

NZIF Accreditation Working Party Report

Introduction:

The NZIF Council's move toward registration of its members and an increased responsibility to represent the profession of forestry in NZ, has led it to consider its role in accrediting forestry degree programmes. The setting of academic standards appropriate to membership of NZIF, forms part of this overall responsibility.

As a result of feedback from a section of the membership, the Council formed an Accreditation Working Party in October 1997 comprised of the following members:-

Peter Hay (Convenor)
Bruce Manley
Paul Smale
Peter Berg
Don Hammond

The terms of reference for the Working Party "to explore the possibility of the Institute initiating and administering an accreditation scheme for forestry degree programmes in New Zealand" clearly identified two phases, namely:-

1. The decision as to whether the NZIF should or could be involved in accrediting degree programmes.

2. If the decision to 1 above is affirmative, then develop a proposed accreditation methodology.

The Working Party reported back to Council at its meeting on 21 August 1998 and this article summarises the activities and thinking of the Working Party to date.

Findings:

Appropriateness for NZIF:

Undergraduate degree programmes provide the initial education for most prospective members of NZIF and must therefore produce graduates who are educationally equipped to address practical forestry and/or technological problems and generate solutions or applications.

The principal objective of accreditation is to assess the standard and content of courses in relation to professional forestry requirements in NZ, and then to assist in any appropriate way to effect change or improvements that may be deemed desirable. It should be a mutually beneficial joint exercise between NZIF and tertiary institutions.

Members of the Working Party, as well as most other NZIF members consulted informally on this issue, consider that accreditation of forestry degree pro-

grammes is a very appropriate activity for the Institute to be involved in, especially if linked to the registration of NZIF members.

What would be gained from NZIF accreditation:

There are 3 groups that would benefit from the accreditation process:-

(i) *Tertiary Education Provider* — accreditation of forestry education programmes would provide professional industry endorsement that is of benefit in marketing the programmes.

(ii) *Students* — NZIF accreditation of the programme they are studying should give them an advantage in the employment market as it signifies a level of industry endorsement. It would also provide them with a known level of status toward obtaining professional registration. If the accreditation scheme is linked via an International Accord with similar professional forestry associations overseas, students automatically gain professional recognition of their academic qualification in Accord member's countries.

(iii) *NZ Institute of Forestry* — an accreditation scheme provides a periodic check on the quality and quantity of the content of forestry education programmes to obtain an assurance that professional forestry requirements are being achieved that satisfy the academic entry requirements for NZIF registration.

The Working Party considers that the Institute should unashamedly be promoting professionalism within its membership. As a consequence, it is considered that the Institute should be visibly involved in maintaining professional standards if it is to remain relevant to forestry in New Zealand.

Accreditation of Part of a Qualification:

The Working Party found that all NZ forestry education providers they consulted saw benefit from having the forestry component of their degree programmes accredited by NZIF. In some instances their willingness to participate in such an exercise was qualified by cost implications.

Issues:

Cost / Benefits

As noted above, the benefits of accreditation accrue to three main parties so a question arises as to who pays the costs associated with accreditation and in what

proportion.

Advice from The Institution of Professional Engineers New Zealand (IPENZ) suggests that most of the direct costs associated with accreditation should be borne by the education provider, with the professional body addressing the industry in-kind contribution to the exercise.

The view of the education providers consulted was that every programme review or accreditation event involves substantial preparation and effort on their part and is highly disruptive to many of their staff. Although they appreciate the benefits professional accreditation can bestow to their programmes, they seek to minimise as much as possible, the considerable cost and staff input involved.

Members of the Working Party were also concerned about the level of time commitment demanded of key NZIF members and the amount of administration/organisation required, if an accreditation scheme such as run by IPENZ, was introduced. As a result, the Working Party floated the idea of combining an NZIF accreditation with the 5 yearly academic reviews University Departments are subject to.

This suggestion was viewed favourably by both the University of Canterbury and Lincoln University who saw no reason why the NZIF accreditation requirements could not be accommodated at the time of an academic review. Both saw savings in this approach in terms of document preparation, administration cost and direct costs as opposed to having separate academic review and accreditation events. There would certainly be savings from the Institute's viewpoint in that much of the organisation for the event would be done by the University concerned.

Coverage

The undergraduate forestry degrees currently offered by NZ universities are listed below:-

Bachelor of Forestry Science	
B.For.Sc	University of Canterbury
Bachelor of Engineering (Forestry)	
BE (For)	University of Canterbury
Bachelor of Science (Technology)	
Forestry option	B.Sc (Tech) Forestry University of Waikato
Bachelor of Commerce (Forestry)	
B.Com (For)	Lincoln University
Bachelor of Applied Science (Forestry)	
B.App.Sc.(For)	Massey University

Two polytechnics (Waiariki and Nelson) have accreditation from the Forest Industries Training & Education Council (FITEC) to deliver the National Diploma in Forestry (Forest Management) which is a 2.5 year Level 5 diploma.

