers.

Reduced logging in state owned native forests has been accompanied by hardwood sawmill closures. Small-scale farm foresters growing hardwood species have generally been aiming to produce logs 6m long with diameters greater that 60cm; a size that has been considered suited to traditional hardwood sawmill equipment. There are concerns that expertise in processing large hardwood logs will slowly be lost.

In addition to this, increasing onus on safety, may make it difficult to attract skilled labour able and willing to harvest, haul and process large hardwood logs. However it could be argued that if farm foresters produce niche products, as is the experience in other niche industries, the value of the final product should ensure any problems with harvesting and processing will be overcome.

Changing land use and land ownership

In the last decade there have been rapid changes in rural land use, accompanied by changes in rural populations. These changes are impacting on the uptake of small-scale farm forestry development in several ways.

In the east of the region, land close to Melbourne (Victoria's capital city) and major regional centres is being subdivided and bought by new settlers seeking a rural lifestyle. Property sizes are usually less then 100 ha (Hollier et al. 2003). Often the driving force for land ownership and management is lifestyle, as opposed to economics (Hollier et al. 2003). These small landholders may be interested in farming on a small scale, establishing 'boutique' enterprises such as vineyards, or nature conservation. They generally have off-farm income that subsidises their activities and in many cases they have the will and resources to effect environmental change.

Small landholders are often a receptive audience to small-scale farm forestry. In the east of the region small landholders make up at least half of the membership of farm forestry networks and a high proportion attend field days, training sessions and courses, as well as subscribe to farm forestry journals and newsletters. They provide a clear opportunity for small-scale farm forestry expansion.

To the west of the region, the most common farm enterprise has traditionally been fine wool production. Farm forestry and revegetation integrated into farms has been progressing at a slow rate and establishment is usually undertaken in good years when time and money allow.

Traditional farm businesses are facing long-term real decline in the price of most agricultural commodities. To maintain real income, farm businesses need to increase productivity (Barr 2005). Increases in productivity have been achieved by increasing farm sizes. This may entail farmers moving further west or north out of the region where land prices are cheaper. Increased productivity has also been achieved by changing to new, more profitable enterprises such as prime lamb production or cereal cropping. In the region over the last 10 years the amount of land cropped has increased nearly 5 fold, from 110 000ha in 1997 to more that 450 000 ha.

Traditional land uses are also being replaced by controversial new land uses such as industrial hardwood plantations. These plantations consist of monocultures of *Eucalyptus globulus* (Tasmanian Blue gum) grown in short term rotations (12-15 years) for wood chips used in paper production.

Over the past 15 years, 136 100 ha of industrial scale hardwood plantations have been established across the south-western region of Victoria. Physical factors influencing rapid expansion in the region include favourable soils, rainfall, declining profitability of competing land uses and close proximity to ports. Plantation companies have either leased or bought land and the latter option has enabled many farmers to sell their land for much higher prices than otherwise expected due to the increased competition for land.

Investment arrangements have also greatly contributed to plantation expansion rates. Plantation Managed Investment Schemes (MIS) are responsible for financing about 70% of all new plantations in the region (Carmine 2005). The schemes allow people not on the land to carry out 'agricultural production activities' taking advantage of the tax deductions available to primary producers. Investors buy a woodlot, usually about 1 ha, and the company manages it for them. The long wait for returns by investor is partly offset by the tax deductibility of the business. MIS investment represents a substantial movement of capital form cities to rural areas. Tax arrangements associated with plantations are currently under federal government review.

Even though plantation expansion has occurred against a backdrop of rapid rural change, being a very noticeable land use change, it is the target for

public outrage and concern, especially by local communities.

Reasons cited for concern include, perceptions that rapid plantation expansion is responsible for declining rural populations, accompanied school and rural service industry closures and reduced water supply as well as uncertainty about chemicals used in forestry.

