NORTHLAND'S FUTURE LAND USE

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In this paper, I will deliberately jump forward in time and postulate patterns of land use which one might conceivably find as a visitor to Northland, 10 and 20 years hence. I draw somewhat on the several scenarios which have been painted by various researchers and commentators in the past five years, coupled with my own assessment of likely possibilities. In this way, my paper will emphasise the magnitude of growth that is likely in Northland in several economic sectors, the need for careful environmental management, and the corporate planning that will be required to ensure the financing and construction of the necessary public works at the right times.

I shall not place undue emphasis on forestry but will do my best to describe the possible growth opportunities that appear to present themselves in agriculture, horticulture, forestry and tourism in Northland over the next 20 years — these being the sectors in which there appears to be common agreement that growth can and should properly occur. I shall assume, and I am confident, that these sectors can be developed in parallel. Indeed, the Northland United Council expresses this view in the recently announced second draft of Section 1 of its Regional Planning Scheme. There will, of course, be the need for care in the allocation of those resources such as water which could in particular areas be in short supply. I shall assume for the purposes of this paper that ongoing planning will ensure that these shortages are anticipated and resolved.

An insight into possible future land use patterns in Northland can be gained from turning the pages of several studies, of which I have consulted the following:

Northland Regional Resources Survey (1978) prepared by the Northland Regional Planning Authority for the Northland Regional Development Council.

Forest Industry Study (1980) prepared by the Development Finance Corporation.

Northland Forestry Development Study (1981) prepared by N.Z. Forest Service.

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Forest Industries Energy Research (1982) published by N.Z. Energy Research and Development Committee.

Horticultural Development in Northland (1980) published by Economics Division, MAF.

Reports on Tourism in Northland (1982) prepared by Tourist and Publicity Department.

I have also consulted the regular news reports on the growth of the kiwifruit industry, both in New Zealand and Northland: and I shall refer to a number of anticipated industrial projects in the region such as the expected gum extraction processing, on which public statements have been made.

I will refer to transport arrangements that I anticipate might be needed to cope with the region's export production, with limited reference to storage requirements. Inevitably, within these few pages, I shall be very general and offer nothing more than one possible forecast from a great variety of options.

PLANTING PATTERNS : PASTURES AND EXOTIC FORESTS

At 1977, when the data for the Regional Resources Survey were collected, some 700 000 ha of land in the region was in productive use — of which 5% was in exotic forest. Based on the Regional Resources Survey, I would anticipate that by the year 2005 (*i.e.*, some 20 years from now) 1 000 000 ha will be in productive use, of which 20% will be in exotic forest. I ask you, therefore, to visualise a forest area of some 200 000 ha, bearing in mind that it will be spread over a number of areas. The principal of these, I believe, will be Aupouri-Parengarenga, west Whangarei-Hobson north-Bay of Islands south, and to a lesser extent, east Whangarei. Other areas of more local significance will be planted and I have attempted to illustrate these on Fig. 1. The area of pasture in the region will, I have assumed, have grown during the same period by some 20% to 800 000 ha — with noticeable growth in most counties. I anticipate that market forces will have ensured that the region's arable lands are maintained in farm production and that the majority of district schemes in the region will have allowed reasonably free competition between farming and forestry on hill country soils. I anticipate that the greater part of the "strong hill country" will remain in pasture while the forest industry will tend to acquire those hill country areas with good productive potential but which are either being poorly farmed or have reverted.

