Response to terms of reference

Introduction

ABARE would like to comment on economic issues raised by the terms of reference for the Rural and Regional Affairs and Transport References Committee, No 21 dated 27 June 2002. These economic issues include:

- the economic nature of impediments to plantation investment;
- economic issues in the creation of markets for environmental services;
- economic differences between short and long rotation plantations; and
- economic criteria supporting government intervention to expand plantations.

The economic nature of impediments

- (a) …whether there are impediments to the achievement of the aims of 'Plantations for Australia: The 2020 Vision' strategy.
- (b) …whether there are elements of the strategy which should be altered in light of any impediments identified.

What is an impediment?

Impediments can be caused by institutional factors such property rights, taxation and environmental regulation that alter the private returns from plantations relative to other investments. Private investment may also fall below socially optimal levels if plantations generate significant environmental, amenity or other positive externalities not fully captured in private investment decisions. They can also arise from the structure of the industry if monopoly power creates barriers to the entry of new private investment.

A research report by ABARE – Jaakko Pöyry (1999) identified a range of potential impediments to private sector investment in plantations:

- the high risk of investment loss, as a result of fire and disease;
- the high cost of financing the investment;

- the need for a critical mass of wood availability before processing facilities can be developed;
- the long period of investment, whereby high initial costs are needed for establishment but revenue is only received on harvest;
- the lack of information on appropriate species, establishment and management techniques;
- the lack of regional infrastructure to support plantation development;
- the high risk of marketing products especially for small wood from thinnings;
- the lack of secondary plantation markets to allow the sale of plantations before harvesting; and
- the limited rights to harvest or other government restrictions that may be perceived as sovereign risk.

When private sector investment in plantations is perceived to be low, it is important to identify whether it is low because of market failure or because returns to capital are higher elsewhere in the economy. Government intervention can increase economic welfare by overcoming market failures and increasing private investment in plantations toward the socially optimal level. Government intervention that increases private investment in plantations when there are no market failures may lead to a net loss of economic welfare by reallocating economic resources from more efficient uses in other parts of the economy.

Plantations investments are economically viable if they provide a rate of return greater than the next best alternative land use. The returns that would be generated by the next most profitable land use define the opportunity cost of using the land to grow plantations. A recent study by ABARE (Burns et al. 1999) found that there was some potential to expand plantations at current prices, particularly in regions with significant processing capacity such as Western Australia, Tasmania and the Green Triangle of South Australia and Victoria. The report warned that a threat to plantation expansion was falling prices as plantation roundwood production in Pacific Rim nations increases. This risk has increased with recent upward revisions of the supply of plantation wood (Yainshet et al. 2002).

The future international competitiveness of Australia's forest industries could be assessed by developing a Pacific Rim trade model. ABARE uses this approach to quantitatively analyse the medium term market impacts of changing international supply in agricultural industries. This research capacity is not currently available for Australian forest product markets.

The industry structure paradox

A paradox in the plantation industry is that its most efficient economic structure may be responsible for one of the most important perceived impediments to additional private investment. A recent ABARE survey of 20 industry leaders confirmed that log prices are difficult to obtain in the forest industries. Log prices play an important role in the analysis of new plantation investments, and without this data, capital may flow to alternative investments for which information is easier to access.

Log prices are difficult to obtain in Australia because the industry is dominated by a handful of large processors and growers in each region. The need for a large scale resource to support an internationally competitive processing industry means this is the most efficient structure of the industry. Investment in large scale processing requires secure access to a long term supply of wood, encouraging long term supply agreements. Long term supply agreements between a small number of large scale growers and processors effectively means there is no spot market for logs, making it difficult for new growers to enter the market.

This has been overcome in other countries such as New Zealand by public investment in market research and reporting infrastructure. There are substantial social benefits from transparent markets that incumbent large scale operators have no private incentive to provide. These benefits arise by promoting the flow of capital into and out of the industry at low cost, enabling private capital to move to its most efficient use.

ABARE has proposed that an annual survey of the economic performance and structure of Australia's wood processing industry be undertaken. A survey similar to those conducted by ABARE for the agricultural, fisheries and energy industries could provide log prices by region and type. An ongoing annual survey could also provide

data on log flows, efficiency of processing and end use, as well as employment and expenditure patterns.

Creating markets for environmental services

- (c) whether there are further opportunities to maximise the benefits from plantations in respect of their potential to contribute environmental benefits, including whether there are opportunities to:
    - (i) better integrate plantations into achieving salinity and water quality objectives and targets,
    - (ii) optimise the environmental benefits of plantations in low rainfall areas, and
    - (iii) address the provision of public good services (environmental benefits) at the cost of private plantation growers;

Conservation or subsidy?

