



Carbon sequestration and New Zealand's indigenous forests

The global concern over deforestation can be seen to be soundly based when our nearby East Asian neighbours are visited. Laos and the Philippines have eight million hectares and ten million hectares respectively of degraded hill country subject to remorseless pressure for grazing and cropping in a grossly unsustainable manner. This ought to be viewed in the context of land mismanagement and not in the context of protection of rainforest, which is a laudable concern of "Western" societies insulated from the realities of day-to-day survival.

The rainforest process in New Zealand has been codified by (a) the Forest Accord between the forest industry and the conservationist groups, and (b) the Forests Amendment Act 1993. To me, it seems that there could be a further incentive which is based on the concerns with global warming, carbon dioxide emissions and sequestration demands exemplified by the Electricorp NZ (ECNZ) Stratford case.

President's comment

The Minister for the Environment's decision to support forest planting as a process of sequestration has two flaws. The first is that it is a temporary process of a rotation before positive sequestration ceases. The second is that it erodes the commercial basis for forest investment by having power consumers subsidising new planting by the increased power charges inevitable if ECNZ is to maintain its profit margin in a non-competitive economic environment.

Our Indigenous Forests

Both of these flaws could be addressed if encouragement was directed at enhancement of the growth potential of indigenous forests.

The first concern is to quantify the area and characteristics of indigenous forest on a national basis. Dave Field's Indigenous forestry working party is aware of this need, and the Ministry of Forestry has to be encouraged to give this task more resource. The second issue is the health and growth pattern of all indigenous areas including scrub and reverting farmland. The significance of this latter category is



Peter Olsen

that this is the area of greatest sequestration potential.

If we take data from Newsome (1987) we can get a perspective on this. Included within pasture lands is 3,462,000 hectares of "scrub" and 1,629,000 hectares of "scrub and forests". In native grassland, 853,000 hectares is "scrub and forest", and, quite apart from these areas, the native forest estate has 6,267,000 hectares designated either scrub or forest: a total of 12,211,000 hectares.

If a crude assumption of five cubic metres/ hectare/ annum growth was applied

after deducting high forest and scrubland planted to exotic since 1987, we could expect six million hectares to annually sequester 30 million cubic metres (approximately 13 million tonnes) of carbon. Using NEFD modelling assumptions, this is equivalent to the effects of two million hectares of new exotic forest planting.

This leads to the main point of my interest in this issue. Should we, by virtue of our fortunate national forest situation, continue to support a nett sequestration approach, or should we risk an economically-fraught choice of gross emission reduction as a sane long-term target? It is difficult, while dealing with the hypocrisy of international posturing on this complex issue, to be able to give the Minister for the Environment a pragmatic professional viewpoint. He does, however, deserve support in taking a principled, albeit politically unpopular, stance on the need for New Zealand to make a positive contribution to the global changes necessary to reverse the accumulation of global atmospheric carbon dioxide.

Peter Olsen
President

References

- Newsome P.F.J. 1987: "The Vegetative cover of NZ".
National Water & Soil Conservation Authority (Ministry of Works).

NZIF Handbook – Third Edition

After a gestation period similar to that of an elephant, the third edition of the Institute's handbook is about to be born.

Conception, a considerable time ago, was the result of the previous edition, (edited by Hamish Levack) being out of print and the current editor being observant (foolish?) enough to publicise the fact.

Furthermore much had changed in forestry since 1986 – the industry had grown and matured, issues that were topical in the 1980s are less significant now, and of course new issues have surfaced.

The new handbook attempts to capture forestry of the 1990s in its content.

Sections on Biodiversity, Forestry and Carbon Storage, Oversowing, Sustainable Management, and Training have been added.

In addition a substantially enlarged section on the marketing and utilisation of forest products is included, to reflect the moving emphasis of our industry.

Other changes that have been added include an index and sections providing commonly used forestry data such as slope correction factors, radii of plots, and tree heights.

Presentation is A4 format, with spiral binding to allow the book to lie flat while being used.

Those who have had and used copies of previous editions will have particular sections they use most often. It is my belief that those sections are still there and improved so you will be able to continue to use them. New owners will find their own favourite sections from the almost 100 sections and over 240 pages.

The Handbook is available from: The Secretariat, NZ Institute of Forestry, PO Box 19840, CHRISTCHURCH, or Phone/Fax (64-3) 384 2432 or by completing the enclosed order form.