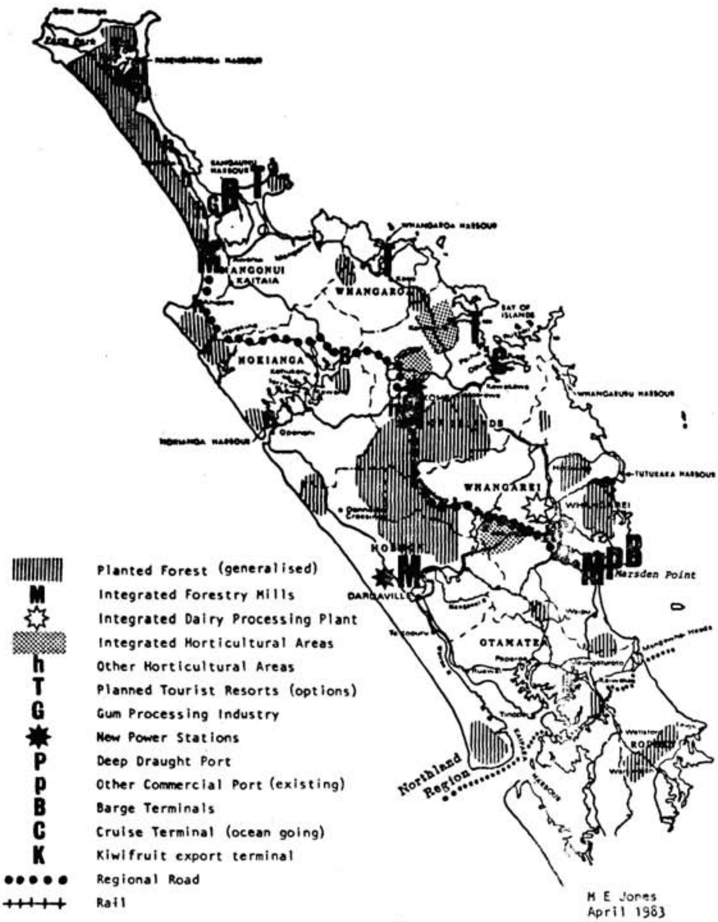

FIG. 1: *Northland land use: possible projects within 10 to 20 years.*

I need not emphasise that, during the next 20 years, the greatest proportion of millable forest in Northland will lie in Aupouri, which in turn will cause the development of processing to be concentrated in that area during at least the coming 10 years. I shall discuss processing later in this paper.

PLANTING PATTERNS : HORTICULTURE

Horticulture can be expected to become a significant land use in Northland over the next 20 years, not simply in monetary terms but even in the sheer area that could be involved. It is difficult to escape the conclusion that the principal crop will be kiwifruit, which is being planted through the region at a rate in excess of 300 ha per annum. Planting is heavily concentrated in the Bay of Islands and Whangarei counties, and it is expected that this trend will continue throughout the period — except to the extent that useful developments will occur in the Mangonui County over more limited areas.

Press reports indicate that Northland contributes at present 2.5% of the national kiwifruit output and that this will rise to almost 12% by 1985. Already some 800 ha have been planted in kiwifruit and this figure is expected to have climbed to almost 2000 ha by 1985. The potential planting area in the Bay of Islands and Whangarei counties is calculated at 8700 ha and the likely planted area within the Maungatapere-Whatatiri area is estimated at 2300 ha if the anticipated irrigation scheme is constructed. I am assuming that the irrigation scheme there will be constructed and that an even larger scheme will follow it in the Waimate North area. I would not expect these irrigation schemes to compete with the forest industry, though competition with urban water demand is of concern in the Maungatapere scheme. Northland kiwifruit production is expected to rise from its present figure of 310 000 trays per annum to 8 000 000 trays in 1990. This will require considerable construction of packing sheds and cool stores and a possible change in transport arrangements. I deal with these processing questions later in the paper.

As in the case of forestry, large-scale units will become more common even in horticulture. Already, companies such as Yates are commencing the development of 100 ha properties in kiwifruit, each capable of yielding half a million trays per year.

In the Mangonui County, a specialist horticultural industry could build up, following the recent disclosure by MAF that the Houhora area has advantages for the growing of avocado which are not present in any other part of New Zealand. The Houhora area combines the advantages of suitable soil type (subject to drainage) with unique spring air temperatures such as will provide the best conditions for avocado pollination.

TOURISM

The recent paper of the policy planning section of the Tourist and Publicity Department discloses that Northland receives a higher share of domestic tourism than any other region in New

Zealand, and that annual visitor arrivals could reach 1 million persons in the foreseeable future. The Department estimates that visitor expenditure in the region now exceeds $50 million, or 15% of all commercial turnover. The Department sees Northland as ". . . the leading coastal water recreation region" in New Zealand and the birthplace of European settlement, which, coupled with the proximity of the region to Auckland, leads the Department to conclude that ". . . Northland's prospects for marked visitor arrival growth and expenditure are bright . . ." The report goes on to warn, however, that this growth can only be achieved through significant capital investment. Not only does the Department see the need for accommodation growth but it emphasises the importance of improved roads and airports. In particular, it calls for the upgrading of facilities at Kerikeri Airport and for the improvement of Northland's State Highway system, together with a number of local tourist roads. As the author of the report states, "tourism facilities need to be readily accessible and while a few may enjoy the rigours of rough-road riding, most people prefer to reach their destination in comfort."

It is certainly therefore not only the forest industry and agricultural sector that depend upon good roading for their efficiency and growth. Tourism should be seen as a prestige industry which will fall short so long as roading fails to meet reasonable world standards. I would therefore postulate that the government will, within 5 to 10 years, declare Northland as a growth region for tourism and fund a roading programme to promote that growth. The programme will be closely related to initiatives that the government will take in funding forestry roading. Inevitably, I believe there will be "spine" routes that will justify upgrading for both tourist and forestry purposes.