Economic instruments can be designed to increase the provision of public good environmental services by private plantation owners. Investors establishing plantations bear the full cost of doing so, but may be unable to capture the full value of environmental services provided to the wider community. This can mean that private investment in plantations falls below the socially optimal level. The opposite, however, can also be true.

It is important that economic policy instruments designed to enhance the environmental services provided by plantations, are targeted to provide well defined environmental outcomes. For some environmental services to be efficiently provided, such as salinity mitigation, plantation establishment must be targeted to very specific recharge areas of catchments. For biodiversity purposes, wider plantings of mixed specifies may be preferred over industrial monocultures.

Policy initiatives to create markets for environmental services need to consider which investors can most efficiently provide the required environmental outcomes. Economies of scale in the forest industries mean that the most efficient structure of the wood products industry is one or two dominant growers and processors in each region. Policy initiatives designed to provide environmental services through small

holder plantations or farm forestry may expend resources altering the structure of the industry by attempting to increase the economic viability of smallholder forestry versus large scale industrial forestry. Resources expended to alter the economic viability of smallholder forestry are not necessarily the most efficient method of purchasing environmental services.

The tension between scale efficiency and the provision of environmental services by forests can be addressed in many ways. Collective management of smallholder forests, either via industry or government, in used in various parts of the world to ensure the most efficient scale of production. Economic research is required to ensure that policy initiatives to create markets for environmental services are well targeted and efficient.

Long vs short rotations

- (d) ...whether there is the need for government action to encourage longer rotation plantations, particularly in order to supply sawlogs.

The decision to plant short rotation plantations to supply pulplogs, or long rotation plantations to supply sawlogs, should be based on the relative returns from the two types of investment. The concern over this issue partly arises from the current expansion of blue gum plantations for pulpwood production, and partly from a desire in some quarters to reduce logging in native forests. However, it is difficult to identify impediments that disadvantage other types of plantation investment relative to short rotation eucalypt plantations. Investment decisions for long rotation plantations are made under exactly the same institutional conditions.

Government intervention to alter investment patterns away from short rotation into long rotation plantations needs to be clearly directed to overcoming market failures rather than simply altering the economic viability of the two types of investment. A shorter planning horizon for pulpwood plantations reduces risks for investors by reducing discounting of future returns at harvest, and reducing the risks of supply agreements with buyers. Pulpwood marketing depends more on volume and less on quality than sawlog marketing, reducing the risk to potential buyers entering into supply agreements.

The decision to alter the supply of sawlogs from plantations requires an analysis of the lowest cost option of sawlog supply. With burgeoning plantation supply in the Pacific Rim, the lowest cost source of sawlogs could include imports, particularly from New Zealand. In other industries, the long term market implications of changing international supply are assessed using trade models that are not currently available for Australian forest products. Investment in this research would help to target the most efficient strategy for forest industry development.

Government intervention to expand plantations

- (e) ...whether other action is desirable to maintain and expand a viable and sustainable plantation forest sector, including the expansion of processing industries to enhance the contribution to regional economic development.

Government action to expand plantations should focus on overcoming clearly identified market failures. The clearest market failures impeding private investment in plantations are brought about by the structure of the industry. Thin markets and the cost of price discovery can be addressed by setting up a price publishing system. Barriers to entry for new plantation owners created by the scale necessary to be internationally competitive in wood processing can be addressed by collective management of smallholder forests. Governments could encourage a consolidated approach to the management of smallholder private plantations to ensure a consistent quality and flow of wood to processors.

Great care is needed to ensure that policy initiatives to overcome impediments or create markets for environmental services are not subsidies to overcome an inherent lack of economic viability. Provision of such subsidies would lead to a net economic loss by reallocating resources away from more efficient uses elsewhere in the economy. The international market for plantation wood products is extremely competitive, and forecast to become even more competitive. Pacific Rim timber prices are expected to fall in response to increasing plantation production, and continued profitability depends on increasing productivity. Public investment targeted at wealth and employment creation are best directed to sectors of the economy in which Australia has a clear comparative advantage.

References

ABARE – Jaakko Poyry 1999. *Global outlook for plantations*. ABARE Research Report 99.9, Canberra.

Burns, K., Walker, D. and Hansard, A. 1999. *Forest plantations on cleared agricultural land in Australia: a regional economic analysis*. ABARE Research Report 99.11, Canberra.

Yainshet, A., Nelson, R. and Love, G. 2002. *Rising domestic plantation wood supplies*. ABARE Current Issues 02.7, August.