

Resource Community Formation & Change:
A Case Study of
TUATAPERE

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INTRODUCTION

This paper reports the findings of a case study of Tuatapere. It is one of a series of three case studies of forestry communities in New Zealand which are part of a project entitled "Resource Community Formation and Change" that has been funded by the Foundation for Research, Science and Technology. The other two case studies of forestry communities in this series are Kawerau (WP 6) and Murupara (WP 7).

A variety of research methods were used in this case study which focuses on the history of Tuatapere since the early 1950's. These methods included an analysis of census statistics, a review of published documents about the town and forestry sector, and six days of interviews in Tuatapere during October and November 1997.

FORESTRY IN OTAGO AND SOUTHLAND

The following description of the forestry sector in Otago and Southland has been based on an earlier working paper which examined the regional, national and international trends and linkages of the sector in New Zealand from 1980 to the present (McClintock, 1997). That working paper updated an earlier profile of the forest industries provided by McClintock and Taylor's (1983) case study of New Zealand forestry towns.

About 60 per cent of the planted forest area in Otago is located on the coastal hill country, while most of the planted forests in Southland are located on the hill country. The major factors limiting tree growth in the region are high altitude and low rainfall (Ministry of Forestry, 1994: 6). Most of the natural forests are administered by the Department of Conservation, although some 34,000 hectares of indigenous species in Southland are owned by Maori (Southland District Council, 1993).

The industry developed from the large natural forest resource in south-east Otago and western Southland. Introduced species were planted in the Conical Hill and Naseby forests in 1898. During the 1920's and 1930's there was further planting at Tapanui and at Hokonui in Southland. A second phase of expansion occurred in the 1970's and 1980's when the Otago Coast, Silverpeaks, Owaka, Glendu, Oreti, Waiau, and Slopedown forests were established in the region (Ministry of Forestry, 1994: 5).

Between 1980 and 1992 the area of planted forests in the region increased by 66 per cent to 128,510 hectares (Statistics New Zealand cited in Jarvis 1994: 40). The dominant exotic species are radiata pine (80%) and Douglas fir (10%). Harvesting of these exotic species increased from 393,000 cubic metres of logs in 1986 to 1,100,000 in 1993. Over the same period, however, the volume harvested from the natural forests in the region (mostly silver beech) was halved from 157,000 to 78,000 cubic metres and expected to decline further (Ministry of Forestry, 1994: 7).

The silver beech forests in western Southland have been managed for timber production since the 1950's. Beech has the best prospects for sustained yield management of any indigenous species in New Zealand as it has a relatively fast growth rate. The most common method of harvesting beech is to clearfell in small coupes and leave seed trees to regenerate. Its rotation period is 80 to 100 years (Ministry of Forestry, 1994: 6-7).

There are five major forest owners in Otago and Southland. Multinational companies, such as Wenita Forestry Ltd, ITT Rayonier Ltd and Earnslaw One Ltd, own or hold crown forestry licences for many

of the region's larger forests. Yet owners with holdings of less than a thousand hectares control over 30 per cent of the region's planted forests (Ministry of Forestry, 1994: 9-10). Moreover, they were the major contributors to the rapid increase in the area of planted forests between 1991 and 1995. Some 38,000 hectares of new plantings were established in Otago and Southland during that period; with several farm properties being acquired by Earnslaw One, ITT Rayonier and the Oji group for conversion to forestry (Houghton *et al.*, 1996: 34-35). Properties purchased by these multinational companies are completely planted, while farm foresters generally use land with little agricultural potential (Jarvis, 1994: 39).

The processing industry in the region is comparatively modest by national standards. Sawmilling is dominated by a large number of small-scale sawmills. Other timber processing plants include a radiata pine manufacturing plant, a medium density fibre mill, two stand-alone chipping plants and over thirty preservative treatment plants. There is also a paper mill owned by Carter Holt Harvey Ltd at Mataura which processes softwood pulp from the Kinleith mill, imported hardwood pulp and recycled waste products from the South Island (Ministry of Forestry, 1994: 11-13).

TUATAPERE AND THE FOREST INDUSTRY

Tuatapere is a township in Western Southland that has long associations with indigenous and plantation forestry, and sawmilling. It is 87 kilometres west of Invercargill on provincial highway 99.

The growth of sawmilling activity around Tuatapere at the beginning of this century hastened the clearance of land for agriculture and opened up the district for settlement. Between the two world wars a symbiotic relationship developed between the mill workers and members of the local farming community which defined the township's role as a service centre for the district.

