

scheme is voluntary and by no means covers all forest consultants or contractors in New Zealand. Under the scheme, consultants are required to meet certain conditions and the Institute's Code of Ethics. However, there is no requirement on recognised consultants to meet the conditions in the Forest Accord.

**Tim Thorpe**  
**Convenor, Environmental**  
**Working Group**  
**NZ Institute of Forestry**

## **Far North Afforestation replies to Greenpeace**

Sir,

It is important to set the record straight following a series of inaccuracies and incorrect assumptions in the letter from Greenpeace correspondence Grant Rosoman published in your May issue.

The first matter to deal with is the "recent incidences reported to Greenpeace", included in which is Mr Rosoman's allegation that Far North Afforestation Limited roller crushed 200 hectares of regenerating native forest south of Kaitaia.

This is total nonsense. FNA has never been, and will never be, involved in practices which destroy what any reasonable person would recognise as New Zealand native bush or forest. In fact, this company has retained many hundred hectares of quality native bush as part of our development operations.

I cannot speak for all managers and contractors, but if Mr Rosoman and his fellows believe that they have a mortgage on concerns for the natural environment of this beautiful country then he is one who is misguided and irresponsible. Ill-informed comment like his, without knowledge of all the facts, does more to bring the green lobby into disrepute than anything this industry could say or do.

As other correspondents to NZ Forestry have already noted, Mr Rosoman seems to be particularly confused about the Forest Accord, including who signed it and who accepts it. FNA has never signed it, and we never would in its current form because it is totally unrealistic and unenforceable. I believe that even those companies involved in the negotiations which led to the Accord will be taken aback to learn that the environmentalists are now trying to include rough scrub country in their definition of a forest or bush.

I have no doubt that all participants in

the forestry industry in this country accept that there is need for some general acceptance of standards and operating procedures which address the concerns of both sides. But there is a growing body of opinion which says that the Forest Accord does not achieve this. The first instrument of the Accord defines a native tree as "any indigenous woody plant which ultimately forms part of the canopy of a naturally occurring forest ..."

If that is to be the literally applied standard by which the whole industry operates then the national economy will be devastated by the collapse of a major contributor to the country's business, employment, financial and export infrastructure.

If we are ever to achieve common ground, Mr Rosoman, we must start talking common sense.

We support the total protection of quality native bush and forest. We simply cannot accept the foolish attitude which says that every little bit of scrub must be saved forever.

Many smaller forestry managers and developers are cynical about the big forest companies represented by the signatures on the Accord - they had their forests well established before the Accord was ever dreamed up. And Mr Rosoman well knows that all major plantings are now being done by private investors and forestry development companies. In fact, 80 per cent of the 90,000 hectares planted in the last year were planted by private investors.

If Mr Rosoman and his cohorts were to spend more of their time and effort developing a philosophy that recognises that both sides of this argument have a legitimate point of view, and that both sides should try much harder to work together, they would make a far more meaningful contribution to make this country a better place for the future.

**Graeme Jespersen**  
**Chief Executive**  
**Far North Afforestation (NZ)**  
**Limited**

## **Native scrub clearing - Waingake**

Sir,

In reply to Mr Rosoman's letter I would make the following comments.

The area felled (approximately 18.0 hectares) comprised a mixture of manuka, 4-metre-high kanuka, fern, mingimingi and a small percentage of young podocarps. Had the podocarps been left standing, they would have died in the

burnoff and shaded the radiata seedlings. An area of larger podocarps and beech species (6.5 hectares) was left because of the presence of what was in our view a significant stand of native species. The area left was also larger than required by the Gisborne District Council under the Resource Consent.

As a consequence I believe Kohntrol Forest Services acted responsibly when the block was developed. Of the 9280 hectares under Kohntrol's management, 10-12% of this area has not been planted because it is covered in native vegetation.

The cost to the client is significant and affects the investors' return by effectively increasing the cost per plantable hectare.

I believe it is a matter of finding a balance between scrub that should be felled so that plantations may be established (and thereby inherently protecting more significant forests in other areas) and retaining bush within plantations which are important.

Mr Rosoman's suggestion that consultants have been giving their clients poor advice presupposes we are all tarred with the green brush. If we were then we certainly would be giving them poor advice.

My limited knowledge of the Accord leads me to believe that it has gone too far in restricting the felling of native species and it can only do harm to the environment and the economy in the long term. A classic example of this was the Ngati Porou Whanui Forests Limited/Tasman Joint Venture which was halted for that reason.

**Julian Kohn**  
**Kohntrol Forest Services Ltd**

## **The public's perception of Forestry**

Sir,

We should not be too surprised at the apparent lack of public insight towards our forest industries referred to by Peter Hill (NZ Forestry, May 1995). I believe each of us should look critically at our own contribution towards communicating with a community who are not aware of the potential that is accumulating within our forests.

Little has changed since the days leading up to the dismemberment of the Forest Service when we were about to pay the penalty for failing to communicate our aims and achievements over three-quarters of a century of forest expansion. Yet by comparison with today's level of dialogue, we were still comparatively well served with avenues of communication.

At least pre-1987 we still enjoyed a

network of Forest Service regional offices, rural Forest Service headquarters and numerous extension officers moving freely in the community. Our advisory services are now attenuated, and confined within a strait-jacket of 'user pays'.

A large group of highly-trained forestry company staff are presumably influenced by the problem of commercial sensitivity, and consultants probably do not venture out unless remuneration is guaranteed beforehand. The Ministry of Forestry is limited to a few key centres and appears to be severely constrained by shrinking budgets and continuing staff cuts. One can only guess at the frustration experienced by experienced staff unable to meet the needs of the private forestry community.