Areas of likely tourist growth within the region are still the subject of much debate and likely litigation. All that one can properly say at this stage is that planned tourist resorts could proceed, at varying scales, at one or more of the following locations: Onewhero Bay (Bay of Islands), Whangaroa Harbour, and Karikari Bay (see Fig 1). I also contemplate that the Te Paki Farm Park will become a visitor area of national importance.

ENERGY DEVELOPMENT

Published scenarios of possible future forest processing have pointed up the possibility of power schemes being constructed within the region. Government's thinking to construct a geothermal station at Ngawha is of course well known, though the report of the N.Z. Energy Research and Development Committee draws attention to limitations in the value of geothermal energy because of its low pressure but suggests that ". . . it may well contribute substantially to lumber drying if sawmills are located strategically to this resource".

The same report also concludes that if high yield forest processing options favouring pulp and paper are to be realised in Northland, ". . . large scale fossil fuel developments may also be required. . ." The Northland Regional Resources Survey points to a possible major lignite field along the western side of the region a little inland from the coast, particularly in the Hobson area. A lignite-fired power station could, it seems, be viable beyond the year 2000 but there is considerable anxiety about the severe environmental impact the necessary opencast mining would have. However, for the purposes of discussion, I postulate by the year 2005 a lignite-fired station in the Dargaville area, where I also anticipate an integrated forestry mill.

PROCESSING AND EXPORT FACILITIES : FOREST PRODUCTS

The Development Finance Corporation, in its report, contemplates relatively little processing in the southern half of Northland during this century, and contemplates only a small, medium density fibreboard plant in the late 1980s. In the northern zone, the Corporation anticipates that by 1990 a thermo-mechanical pulp mill will be operating (and exporting through Opua) and that during the period 1990-2000, three more large thermo-mechanical mills will be needed. During that period, the Corporation also postulates the building in the northern zone of a large integrated sawmill and plymill, and at least two other major sawmills. Most of this development, it anticipates would be centred on Aupouri.

At the time the DFC report was written, the intention of N.Z. Forest Products to acquire a processing site at Marsden Point was perhaps not known, and nor of course was the subsequent formation of the joint venture company with Shell Forestry New Zealand Ltd. That joint venture company is intending to establish a major forest and processing unit based on intended plantings north of Dargaville. Obviously these plantings can only produce smallwood during the period I am addressing.

The report of the N.Z. Energy Research and Development Committee contemplates three of four senarios that were developed for Northland by the 1981 Forestry Conference Processing Options Working Party. The three scenarios postulate between six and twelve major mills being required by the year 2005. Each scenario assumes the need for sawmills, plymills, and pulp and paper mills; and one scenario provides for a craft pulp mill. One scenario calls for the construction of a small pulp and paper mill during the period 1986-1990 and none of the three scenarios postulates any further mill construction until 1996. In the interim, it is assumed that there would be a small quantity of log exports. In the period 1996-2000, two scenarios anticipate a massive programme of construction of processing plants (one each year), repeated again during 2001-2005. The NZERDC report anticipates two major concentrations of processing plants — one feeding an export port at Opua and the other feeding such a port at Whangarei. My own belief is that there will not be a forestry port at Opua. The NZERDC report considers there will be comparatively little use of rail, and I am inclined to agree.

The report of N.Z. Forest Service, a summary of which appeared in the *Northern Advocate* in January 1982, anticipates a somewhat quicker build-up of processing activity than does the NZERDC report. The Forest Service report is similar in anticipating an initial pulp mill in the northern zone during 1986-90, but then postulates a further pulp mill and a paper mill in the region during the period 1991-95. This projection certainly seems to resemble more closely the published aspirations of the leading forestry companies in the region. For the purposes of compiling a reference map of possible developments in the next 10- to 20-year period, I have postulated integrated forestry mills at Sweetwater, Ngawha, Marsden Point and the Dargaville vicinity. Clearly there will be others but these four developments appear as major probabilities. All but the Kaikohe location appear to have had "industry support" through the press, and I am personally convinced that the Kaikohe-Ngawha area is a strong contender. As calculated in the Northland Regional Resources Survey, Kaikohe is the "centre of gravity" of the region's potential forest lands. It is also served by rail.

It appears that export arrangements will be centred on the proposed port of Marsden Point, coupled with a rail extension from Oakleigh to the Point. The possibility which was canvassed two years ago that a limited timber port be operated at Opua appears unlikely in the face of the environmental concern of Opua residents.

