



East Coast forestry – goals, risks and realities

Introduction

The February 1995 issue of NZ Forestry reported a positive response from the Minister of Forestry to the recent report from the Parliamentary Commissioner for the Environment on the East Coast Forestry Project¹. The Commissioner's report concluded that the project has the potential to assist the change to more sustainable land management in the East Coast region and that it should continue. But it should also be recognised that despite this endorsement, the actual achievements of the project have so far fallen significantly short of its goals, in terms of both area and type of land afforested. In this commentary I wish to look a little closer at some of the messages in the Commissioner's report, especially those that may be most relevant to the forest industry.

Participation by types of forestry investors

The total area approved for grants in the first three years of the project was 15,358 ha. This area was intended for planting in the years 1993-97 and in the first two years of planting about 7300 ha was planted. This compares with the project's budgeted goal of planting 7000 ha per year for 28 years from 1993.

Looking at the types of investors participating in the project (table), it can be seen that in total the largest number of grants and the largest grant area have been made to the category of farmer or farming company. Numbers in this category have increased significantly in the three years of grants while the numbers of forestry investors have decreased. Participation by various types of investors in the project may be affected by a number of factors. While large-scale forestry does not necessarily depend upon large forestry compa-

nies, investor confidence across a range of potential investors is crucial if the project is to succeed.

Targeting issues

The objectives of the project are to promote large-scale commercial forestry as a means of controlling soil erosion, providing employment and regional development and to recognise environmental needs on individual properties. These multiple objectives have been widely criticised as being mutually incompatible. The Commissioner's report discusses them at length: I will not pursue this discussion here. Let us accept that commercial forestry has been chosen as the means of achieving the project's objectives. However, we must also accept that the project has arisen mainly because of the history of erosion and land instability in the region, and that the soil conservation objective is seen as paramount to many. Thus the project's targeting mechanisms are crucial to the achievement of the project's objectives by focusing the project planting areas on the most at-risk land, while also having important implications for the economic and social aspects of the project.

To help achieve this objective, a land classification weighting system was introduced in 1993. This system was to provide those applications that contained a greater percentage of target land with a more favourable ranking in the process of

prioritising bids. The target area for the project is all Category 3 land and severely eroding Category 2 land². The project has a goal of 50% of all land approved for planting being in these target categories.

The actual achievement has been less than this goal. While there is uncertainty over the exact figures, the overall targeting achievement has been about 30% and it declined from 1993 to 1994. One reason for this is that many of the 1994 tenders had very low individual net target areas and, in some cases, a nil net target area.

Any goal of this nature is somewhat arbitrary. We do not feel, as do some critics, that the underachievement so far is critical: it is unrealistic to expect that a project of this nature would crank up to full speed in its first couple of years. However the continuation of approval for bids with low target areas would be a serious concern. The report suggests that improvements to the targeting system can be made. Alternatives to the present system should be rigorously evaluated as part of the forthcoming review process (see below). The criteria for the selection of a land classification weighting system should include:

- recognition of both present and potential erosion;
- recognition that in the long term, potential erosion is at least as important as present erosion;

Table: Categories of investors in the East Coast Forestry Project, 1992-4

	TENDER ROUND YEAR			TOTAL	
	1992	1993	1994	1992 – 1994	
CATEGORY OF INVESTOR	Number of Grants			Number of Grants	Area approved (ha)
Forest Investors using Venture Mechanism on Farmland	18	4	7	29	3174
Farmers or Farming Companies on own Land	5	13	22	40	9042
Forest Investors on own Land	1	3	–	4	1645
Joint application: Farmers or Farming Companies and Forest Investors on Farmland	–	2	–	2	1497
TOTALS	24	22	29	75	15358

1 *Parliamentary Commissioner for the Environment, 1994: Sustainable Land Management and the East Coast Forestry Project.*

2 *Land categories refer to groupings of Land Use Capability (LUC) units in the region requiring broadly similar management. As a generalisation, Category 2 is better LUC Class VII land and Category 3 is poor LUC Class VII land.*

- recognition of the different rankings of erosion severity;
- recognition of the mosaic of LUC Classes;
- ease of assessment;
- simplicity and ease of understanding for the applicant.

If the project grant is not correctly targeted to at-risk land, not only does it compromise the soil conservation objective, but also it may create distortions in the regional economy. The grant may distort the level of inputs and outputs, the locality and distribution of production systems, and thus have the effect of crowding out investment in private forestry and other land uses such as agriculture.