Organisations such as the NZ Farm Forestry Association continue to play a role, but their membership still stands at only around 5000. By comparison, the magazine 'Growing Today' reaches a public of 25,000, many of them deeply conscious of land-use issues.

As forestry moves towards a dominant position as our largest export earner, it must carry public opinion along with it by developing a constant dialogue, particularly with regard to environmental issues, or risk alienation.

The present discussions surrounding planning consents for new industries, such as those proposed by Rayonier and Wenita, highlight this need.

I believe the Institute is capable of responding from within its membership to questions arising across a wide range of matters relating to land use, industrial development and the social issues resulting from the emergence of substantial new industry. In fact, the questions are quite predictable and we should be providing the answers in anticipation.

Where is the next generation of Chavasses and Purey-Custs?

## Bill Gimblett

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## A mathematical complexity

Sir,

The May 1995 issue of the Journal published an article by Dr Hugh Bigsby called "Accounting for Plantations – National Accounts and Forestry". Three formulae appear in the article of which the first and third appear to need correction or at least clarification.

Dr Bigsby introduces his first formula by stating (p. 17) "... a more appropriate way to value forests would be through the calculation of NPVs for each of the regions, species, and silvicultural treatments. The value of the forest estate would then be the sum of these NPVs,

$$\text{Value of the Forest Estate (VFE)} = \sum_{g=1}^m \sum_{h=1}^n \sum_{i=1}^o \sum_{j=1}^p \text{NPV}_{ghij} \quad (\text{B1})$$

where  $g$  is the region,  $h$  is the species,  $i$  is the silvicultural treatment, and  $j$  is the age class."

Dr Bigsby's definition of  $\text{NPV}_{ghij}$  needs at least two clarifications. Firstly, his definition is incomplete because it does not refer to  $j$ . Secondly, his definition assumes there is a one-to-one correspondence between forests and the set of ordered 4-tuples  $(ghij)$ . In general, there may be more than one forest with the same  $(ghij)$  combination, so his definition should have read:

$$\text{NPV}_{ghij} = \sum_{f \in S(ghij)} \text{NPV}(f) \quad (\text{H1})$$

where  $\text{NPV}(f)$  is the NPV of the forest  $f$  and the set  $S(ghij)$  is the set of all forests in the population which have the combination  $(ghij)$ . The term "forest" includes parts of forests.

Dr Bigsby introduces his third formula by stating (p. 17): "The components of the present value of a forest stand can be separated as prices ( $P$ ), volume per area ( $V$ ) and area ( $A$ ). A change in the net present value could arise from a change to any one or all of these factors.

$$\Delta \text{NPV} = \sum_{i=1}^n \frac{\Delta P_i \times V_i \times A_i}{(1+r)^i} \quad (\text{B3})$$

"The price,  $P$ , is actually a composite price which is a weighted average of the expected products."

I assume that the "n" in the summand is a misprint for "i". Dr Bigsby does not make the status of this formula clear. If it is a definition of  $\Delta \text{NPV}$  then the question of validity does not arise. However, it seems unlikely to be a definition because this would involve an unconventional use of  $\Delta$ . It seems more likely it is meant to be a derivation from the formula

$$\text{NPV} = \sum_{i=1}^n \frac{P_i \times V_i \times A_i}{(1+r)^i} \quad (\text{H2})$$

on the assumption that the change in NPV arises from changes in  $P_i$ ,  $V_i$ ,  $A_i$  or  $r$ . If this is so, then his formula is incorrect. Using the commutivity of  $\Delta$  and  $\sum$  for finite sums and the product and quotient rules for finite differences the correct formula can be derived as

$$\Delta \text{NPV} = \sum_{i=1}^n \frac{((\Delta P_i \times V_i \times A_i) + (P_i \times \Delta V_i \times A_i) + (P_i \times V_i \times \Delta A_i) + (\Delta P_i \times V_i \times A_i) + (P_i \times \Delta V_i \times \Delta A_i) + (\Delta P_i \times \Delta V_i \times A_i) - P_i \times V_i \times A_i) \times ((1 + \frac{\Delta r}{1+r})^i - 1)}{(1+r)^2 (1 + \frac{\Delta r}{1+r})^i} \quad (\text{H3})$$

Dr Bigsby has implicitly assumed  $r$  to be fixed, in which case this formula reduces to

$$\Delta \text{NPV} = \sum_{i=1}^n \frac{(\Delta P_i \times V_i \times A_i) + (P_i \times \Delta V_i \times A_i) + (P_i \times V_i \times \Delta A_i) + (\Delta P_i \times \Delta V_i \times A_i) + (\Delta P_i \times V_i \times \Delta A_i) + (P_i \times \Delta V_i \times \Delta A_i) + (\Delta P_i \times \Delta V_i \times \Delta A_i)}{(1+r)^i} \quad (\text{H4})$$

but this is still not the same as his formula. To obtain Dr Bigsby's formula it would be necessary to impose a condition

$$\sum_{i=1}^n \frac{(\Delta P_i \times V_i \times A_i) + (P_i \times \Delta V_i \times A_i) + (P_i \times V_i \times \Delta A_i) + (\Delta P_i \times \Delta V_i \times A_i) + (\Delta P_i \times V_i \times \Delta A_i) + (P_i \times \Delta V_i \times \Delta A_i)}{(1+r)^i} = 0 \quad (\text{H5})$$

but such a condition would not be satisfied for arbitrary changes and arbitrary values of the variables.