I would speculate that the limited use of rail will be in the form of processed timber products from mills in the Kaikohe and Dargaville vicinities through to Marsden Point.

If we accept the possibility that the forestry companies may only make limited use of rail and we also assume that there will be no major timber exports from Opua, then we must postulate either a highly developed barging service from Kaimaumau or a well-constructed, well-aligned road down through the length of the region to Marsden Point. I believe a serious case can be made for not attemping to improve further the State Highway over the Mangamuka Ranges from the Mangonui County and instead to improve the present County roads from Ahipara to Mangamuka Bridge and from Okaihau via Twin Bridges to Maungatapere and thence direct by way of Otaika Valley Road to Marsden Point. I have marked this route in the reference plan.

PROCESSING POSSIBILITIES : DAIRY PRODUCTS

It was announced on 6 April 1983 that the Northland Co-operative Dairy Company Ltd will build a multi-million dollar dairy factory in the vicinity of Whangarei, thereby amalgamating the present Maungatapere, Whangarei and Moerewa branches. It is reported that the company anticipates consolidating ". . . down to three plants in the future" within the region. A further increase in the use of Northland's roads by heavy transport is therefore to be anticipated.

PROCESSING AND EXPORT FACILITIES : HORTICULTURAL PRODUCTS

The growth of kiwifruit production will lead to a spectacular programme of construction of packing sheds and cool stores. On 21 May 1982, it was reported that MAF anticipated a need for more than 80 cool stores each of a minimum capacity of 100 000 trays, and that the Kiwifruit Authority expected almost $29 million to be spent on kiwifruit cool stores and pack houses in the region in the next eight years. It was reported that the Northland kiwifruit export crop is transported to Auckland for shipment at present but that the General Manager of the Northland Harbour Board, Mr McHugh, said the Board was sounding out the possibility of exporting the fruit through Whangarei or Opua. A site had been "earmarked" at Whangarei for a possible kiwifruit cool store development, eventually covering 8 ha. One begins therefore to appreciate the land use implications of the kiwifruit industry.

OTHER PROCESSING

No commentary on land-use development prospects in Northland could omit a description of the very innovative proposals for the extraction of kauri gum and resins from the Kaimaumau Swamp by a joint venture company which I understand comprises the original promoter, Kauri Deposit Surveys Ltd, and ICI. The project already has town planning consent and the consent of the Minister of Mines. The company seeks a licence to drain and systematically mine the peat within some 2000 ha of the swamp, extract the natural resins and return the peat to the land for its development as grassland. At the time the proposal was reported in 1979, it was estimated that the area would yield extractables conservatively estimated as having an export value of $550 million — to be earned over a 35-year term.

HABITAT CONSERVATION

Landscape and habitat conservation is a growing field of concern amongst natural scientists, as their knowledge of the distribution of habitats within New Zealand improves. The New Zealand Wildlife Service, for example, has completed a major inventory of habitats within Northland as the basis of maps which have recently been published by the Department of Lands and Survey. The Wildlife Service is endeavouring to secure acceptance of the principle that habitat conservation requires ". . . the establishment of a network of conservation areas representative of all habitat types of a region with their full range of variations in altitude, soil type, floristic composition, etc." The Wildlife Service has gone further in a report to the Whangaroa County Council in stating that ". . . there could be disastrous impacts on wildlife should very much more of the remaining indigenous forest and shrublands be converted or used for farming or exotic afforestation." The possible restriction on the use of shrublands for afforestation will be of concern to the forestry sector. On the other hand, one can appreciate that there must be a responsible measure of habitat conservation. I believe it is important now that the Wildlife Service carefully rank the habitats of which they have a knowledge and that there then be an attempt to gain agreement between the conservation bodies, on the one hand, and the farming and forestry industries, on the other, as to a proper management approach. This question has such wide implications and applies so widely through the region that it seems to me it must be handled through the Northland United Council.

CONCLUDING REMARKS

I hope that I may have conveyed something of the scale of development that Northland is almost certainly going to face in the next 20 years, principally though not exclusively as a result of exotic afforestation. I have not spoken of social change, of employment opportunity, of improved personal incomes or conversely of the social difficulties which unquestionably can arise in the process of industrialisation. These questions are another subject again. My purpose, rather, has been to try to convey a picture of the physical changes that could soon, and indeed are already taking place in the use to which we put our lands for the purposes of economic production — a physical or "land use" picture as was my brief. I have also touched on the growing body of opinion seeking to conserve the best examples of our nation's diminishing wildlife habitats, some of which are to be found in Northland. A heavy responsibility, I feel, now lies with the Northland United Council to ensure that a proper balance is achieved between the contrasting demands of land development and habitat conservation.