The Working Party decided that Institute members should only be asked to make decisions relating to competence on forestry matters alone. Consequently it was decided that NZIF accreditation coverage for whole qualifications should be limited to programmes majoring in forestry science/management. Accreditation of the forestry component of other degree programmes (eg. B.Com.(For), B.Tech.Sc.(For)) could be provided if requested, or could be provided in conjunction with another professional accrediting body such as IPENZ (eg. BE(For), proposed B.Tech.(For)).

The mix of science and technical knowledge required for NZIF member registration could lead to the situation whereby if the B.For.Sc degree at the University of Canterbury became accredited by NZIF, holders of that qualification could follow a normal pathway toward NZIF registration, whereas holders of other qualifications would follow another, somewhat slower pathway (ie. a similar model to the existing IPENZ membership pathway)

Quality assurance of the National Diploma in Forestry (Forest Management) is covered by a moderation process administered by FITEC. The Working Party felt that it would be worthwhile for NZIF to seek formal involvement via FITEC in the moderation of this qualification. (eg. that the industry representative on moderation panels be a NZIF registered member). This initiative has now been approved by the FITEC Council and the Moderation Action Plan for the National Diploma is currently being modified to accommodate the need for the industry representative on moderation panels to be NZIF registered.

International Linkage

An important feature of most accreditation schemes is an international linkage with like professional institutions that agree to recognise accredited qualifications as meeting their own professional requirements. IPENZ for instance is linked via the Washington Accord to 7 overseas engineering institutions (United States, Canada, United Kingdom, Ireland, Australia, South Africa and Hong Kong).

This linkage provides a major benefit to graduates who have their qualifications automatically recognised overseas and to providers who can use this feature as an important marketing tool for their

programme.

Professional forestry institutes similar to NZIF have substantial formal processes in place to deal routinely with accreditation of education providers (eg. Canada, USA, UK).

The existence of these programmes by other like institutes, demonstrates the magnitude and complexity of the implementation task. Their experience should provide models that could fairly readily be adapted to NZ requirements.

Australian Connection

The Institute of Foresters of Australia (IFA) is currently looking at accrediting forestry education providers in conjunction with establishing a membership registration scheme. The IFA has been informed of the NZIF Working Party's existence and of our possible interest in sharing information and the workload in defining a common set of minimum competencies forestry graduates should attain from accredited qualifications.

Criteria and Standards Requirements

Neither the NZIF nor the IFA have a documented position at present on what elements should be mandatory in a forestry degree or of the standards graduates should attain. In view of the diversity of activity in which foresters are now routinely employed, development of these minimum requirements will require a considerable amount of research and debate. It requires an understanding of what is now provided and an analysis of likely future requirements. It also requires an understanding of the procedures by which general academic standards are set and maintained.

The professional requirements for registration of NZIF members have already been defined and obviously should be linked to whatever criteria and standards are developed for the purpose of accrediting forestry degree programmes. The task of defining these criteria and standards is a difficult one and if possible should be done in conjunction with IFA.

Implementation:

It is the view of the Working Party that NZIF accreditation should be incorporated with each forestry education providers 5 yearly academic review. This could be achieved by having 2 or 3 NZIF members added to the Universities review panel. If such an arrangement of combining external academic review with professional accreditation can be imple-

mented, there would be obvious cost savings for both the education provider and NZIF.

The 5 year frequency of accreditation is considered adequate and corresponds to that used by IPENZ in their scheme. More frequent accreditation would only be justified if substantial change had been made to the structure or content of a qualification. To help with continuity of NZIF involvement with education providers between accreditation events, the Working Party suggests that NZIF should seek formal representation on the relevant Advisory Committees maintained by education providers. It has been indicated to the Working Party that such representation would be welcomed by the current forestry degree providers.

The possibility of NZIF participating with IPENZ in a joint accreditation of the BE(For) degree at the University of Canterbury has been suggested. Such joint accreditation arrangements have worked successfully overseas (eg. Oregon State University).

The Working Party consider that accreditation should not be added to the responsibilities of the NZIF Registration Board but that one member of each accreditation panel should be a member of the Registration Board so as to provide linkage.

Administration requirements of such an accreditation scheme would need to be investigated and properly resourced, but initially could be handled by the NZIF secretariat.

The adoption of an accreditation scheme may require some change or addition to the NZIF constitution. This matter should be investigated by the Working Party if Council decides to proceed with an accreditation scheme.

Recommendations:

The following recommendations were made in the Accreditation Working Party report.

1. That accreditation of forestry degree programmes is an appropriate activity for NZIF to be involved with in order to obtain an assurance that professional forestry requirements are being achieved that satisfy the academic entry requirements for NZIF registration.

2. That the Working Party further investigate the feasibility and costs associated with combining NZIF accreditation with 5 yearly University Department academic reviews.

3. That accreditation coverage for whole qualifications be limited to forestry science degree programmes.

4. That accreditation of the forestry component of other degree programmes be provided if requested.

5. That the Working Party further investigate the feasibility and cost of a joint accreditation with IPENZ of the BE(For) degree programme.

