



BOOK REVIEW

Indigenous Forestry

Indigenous Forestry : Sustainable Management 1998. Joint publication of Ministry of Forestry and New Zealand Farm Forestry Association Inc. Published by Ministry of Forestry, January 1998. 212 pages including nine appendices, 76 figures, tables, photos; 15 x 21 cm \$26. Available from Roger MacGibbon, P 0 Box 24, Taupo.

This is a neatly produced, compact handbook, spirally bound, written as a practical guide for the owners and managers of privately-owned forests; it is a first attempt to produce such a handbook, containing both general guidelines and practical advice for forest management in its broadest sense, with wood production as only one of several management options.

The publication of this Handbook is timely, written in a decade which includes the 1991 Resource Management Act and the 1993 Forests Amendment Act, legislation which establishes some general principles of conservation and tight prescriptions for controlling the management of privately-owned indigenous forest on a sustainable basis.

The compilers of the Handbook (anonymous as for authors of the various sections*) claim that it is an "introductory guide to sustainable forest management of indigenous forest land". Though "sustainability" in management of natural resources has been a constant theme in recent years, some readers may have difficulty in fully grasping the concept of sustainable forest management. Such an understanding is not helped by the Handbook's introductory statement that "sustainable forest management effectively means that indigenous timber can only be harvested and milled under an approved plan or permit with harvesting set at a rate no greater than the forest's ability to replace the harvested timber." While there is a legal requirement for the preparation of such documents there is no guarantee that it will lead to sustainable management, adequately implemented and monitored.

So where do we find a full definition of "sustainable forest management", the basic

theme of this Handbook? It is not included in an otherwise useful glossary of terms on p200. After various references in the text to 'ecological sustainability', 'sustainable harvesting' and 'sustainable management' a full legal definition is given on page 198 in an appendix on definitions, viz 'the management of an area of indigenous forest land in a way that maintains the ability of the forest on that land to continue to provide a full range of products and amenities in perpetuity, while retaining the forest's natural values'. A tough assignment indeed!

The Handbook starts with brief accounts of the history of indigenous forestry in New Zealand and the Forest Resource, and, in discussing choices for forest management, including covenants, emphasises that management for timber production, conservation and protection must treat them all as inseparable aspects; there can be no single-purpose forestry for the remaining indigenous forests on private land.

The chapter on Conservation Management contains good measures of precepts and common sense but detailed advice on such matters as control of animal pests and weeds are considered to be outside the scope of this book. In such cases the reader is advised to get outside help and occasionally given a useful reference. In the section on Forest Health one of the attributes of a healthy productive forest is said to be a full representation of age classes within each species. This is certainly not the case with many natural podocarp forests where the 'regeneration gap' (scarcity of stems between about 10 cm and 40 cm diameter) exists and abundant regeneration may be periodic following canopy disturbance on a large scale at long intervals.

Risk of damage to remnant forest by drift of aerial herbicides could be mentioned; also the value of shelterbelts for the protection of exposed indigenous forest margins.

The chapter on Natural Forest Management, dealing mainly with beech, rimu, kauri and tawa, appears to have some controversial statements, particularly in ecological generalisations. Such statements are generally unsourced and cannot therefore be regarded as authoritative.

The section on beech is generally sound and is presumably based on John Wardle's fine and comprehensive book on the New Zealand beeches, included in the reference list (p207) and otherwise acknowledged only to illustrate an example of calculating a sustainable harvest in Southland silver beech forest. A summary is given of the current operations of Timberlands (West Coast) in the rimu forests on South Westland glacial terraces, a culmination of inves-

tigative work started in the 1930's and now giving a prospect of genuine sustainable forest management in podocarp forests of this type. The paper by Ian James on 'Silvicultural Management of the rimu forests of South Westland' (FRI Bulletin 121, Forest Research Institute 1986) is important and should be included in the reference list.

Except for the low impact extraction methods, the South Westland experience cannot be extended beyond forests on the poorly-drained glacial terrace soils. Such forests are not similar to rimu-dominant forests of the Central North Island (cf Handbook, p70) which are mainly reserved from timber production.

The old term 'sustained yield' embracing much less than the concept of 'sustainable forest management' can hardly be applied to podocarp or podocarp/hardwood forest on better-drained soils where the podocarps are mature to senescent and the generation gap exists. In such forests there is usually negative increment owing to tree mortality and stem rots. However, some of the forest values may be retained in perpetuity by securing regeneration to replace the low level of harvesting prescribed by the 1993 Forest Amendment Act. This point was well made by Dudley Franklin in this journal (no. 36(1), p7, 1991): "The main requirement is to ensure that the forests are regenerated."

In several places it is stated that very little research has been done on sustainably managing rimu in podocarp, hardwood forests (p71); that there are little published data on long-term research trials on the management of kauri (p78); that very little is known about the ecology of tawa and even less about its potential for sustainable management (p87). While it is true that there has been a good research basis for the recent management by Timberlands of beech and rimu forest in the South Island, there are, in fact, a fair number of published papers on the ecology and management potential of other forests and species but actual management has been tried only on an experimental or small operational scale. Thus there are papers on the results of management trials in central North Island dense podocarp and podocarp tawa forest and a review has recently been prepared for publication. An extensive literature on kauri is indicated by a bibliography and biological flora account.¹

Results of management trials in second growth kauri stands at Hunua and Russell have been published and work by Barton & Halkett is mentioned in the account of kauri. The experience of the Kauri Management Unit at Kaikohe, (closed with the demise of the N.Z. Forest Service) has been included in a compilation entitled Kauri Management Review, New Zealand Forest Service 1993. A more easily obtained source of information on many aspects of kauri and its management is the book by

* Footnote: John Fyre was the compiler and edited the book with Roger MacGibbon.

¹ (Ecroyd, E.C; 1982 *Biological Flora of New Zealand* 8. *Kauri* N.Z. *Journal of Botany* 20:17-36).