A socio-economic study carried out in the south of Western Australia (Shirmer et al. 2006), in an area experiencing similar rapid Blue gum plantation expansion over a similar period, indicate that this new rural industry, even in the early establishment phase, can improve socio-economic aspects. Results show that areas with industrial plantations also had increased employment and that the presence of industrial plantations is linked to an increased or reduced rate of rural population decline, compared to surrounding areas with no plantation expansion.

A detailed socio-economic study to investigate the impacts of industrial plantations and other new increasing land uses is being planned for the region, beginning at the end of 2006. This information will be used to improve engagement between industry, governments and community, and aid future planning in the region.

Industrial plantation expansion is creating opportunities and challenges for small-scale farm forestry. New businesses such as nurseries, establishment contractors and forestry consultants have increased in number across the region since industrial plantation expansion. This has had a positive spin off for small-scale farm forestry already, providing farm foresters with a wider choice and therefore better quality services.

Small-scale farm foresters have difficulties attracting cost effective thinning, harvesting and haulage contractors. This is because of the tight margins involved in small, as opposed to large operations. In addition to this, contractors often have seasonal contracts with large timber companies, which means that they are not available until winter and few farm forests have access that makes this possible (Lambert 2003). This can to some extent be alleviated by amalgamating activities through farm forestry co-operatives. There is a local farm forestry cooperative, SMARTimbers, operating in the region. They currently process and niche market an existing farm plantation resource, and it is likely that their activities will expand to include the needs of new resource growers, so that the difficulties of small-scale harvesting and processing may be overcome.

Greater forestry activity in the region once harvest of industrial plantations has begun may attract more harvesting and hauling businesses. Potentially there will be more choice for small-scale farm foresters, so that they are not continually waiting for the ‘crumbs’ after industrial plantations have had their go.

If changes to impediments that restrict hardwood sawlog production occur, a proportion of the hardwood plantations established in south-western Victoria could foreseeably be converted from pulp to higher value sawlogs for sawn timber production. If this were to occur, small-scale hardwood sawlog producers could access potential new silvicultural services and market opportunities.

Research into processing smaller hardwood logs (30-40cm diameter) is occurring in other parts of the country, where industrial hardwood plantations have been established. Information derived from work such as this may also benefit small-scale hardwood producers, allowing them to reduce rotation length.

Forestry is a new land use in traditional farming and amenity areas, which tends to create resistance and suspicion amongst communities. Social research into perceptions of landscapes in the west of the region, indicate that people expect their farming landscapes to include large areas of open landscape, sectioned only by fencelines (Institute of Land and Food Resources 2000). This suggests that there is a gap between rural communities’ perceptions of their landscapes, and the way they are changing with industrial plantation expansion, as well as the way government would like rural landscapes to be for environmental degradation control.

One activity to address differences in perceptions of current and future landscapes and to encourage people to consider their landscapes with

more trees for environmental degradation control, involved production of a series of posters, pictorially depicting future landscapes with small scale farm forestry. These widely circulated posters attempt to create interest in farm forestry and encourage people to consider their landscapes with more trees and small-scale farm forestry as a major player.

It could be argued that once communities get used to seeing more trees in the landscape, forestry of all scales may gradually be accepted as another rural land use. Similarly, once harvest has begun with the increasing employment that it brings, communities may view all forms of forestry in a more positive light. This change in perception and culture about forestry may lead to wider adoption of small-scale farm forestry establishment.

However, community perceptions may not always differentiate between large and small-scale forestry and there may be confusion between the two. Whilst in rural communities at the moment, there is often differentiation between industrial scale and small scale farm forests, amongst the wider community (including urban populations) there is often a tendency to 'lump' all forestry together, so that small-scale farm forestry receives the same negative connotations by the wider community as that incurred by industrial plantations. This could have an adverse effect on small-scale farm forestry development.

