

There are global implications of the New Zealand experience. Advocacy of wood-producing plantations reduces the need for wood harvests from the world's remaining indigenous forest. This reduces threats to the world's forest diversity.

We should be justly proud of our plantation management. We should be especially proud of its contribution to the New Zealand economy, to employment, to the environment and to the protection of forest biodiversity.

References

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Plantations and the promotion of sustainability

Dr Hugh Bigsby*

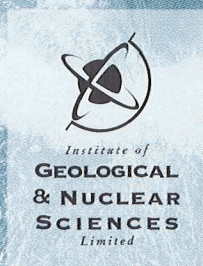
We feel more often these days the pressures to exploit the notion of sustainability of our plantation forests as a marketing advantage in overseas or even domestic markets. This is evident in product brand names (EcoPly) or statements about products from New Zealand's radiata pine resource. The essence of the sustainability argument is to compare the trend in New Zealand's plantation wood supply with the wood supply trends of North America or tropical Asia. In contrast to New Zealand's growing plantation resource, these other regions are often undergoing reductions in timber supply due to overcutting, poor logging or regeneration practices, or environment with-

drawals of land. The trend in wood supply is thus linked to some notion of sustainability of forest utilisation.

In a forestry context, this notion of sustainability is typical. Sustainability is associated with harvesting the mean annual increment (MAI) of a 'forest' or determining an annual allowable cut (AAC) which can be carried out in perpetuity. In other words, there is some aggregation of forested areas, which collectively is called a forest, and is treated as a capital asset. The forest asset yields an annual interest payment in the form of a harvest. As long as the principal is preserved, or there is no over-cutting and adequate reforestation, the interest payment, or harvest, is sustainable. Promotion of New Zealand's growing forest estate as a measure of sustainable forestry fits into this traditional view of forest sustainability.

* *Economics and Marketing, P.O. Box 84, Lincoln University, New Zealand.*

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The Plantation Context

The question is whether it makes sense to promote New Zealand's timber products as being sustainable in this context. The problem is that plantations, as the system is developing in New Zealand, provide a much different forestry context compared with the forests in which the traditional notion of sustainability was developed. In particular, for plantations the traditional notion of forest sustainability as being the long-term maintenance of a wood flow is largely irrelevant. The major reasons for this centre on how plantations are managed, and how decisions on when to plant and harvest are made.

Firstly, the way that plantations are managed makes them more similar to agricultural or horticultural crops than to a 'forest' where only the MAI is harvested from a capital base. Implicit in an approach that looks at a forest entity and harvesting only the MAI is an assumption that reforestation will take place. For plantations though, the forest owner makes decisions about what crop to plant each time the opportunity arises. That decision may not be another crop of radiata pine or even trees. To consider that agricultural lands that have been converted to plantations might be so on a permanent basis, rather than potentially returning back to agriculture or other uses, is comparable to the agricultural fundamentalism that forestry has been subject to for so long. This fundamentalism is that the highest and best use of land is in growing food and fibre (non-wood of course) and that once in agriculture, it should never be converted to another use, particularly trees.

In this decision-making context, plantations are not necessarily sustainable. There is no legislative requirement that replanting take place or that it should occur at a particular rate that would maintain some future wood supply. It is only if economic conditions remain conducive that plantation wood flows will be sustained. This will be true whether taken from the perspective of a small forest owner or a large integrated forestry complex with processing facilities to supply.

Secondly, there is some question as to whether sustained yield can be determined at all, given the system in which plantations are managed in New Zealand. Under the current system, planting and harvesting take place at rates and times which are generally not in any way coordinated towards any notion of normal forests or AAC. The possible exception would be the largest corporate forest holders who have large areas approximating normal forests and large mills to provide for. Even the larger forestry funds or managers who are interested in sustainable income flows will not necessarily have to translate this

into geographically coherent sustainable wood supplies. They need only be concerned that their portfolio of forests, wherever they are located, will generate sustainable income.

The best that is done is to forecast the likely aggregate outcome of all the individual decisions using the National Exotic Forest Description (NEFD) and the FOLPI estate model so that processors can do some planning. Even then, to make these forecasts we are required to make assumptions about future behaviour, such as plantation regimes and rotation ages which may in the end be quite different.

Thirdly, most individual forest enterprises in New Zealand do not need to be worried about sustained yield at all. An individual firm might use the information to plan its investing activities by looking to ensure there is enough wood supply to keep the investment going over its economic life. For most businesses this is 10 years or less, and certainly not more than 20 years. This is not much different from a processor of orchard crops making an investment decision. In addition, the legacy of planting cycles means that a large proportion of the current plantation crop is surplus to the needs of any existing processing facility and is uncommitted to any future processor. As such, it has no notion of sustainability attached to it.

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True, plantations have the potential to provide a perpetual or sustained yield, but this is not an objective affecting current planting decisions. Decisions about the next crop will be made at the appropriate time, not at the time of planting the first crop. There is every reason to anticipate that crops will be replanted and forestry businesses supported indefinitely as long as the economic returns are maintained and investors are confident of the returns.

AAC-style Sustainability and the Image of Plantation Forestry

Within New Zealand, the closest that plantations come to an AAC type of sustainability is in terms of replacing the flow of timber from indigenous forests. Under the New Zealand Forest Accord, the context of plantations is as a sustainable domestic supply alternative, particularly in regions where processing has been dependent on indigenous timber. Generally though, there is no reason to expect that the New Zealand public would be worried about

where anyone is planning for the replanting of plantations to ensure their perpetual continuation any more than they would for maintenance of livestock herds, grape vines or apple orchards. There are numerous examples of industries emerging and then declining as the renewable resources they are based on change over time.

The sustainability that the New Zealand public will be concerned with is that management practices are maintaining the biological potential of the land. This would include factors such as prevention of soil erosion and encouraging the recycling of nutrients. This concern will emerge whatever the choice of crops or land use. This view of sustainability is now enshrined in the RMA 1991 and is also the focus of the 'Principles for the Sustainable Management of New Zealand's Commercial Plantation Forest', which the NZIF may yet ratify.

At the global level, the context of plantations is also in their potential to reduce harvest pressures on old-growth, indigenous forests. The requirement for sustainability is related to the perceived ongoing need to provide for alternative wood supplies in regions where the pressures are occurring. This is not highly relevant to New Zealand or its potential markets, because one would be stretched to argue that a tree planted in New Zealand is saving one in a developing country.

Summary

With moves to exploit AAC-type sustainability of plantation forests as a marketing advantage, there is a need to look first at whether this is appropriate. For plantations, the traditional notion of forest sustainability as being the long-term maintenance of a wood flow is largely irrelevant. A forest owner makes decisions about what crop to plant each time the opportunity arises, and there is no legislative requirement that replanting take place or that it should occur at a particular rate that would maintain some future wood supply. Under the current system, planting and harvesting take place at rates and times which are generally not in any way coordinated towards any notion of normal forests or AAC. In addition, there is no compelling reason to promote plantations under the traditional notion of AAC-type sustainability from a public relations perspective, particularly when it is obvious that this is not the case. As a result, it would be prudent to use the term sustainability in promoting plantation-grown radiata only in the context of sustainable management practices rather than sustainable wood flows.