The competitive bidding mechanism

To understand the difference between the project's goals and its achievements so far, I believe we have to examine the basis of government intervention and the grant allocation process chosen to implement it. The central concept of the project's grant allocation process is the use of a competitive tender mechanism, with various pools, restrictions, and weighting criteria applied to tenders to determine eligibility for grants.

The grant was never intended to and does not cover the total cost of establishment and silviculture. It is intended to 'top-up' the difference between the rate of return for a commercial forestry investment on LUC Class VII land in the East Coast region in comparison to the rate of return for a typical commercial forestry investment in other regions. The commercial rate of return for forestry on this at-risk land is relatively low compared to other regions because of the physical and economic constraints of the East Coast region. Without an incentive such as a grant to improve the rate of return of commercial forestry, this at-risk land would only be slowly planted and this would hinder the region's ability to move towards more sustainable land management.



To help achieve more sustainable land management in the East Coast, forestry needs to attract a range of investors and be adaptable to a wide range of land quality. Photo: P.M. Blaschke

It was anticipated that the confidential tender mechanism would ultimately reduce the cost of the project to the Government: with competition for grants, applicants would need to lower the price of their tender to ensure a successful application. With increasing forestry and infrastructure development in the region, economies of scale would also assist by lowering the cost of establishing forestry.

However, there is a risk that many applicants may choose to bid for areas of the best-quality, most-accessible land while still staying within the project regulations. This type of land is perceived as presenting lower risks and better returns. It is also the target of superannuation investments by private investment partnerships. These investments are reported to be paying above average prices for better-quality farmland and they are a significant factor contributing to renewed fears from the agricultural sector about forestry expansion on to productive farmland. However, it is the project that is widely blamed for the loss of farmland, the Government's incentive being seen as driving and distorting the competition.

It seems obvious that, so far, many forest investors, especially the large corporates, are seeing the costs and/or risks of investment in the project's target areas as too high to justify the investment when there is other suitable land available in the region and elsewhere in the country. Thus the bidding process is not yet competitive. This is exactly the situation that the grant allocation mechanism was designed to avoid. Unfortunately, despite the optimism of the Minister and his officials, we believe that it is a situation that could persist for some time, until either competition for land nationally becomes much more

intense, or the real or perceived costs and risks of investing in the project target areas are reduced³. It may be useful to examine these costs and risk more carefully.

Real and perceived risks

Physical risks from fire, storms, pathogens, etc, are largely unquantified, but real enough. They are largely common to other forestry districts but could be higher in the East Coast because of factors such as remoteness (in the case of response to fire) or possible changes in regional climate patterns such as an increase in the frequency of droughts and cyclonic storms.

Costs of establishment, silviculture and harvesting are undoubtedly somewhat higher in parts of the region, because of remoteness, nature of the country, increased planting density requirements, etc. Information provided to the Commissioner on the relative costs of establishment and silviculture on "difficult" and easy parts of the region suggests that these higher costs may have been overestimated by earlier applicants. In addition, the extra costs associated with the lack of infrastructure in the north of the region are likely to reduce as the area of forest increases, regardless of the project. Our estimate is that there is now between 103,000 and 108,000 ha of exotic forest in the region⁴ and that this area is likely to be increasing at present by more than 10,000 ha per year.

Certainty of harvest: Uncertainty of harvest under Gisborne District Council's proposed Vegetation Removal and Earthworks Plan has been cited by some forestry companies as a disincentive to invest. It must be remembered that absolute certainty of consent to harvest

³ This is the reason that the Commissioner has recommended a more flexible approach to the maximum acceptable price per hectare used as a cutoff point to eliminate high-cost applications. This price is calculated on the basis of Net Present Values of typical forestry investments in the region. Flexibility on the basis of the percentage target area in a bid would have the effect of eliminating some applications with a low percentage of target land, and being more favourable to applications with higher percentages of target land if at relatively higher cost, while remaining fiscally neutral compared to the present system.

⁴ Area administered by the Gisborne District Council.

has never been guaranteed in the past, but all the historical evidence, including from this region, is that once conditions are sorted out the harvest of any forest intended for production has never been prevented. The Commissioner has also suggested that a long-term forest management plan submitted as part of the project application process would further reduce uncertainty over the harvesting phase.

Social and political risks have been largely unstated, but my impression is that they are perceived by many to be quite high. The East Coast region is different, particularly in the north: the high Maori population and large areas of land in multiple Maori ownership, some well-publicised social tensions in recent years, shortcomings in consultation during the development of the project, the involvement of national pressure groups in vociferous arguments over scrub clearance, and the changes to project regulations and criteria in its first years may have all contributed to these perceptions.