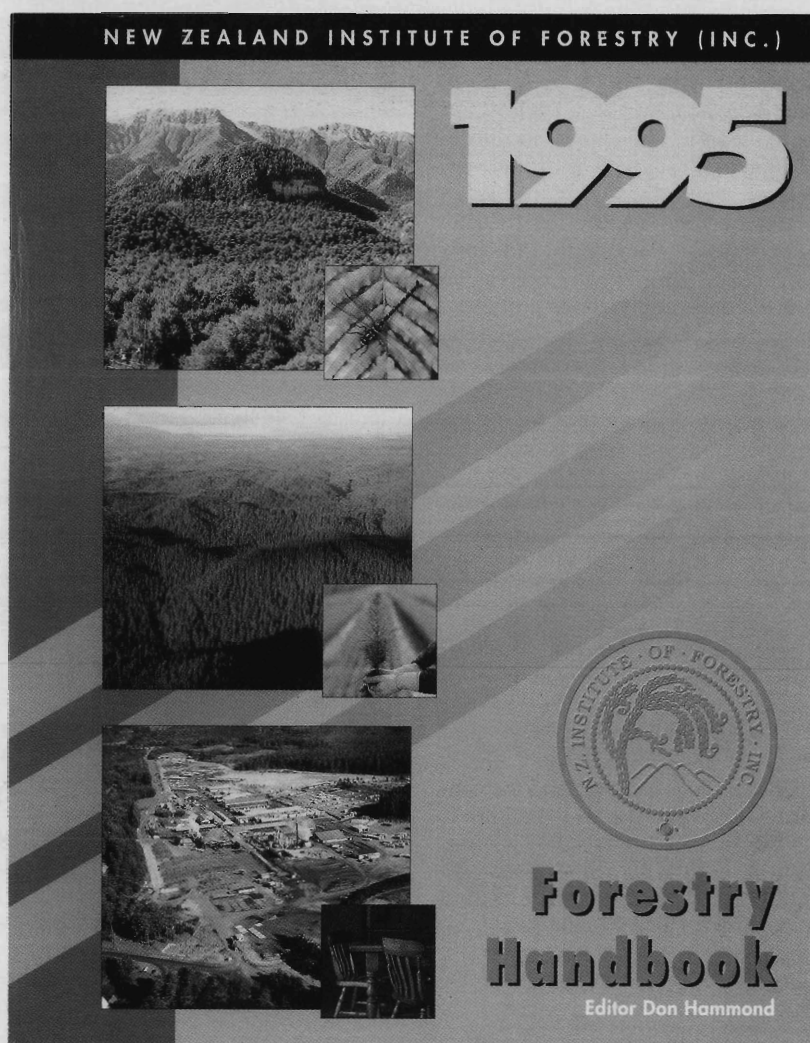
Costs are: Members: \$NZ55 incl GST and Post & Packaging within NZ. Non-members: \$NZ75 incl GST and Post & Packaging within NZ. Overseas: Add \$NZ10 to Australia, \$NZ20 elsewhere.

'Collective Wisdom'

Elephants were once only valued for their ivory; today their value is much more intrinsic and much greater. Forestry too now has greater values than just wood. This handbook is not (like elephant ivory) just a commodity. Its worth is much greater and is the result of the collective wisdom of our industry.

I am confident this handbook will live up to the expectations and standards set by previous editions, filling an important role within the industry.

Don Hammond
Handbook Editor
(*Elephant Expert?* Ed)



Obituary – From Heather to Monoao – a great pumiceland forester – John Ure 1920-1995

In many respects, John Ure was the epitome of the values that made the New Zealand Forest Service the most effective of State Departments – the ability to formulate and meet targets, one after another, with a minimum of fuss, quietly getting the job done to exacting standards and content with the reward of the doing. Like his Scottish and Kaingaroa predecessor, Roderick McRae (described as a fine man – austere but kind), under John's sometimes austere manner lay a warmth and concern for his fellows. Like McRae, those who seek John's memorial need only to look about them in the great forest. The contrast between the untended old crops and intensively tended second crop is as much his doing as anyone's.

John Ure began his direct connection with New Zealand forestry when, in 1945,

he wrote to Forest Ranger R.N. Uren of Canterbury conservancy, having met his son on service in Italy. John said he was very keen to settle in New Zealand and work for the State Forest Service. His letter, rapidly dispatched to Wellington, led to an interview with Scientific Liaison Officer Lindsay Poole at the NZ Government Offices, Strand, London, where Lieutenant John Ure, RNVR, DSC made the first of many strongly favourable impressions on existing or prospective key figures in New Zealand forestry. In what proved to be an understatement, A.L. Poole concluded that Mr Ure would make a very suitable forestry officer in the New Zealand State Forest Service, a view endorsed by the Director of Forestry, A.R. Entrican, following a second interview in 1947. The invitation to come to New

Zealand followed soon after.

Early the following year John, his wife Joan and two children settled into their new home in Kaingaroa Forest. The timing of John's posting was fortuitous, being on the eve of plans for utilising the centrepiece of the New Zealand plantations. The great work of the pioneering planters now needed the focus of a scientifically honed mind steeped in the disciplines of an emerging forestry profession. John provided the necessary ingredients.

He was fascinated by their apparently simple but complex creation, moulded by the interplay of diverse pumice showers, microclimates, tree species and provenances, and initial planting spacings. His approach from the outset was ecological, recognising that, far from being monotypic and dull, the plantation ecosystem