Conversely, it could be argued that establishment of small scale farm forestry could alleviate concerns over industrial plantation expansion. Establishment of industrial plantations over 5% of a sub-catchment (total sub-catchment size is 1892ha) in the foothills of the Otway Ranges has created little or no community concern. Experience in other parts of the region has shown that public concern is usually raised when industrial establishment rates are of similar concentration. The same sub-catchment has in the order of 4% small-scale farm forestry. Small-scale farm forestry may predispose local populations to forestry, making industrial plantations more palatable (Burk et al. 2005)

Shrinking and shifting funding resources

A recent change in focus by state government is leading to priority being placed on production and larger scale revegetation (and forestry) for environmental degradation control. Emphasis on the farm scale is being replaced by landscape scale. There is a growing realisation that if we are serious about environmental degradation control, then large areas of revegetation and forestry are required, and that increasing critical mass will assist forest industry development and overall production.

For this to occur, emphasis has to be given to social aspects of large-scale commercial and non-commercial revegetation. The socio-economic study planned for the region will go some way to assist understanding of the complex issues associated with rapid land use change. Information obtained will assist government and others to understand and better communicate the changes that are occurring and hopefully identify methods for community consultation, input and if necessary, adjustment.

As a consequence of changing state government focus, cutbacks to government extension programs for small-scale farm forestry is beginning to occur. It is likely that financial incentive programs, general awareness raising activities and background information provision will continue on a state-wide basis. But reduced extension and training provided by state government could adversely affect small-scale farm forestry development.

Farm forestry networks in the region have been successful in attracting funding for awareness raising, extension and training from federal government programs that focus on revegetation and integration at the farm scale. It is likely that networks will to some extent fill the role once provided by state government. This will ultimately mean that they have more freedom to initiate grower led training and learning programs that are more tailored to their needs. However, if they can no longer access funding, there is a risk that voluntary groups such as these, could become over-worked and lapse into inactivity, adversely affecting new farm forestry uptake.

It could be argued that reduced government support for extension may also pave the way for other organizations to provide a service that is more tailored to the needs of the farm forester. Cooperatives such as SMARTimbers could in the future provide more cost effective targeted extension to its members as well as farm forestry networks.

CONCLUSIONS

Small-scale farm forestry is still in its infancy and yet to become a mainstream activity. It may always remain a niche industry with low grower participation and the potential for hight returns for rare and different products.

The multi-functional nature of small-scale farm forestry and its potential to contribute to improved catchment health has led to government support, through extension and incentive programs. It is likely that incentive programs will continue to be supported by government and they will continue to be refined, in order to more adequately reflect the level of public good that can be derived from small-scale farm forestry.

Support for farm forestry networks to deliver training and extension by whichever level of government must continue, to ensure small-scale farm forestry development continues. Shifting funding sources from state to federal governments, has meant that networks are better able to tailor training activities to their needs.

It is however, important that farm foresters can grasp the opportunities afforded by the rapid land use change that is occurring in south-western Victoria. Positive spin-offs from industrial plantation development will include increased competition and choice of forestry services. Increasing numbers of small landholders, often with the resources and will to establish small-scale farm forestry provide a growing audience and opportunity for farm forestry development. More forestry in the region is likely to engender a forestry culture, with communities supportive of forestry and potentially creating a positive environment for more participants in small-scale farm forestry.

The impacts and perceptions of plantation expansion and other rural land use changes need to be better understood and the planned socio-economic study for the region will go some way to assisting this. This information will be used to improve engagement between industry, communities and government. Governments have a role in communicating and providing a process for community input into future planning and to guiding industrial plantation development to areas where greater public good can be achieved. It is important that these communications aim to raise awareness of the potential multi-benefits of small-scale farm forestry particularly, recognising that it can be better integrated into landscapes, causing less community concern and greater value adding opportunities. This will ensure that small-scale farm forestry does not suffer from the negative connotations associated with the rapid expansion of industrial plantations.

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