6. That Council seek formal involvement via FITEC in the moderation of the National Diploma in Forestry (Forest Management).

7. That Council explore the possibility of establishing an International Accord between the professional forestry institutes of Canada, United States, Great Britain and Australia for the purposes of recognising the accreditation of forestry degrees.

8. That the Working Party explore the

possibility of working in conjunction with IFA to develop and define common competencies and standards related to the accreditation of forestry degree programmes.

9. That NZIF seek formal representation on relevant Advisory Committees maintained by education providers. (eg. School of Forestry Advisory Committee — University of Canterbury; Forestry Advisory Committee — Lincoln University (being established))

10. That the Working Party investigate the administrative resources required to establish and maintain the proposed accreditation scheme.

11. That the Working Party investigate any legal or constitutional requirements involved in NZIF operating an accreditation scheme.

The NZIF Council endorsed these recommendations in principle, but decided to consult with the membership first before proceeding with implementing most of them. Therefore members feedback, views and comments on the recommendations is welcomed by Council.

Peter Hay
Convenor
NZIF Accreditation Working Party



David Norton's Article

Sir,

David Norton, in his article on Indigenous Biodiversity Conservation and Plantation Forestry, criticises the New Zealand forest Accord and the Principles for Commercial Plantation Forest Management derived from the Accord. Norton sees these voluntary agreements between conservation and forestry interests as polarising conservation and production, whereas enlightened managers should be adopting his more integrated approach.

The main purpose of the Accord was to identify those natural areas it would be inappropriate to clear for the establishment of plantations. This may be polarisation, as Norton calls it, but it is also plain common sense that has delivered significant conservation gains. It has been a cost-efficient way of resolving the hugely controversial land use disputes that dogged the pine industry during the native forest clearing era of the 1960s-1980s.

Would Norton have us return to that era or to so-called 'enrichment plantings' of exotics in indigenous forest areas? The Accord and Principles do not see plantations as areas devoid of value for indigenous biodiversity. A key section of the Principles sets out goals for the management of indigenous biodiversity in plantations. The conservation of indigenous flora and fauna is to be provided for where appropriate, with specific undertakings for threatened species, riparian margins, waterways and for the restoration of critically depleted habitats. The Principles also address a key issue of plantation management being ignored by Norton — the

weed and pest threat they pose to natural areas. Invasive weeds can bulk up within a plantation and form a huge seed reservoir that hastens their spread. Grazed farmland presents far less of a threat in this regard.

Plantations can also facilitate the dispersal of animal pests such as deer and goats. They are harder to control under the forest cover provided by the plantation than on open land. Unless there is effective pest control within a plantation, native forest areas may survive better as forest islands amidst pasture than when surrounded by pines inhabited by browsing animal pests.

These issues present new challenges for plantation managers. Norton hasn't convinced me the "old paradigm" should be ditched in favour of his "new paradigm" which looks much like the old multiple use regimes for forestry long promoted by New Zealand's forestry schools and state-funded foresters.

Kevin Smith
Conservation Director

Commentary by Chris Perley

Sir,

Chris Perley (August 1998) argues cogently for the inclusion of uncertainty in decision making, and for reducing the over-emphasis on Discounted Cash Flow Analysis. I agree with nearly all his points, but feel he has over-stated his case, perhaps for the sake of impact.

How would Chris address the following situations? Two business people (Mr Alpha and Ms Beta) approach Chris Perley & Associates for expert forestry advice. To Chris's disgust, they are interested only in maximising their profit, have scant regard for the environment, and have

no time at all for New Age philosophies. Nevertheless, times are hard and Chris is obliged to accept their money.

Situation 1. Mr Alpha has a 28-year old woodlot of radiata pine, which he wishes to sell. He does not need the money now, but wants to maximise the cash in his hand when he retires in three years' time. Should he harvest now, and put the money in a three-year term bank deposit, or should he grow the stand for another three years and fell it then? The latter involves more risk (wind, fire, market prices), although prices can go up as well as down.

I would analyse these options using Marvl, GroMarvl, and the principles of compound interest and taxation. Lastly, I would look at the historical evidence in order to attempt to quantify the various risks. The final decision is, of course, up to Mr Alpha. What would Chris do?

Situation 2. Ms Beta wishes to plant a radiata pine woodlot on bare land as a superannuation scheme, to mature in 30 years' time. She has discovered two properties for sale, virtually identical in every respect except that Block A has a site index of 25 m and a sale value of \$600/ha, while Block B has a site index of 32 m and a sale value of \$1500/ha. Given that all else is equal, which is the better investment?

I would analyse these options using a number of Standpak runs, calibrated for the local conditions. I would use Discounted Cash Flow Analysis to calculate Net Present Value for a number of discount rates. (Bill Studholme was right, if he was referring to NPV rather than IRR: you will inevitably get a range of answers.) If Block B was superior to Block A under all scenarios, I would breathe a sigh of relief and make an unequivocal recommendation. If not, I would say 'it all depends' and interrogate Ms Beta closely to discover how important cash-up-front was to her, compared