One of the successes of the project so far is that it has delivered some forestry in the north of the region that would not otherwise have been established, but the momentum desperately needs to be maintained. Participation by Maori, specifically by Ngati Porou in the north, is a precondition of the other objectives being fully met. The Commissioner was left in no doubt about the commitment to commercial forestry by Ngati Porou leaders who have clearly identified it as their most important development option. Space precludes discussion of the scrub clearance issue here, but this issue is and must be resolvable in order to make the project more certain and equitable, not to mention able to begin delivering on its muted nature conservation objective.

We believe that there is reasonable political commitment to long-term continuation of the project. Even if one cannot conceive of such commitment for 25 more years, this should not affect a decision to invest now, since once the trees are in and through their initial silviculture, the private benefits have been captured.

Continued uncertainty undermines the potential of any commercial solution. The Commissioner has recommended that, to help stability in the short term, there should be no significant changes to the project until after a major review, planned for the coming year, is completed. Changes may well be necessary once this review is completed in 1996. Any changes that do then take place should be based upon full consultation and should also allow adequate time for the Ministry of Forestry to discuss with stakeholders the nature of the changes and why they are necessary.

In summary, there are a number of important risk factors, a few of which are unique to the region. In total they appear high enough to have persuaded many forestry corporates not to invest or to put in unacceptably high bids. I have attempted to show, however, that many of these risks may be more perceived than real, especially in the light of increasing forest areas in the region. They also have to be weighed against such positive factors as the very favourable growth rates, the ready availability of land and labour, somewhat lower (though rising) land costs, and of course the availability of the project grants. A rethink of the risk assessment by forestry analysts may thus be in order.

Conclusion

As stated at the outset, the project has the

potential to contribute strongly to more sustainable land management in the region, provided that a number of criteria are met. It is not the only answer to the present problems of the region and should form part of a comprehensive approach to future sustainable land management, supported by the Government, the Gisborne District Council and all stakeholders. It needs to be effectively targeted, non-distortional, and able to attract the participation of a range of potential forestry investors.

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Confused by figures, or the search for mediocrity

On page 184 of his book "Moa's Ark" David Bellamy writes that:

- a hectare of radiata pine (300 trees) has a mean annual increment of 20 cubic metres/year – or 0.07 cubic metres/tree, and;
- the kauri Tane Mahuta is said to be 1200 years old and the volume of its trunk is 244.5 cubic metres, giving it a mean annual increment of 0.2 cubic metres/year.

He asks, without malice, why do we not grow kauri if it grows three times as fast as radiata pine?

Is there a flaw in his argument? Can anybody tell me?

Change the subject but not the confusion. In the dim distant past, when the prophet of yield was Hans Beekhuis and computers were only a gleam in the eye, we were told that on an average site the mean annual increment of radiata pine maintained itself at a steady 20-25 cubic metres/hectare/year between about age seven and 40. Before that, it was gathering its strength and afterwards its productivity fell through competition and failing vigour.

At the same time we learned that, within this span, the older the tree the more useful and valuable its wood became. The first few years of growth lack strength and stability, but with age these improve, as does fibre quality, and of course clearwood volume after pruning. Also simple arithmetic tells us that establishment and silvicultural costs are spread over a longer period and so reduced if the

felling cycle is lengthened.

Why then the fashion for "younger and smaller (trees) bringing new challenges for the wood processing sector" (Russell Dale in his paper to the 1994 AGM)? One obvious reason is likely to be that, in the short term anyway, companies have perforce overspent on forests with a concomitant increase in processing investment and so must generate cash flow. This may be too simple to admit, so the praise singers are called in to turn the mundane into the miraculous, and we risk being convinced that short-term necessity is long-term strategy.

The trade magazines, confused over whether they are in the driver's seat or simply have a tiger by the tail, give sometimes an impression that there is a deliberate preference for younger and smaller logs as a challenge to technical wizardry, and sometimes an almost puritanical delight in self-imposed suffering. Again, this makes a kind of virtue out of necessity, but it doesn't make much sense as a long-term strategy for either the grower or the user of forest products.

Here of course the economist begins to snort – does the simpleton not understand the effects of interest? Has he forgotten the Faustmann formula? The layman's answer becomes a bit blurred, bewildered by figures and assumptions, but, strangely, it seems to be the owners and managers of large forests who are keenest on short-rotation theology, while in the long term they are the ones who would seem to ben-