



NEW ZEALAND

## REPORT

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# 1981 FORESTRY CONFERENCE REVIEW

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Forestry Development Conferences are held periodically to review the performance of the forestry sector and to make recommendations to government and the industry on the future direction and scope of forest development. They are convened by the Forestry Council who have the responsibility of implementing the recommendations.

The 1981 Forestry Conference was held in two separate sessions. The first session, in March, presented papers covering the present resources; management intentions; utilisation and marketing opportunities; implications of utilisation; and future development options. After the first session working parties were formed to discuss issues that required further investigation, and report back to the second session in September. Their reports covered afforestation; forest management; research; training and employment; social and regional strategy; financial implications; sale of State wood; transportation; processing options; and industry strategy.

Many reports have important implications for the logging industry. LIRA publishes this review in the interests of providing a summary of some of the factors which will affect the industry in the future.

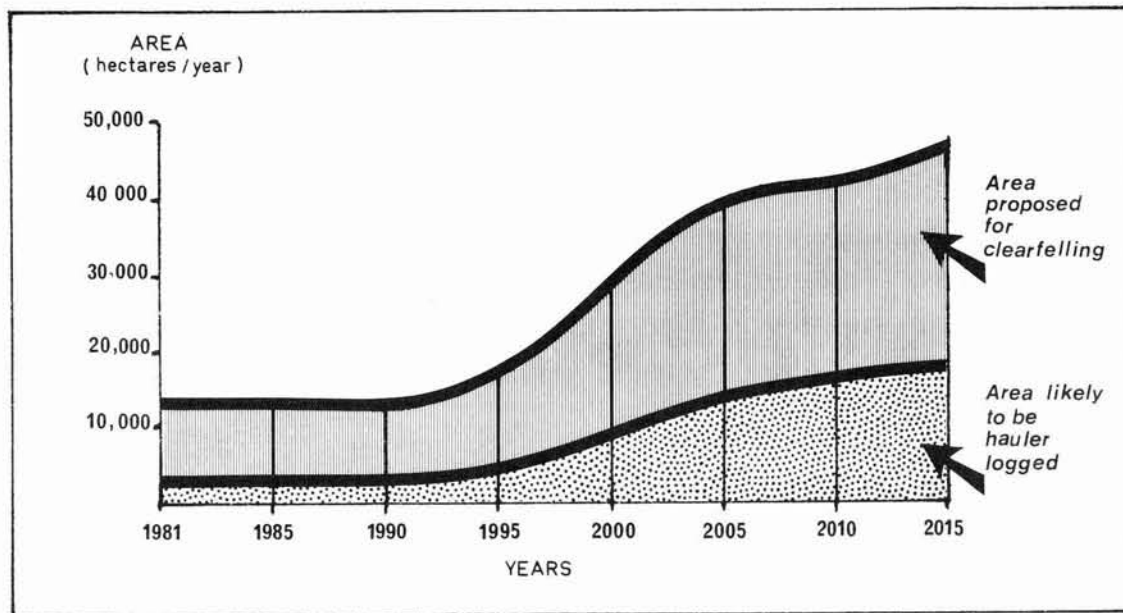
## EXOTIC FOREST RESOURCE

A detailed forecast of future exotic forest production, for both private and State resources was presented and is summarised in the following table:

*Future Exotic Forest Production*

Period	Total Volume (million m <sup>3</sup> /year)	Area to be Clearfelled (ha/year)	Area to be Hauler Logged (ha/year)
1981 - 1990	8.8	12,300	2,300
1991 - 2000	14.5	22,600	7,100
2001 - 2010	25.9	40,200	14,600
2011 - 2015	31.1	46,800	17,900

The main feature is the fourfold increase in volume production that will occur over the next thirty years as a consequence of the planting boom of the last 15 years. Much of this increase is in regions where there is limited harvesting at present, and where there could be major shortages of operational, planning and management skills for logging. This is particularly apparent in the Gisborne region, but also applies in areas such as Northland, Hawkes Bay, the King Country, Marlborough, and Northern Westland. These areas have forests established on much steeper and more sensitive terrain than in the past. This is significant as it represents approximately an eightfold increase in areas considered likely to be hauler logged.



#### Areas to be Clearfelled & Hauler Logged

Changes in crop and terrain characteristics will have important implications. Lower rates of production and higher costs can be expected to result from:

- Shorter rotations producing smaller trees and smaller logs;
- Wider-spaced trees producing larger branches and higher trimming costs, especially in top logs;
- More forests on steeper hill country needing to be hauler logged;
- Privately owned forests scattered through regions in small woodlots and forests, requiring mobile equipment, frequent shifts, and a larger investment in access;
- Limitations on harvesting techniques to satisfy soil and water requirements.

To offset these disadvantages high values are expected for high quality logs. Forest owners will therefore be interested in maximum value production rather than volume. Consequently, changes will be likely in felling techniques and skid cutting practices to improve log merchandising.

#### TRANSPORTATION

There is widespread recognition of the need to continue to improve transport efficiency, which represents up to half the logging cost to mill or port. Most future transport is expected to be by road, but water-based transport may be important in areas such as Northland and Marlborough. The Transport Working Party estimated that up to \$775 million may be needed over the next 15 years for the different transport systems. A detailed breakdown of costs is given in their report. It is noted that the development of the transport infrastructure will need to be integrated with those of other industries, and regional planning authorities have a major role to play.

Many of the existing roading systems are inadequate for substantial use by heavy traffic, and will require upgrading, usually by County Councils. Many counties feel they lack sufficient funds to maintain existing roads and view the additional costs of upgrading with dismay. On the other hand, forest owners feel that as they pay local rates and road user charges it would be unfair for them to pay twice through a special levy. So the question of "who pays" remains unresolved. The Forestry Council were asked to undertake a detailed examination of the requirements and funding of logging transport in New Zealand.

### FUTURE PLANTING

Regional planting targets have been set to ensure the development of a forest resource of sufficient size to allow complete utilisation, which will include processing low quality material that would previously have been left to waste. Loggers will continue to be more concerned with planning the utilisation of the resource that has already been planted, rather than with future plantings.

### FOREST OPERATIONS GUIDELINES

The Forest Operations Guidelines were prepared in 1975 by a committee comprising of representatives from the N.Z. Forest Service, the forest industry, catchment authorities, and the Ministry of Works and Development. They were implemented by local catchment authorities on a trial basis for three years and revised guidelines were released in 1978 by the National Water and Soil Conservation Organisation.

The Forest Management Working Party concluded that there was no need to change the present forest operations guidelines, but they should be reviewed regularly. They recommended that a review of logging techniques and their interaction with soil and water management be implemented. LIRA has consequently been requested by the Forestry Council to carry out this review.

### MARKETS

Future trends in world supply and demand for softwoods indicate that prospects for New Zealand's wood products are good. Current world softwood usage is estimated at 1280 million m<sup>3</sup>, and is expected to reach 1550 million m<sup>3</sup> by the year 1990. New Zealand's total softwood production will be around 31 million m<sup>3</sup> by the year 2000. Domestic consumption at this time is estimated to be around 4 million m<sup>3</sup>; the remaining 27 million m<sup>3</sup> will have to be exported. Efficient and well co-ordinated marketing policies will be required to sell this wood overseas. The main markets will continue to be other Pacific countries (Japan, Taiwan, Korea, China and Australia), but there are also marketing opportunities in the Middle East and other Asian countries.

Log exports are expected to continue from both State and private forests, but it appears that future policy will favour processing of roundwood in integrated plants, which will make best use of the range of log sizes and log qualities. Overseas markets for clearwood from pruned butt logs look very promising, and there seem to be opportunities for small specialised companies in processing and marketing.

### HARVESTING RESEARCH

Some imbalance in the national forest research effort was recognised and harvesting research was identified as one area where intensification of effort is essential. Harvesting research manpower is expected to double within the next decade at LIRA, FRI, the universities, and within the industry.

Further intensive research will be needed to develop suitable equipment and techniques, particularly for the economical harvesting of steep and unstable terrain. Areas such as the highly erodible country of the East Coast and the visually sensitive Marlborough Sounds merit special attention. The affects of roading and logging on soil erosion, water yield, and water quality need to be examined.

### TRAINING

More formal training will be required for logging and forest engineering in forestry courses. This could be obtained in the present degree and certificate courses, either by expanding existing options or adding additional units in harvesting.

High accident rates in both forestry and logging indicate that present training of bushmen is generally inadequate. A suitable scheme is needed that will both train and formally recognise the skills acquired. It should provide appropriate on and off the job training, and promote safe, efficient, and productive work methods. The training programmes carried out by the recently established Logging and Forest Industry Training Board were acknowledged as a good start to getting such training programmes underway.

### CONCLUSIONS

The 1981 Forestry Conference provided an opportunity for a wide-ranging review of the forestry sector and the chance to consider some future development options and their implications. The ten working parties provided recommendations on the future direction and scope of forestry development. Consideration has been given to these by the Forestry Council and selected recommendations have been sent to the Minister of Forests, other government agencies, and to the industry. There is now a comprehensive data base and a substantial number of recommendations on which to base decisions on future forestry development in New Zealand.

### SELECTED PAPERS

Copies of all papers presented are held in the LIRA library and are available on loan to members. Papers of particular relevance are:

"N.Z.'s Plantation Resource - Area, Location, and Quantities"  
D.A. Elliott and H.H. Levack (NZFS)

"The Nature of the Resource"  
E.H. Bunn (Forest Research Institute)

"The International Market for Wood Products"  
C.C. Knudsen (MacMillan Bloedel Ltd., Vancouver)

"Infrastructure Requirements"  
N.C. McLeod (Ministry of Works & Development)

*Working Party reports of relevance:*

Research  
Training and Employment  
Transportation

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