“Larger mills were cutting between 5,000 and 10,000 feet of timber daily - each of these mills had its own cluster of huts for single men, houses for married. Mill hands, in days when trade deliveries were few or irregular, often turned to neighbouring settlers for basic supplies - meat, milk, butter, eggs, potatoes, swedes, currants, rhubarb and the like. Settlers, in turn, were grateful for ready transactions that involved neither agent, nor transport. Fresh eggs and separator butter went to the local stores, while butchers, if need arose, supplemented their own supplies of beef, or pork, or lamb, by buying on the hoof (McLeod, 1984: 48).”

When the logging of natural forests reached its peak during the late 1940's there were 25 sawmills within a 15 mile radius of Tuatapere. Workers resided at the mill site. They were paid fortnightly and their groceries were delivered from the township by the mill's lorry driver. At that time Tuatapere had at least three grocers, a bakery, a fish shop, an electric store, a menswear shop, a haberdashery, a shoe shop, a chemist, a restaurant, a cinema, a hotel, three garages, a bank, three mercantile firms and a small maternity hospital.

The nature of the logging industry in the district changed dramatically after 1950. The depletion of the easily accessible forest and the high capital outlay required for increasingly sophisticated equipment resulted in many of the smaller operators leaving the industry (McLeod, 1984: 95). By the 1970's only four sawmills were still operating in the district, while today only two remain - Alan Johnston Sawmilling Ltd (Johnston's) and Paynter Timber Ltd. Following the downturn in the logging industry, and the reorganisation of the Forest Service and other government restructuring of the late 1980's, Tuatapere lost its Post Office, Bank and several shops as the population of the district declined.

Logging, farming and agricultural servicing continue to generate much of the district's economic activity, although tourist enterprises (e.g. camping grounds) in the township are attracting the custom of cyclists and backpackers.

DEMOGRAPHIC FEATURES

Demographic characteristics

The population of Tuatapere grew rapidly for a short period in the early 1950's and then more slowly until 1966 (see Table 1). Since then, with the exception of a short period of growth between 1976 and 1981, the population of the township has steadily declined until the early 1990's. Tuatapere township had 741 residents in 1996.

Children aged 14 years and under were a relatively higher proportion of Tuatapere's population than was the case nationally in both 1971 and 1991. There were very few Maori residents of the township in 1951, but forty-five years later they comprised 17 per cent of the usually resident population.

Socioeconomic characteristics

The unemployment rate among Tuatapere's workforce (9%) was higher than the national average (6%) in 1991. About three-quarters of male workers in 1971 and 1991 were engaged in blue-collar occupations (see Table 2). Although over half of the workforce were employed in the manufacturing and agriculture sectors in 1971, these sectors only provided jobs for two-fifths of Tuatapere's workforce twenty five years later. The community/social sector became a major source of employment for the township's residents during this period (16% of the workforce in 1996).

Table 1: *Tuatapere - Population changes 1951-1996*

Census Year	Tuatapere		New Zealand	
	No. of Persons	% Change in Pop.	No. of Persons	% Change in Pop.
1951	668	-	1,939,472	-
1956	843	26.2	2,174,062	12.1
1961	872	3.4	2,414,984	11.0
1966	954	9.4	2,676,919	10.8
1971	921	-3.5	2,862,631	6.9
1976	858	-6.1	3,098,900	9.1
1981	912	7.5	3,143,307	1.4
1986	861	-5.6	3,263,283	3.8
1991	741	-13.9	3,373,929	3.4
1996	741	-	3,618,302	7.2

Note: Data for the 1951 to 1971 years are for the total population and that from 1976 onwards are for the usually resident population. Changes in population from the 1976 year are calculated using data for the usually resident population as these figures for 1971 & 1976 were published in the 1976 census reports.

Source: New Zealand Census 1951-1996

Table 2: Occupational status of the workforce of Tuatapere - 1971 & 1991

Occupational category	1971		1991	
	Male %	Female %	Male %	Female %
administrators/managers	5.9	-	9.8	12.5
professionals & technicians	4.4	21.6	11.8	18.8
clerks	5.5	25.5	2.0	25.0
service/sales	7.0	43.1	2.0	18.8
agriculture, forestry & fisheries workers	26.1	2.0	21.6	6.3
trades workers/machine operators/ elementary occupations	50.7	3.9	51.0	18.8
Total Number of Persons	272	51	153	45

Source: New Zealand Census 1971 & 1991

Half of Tuatapere's residents aged 15 years and over possessed no educational qualifications in 1991 (see Table 3). Household incomes were also significantly lower than the national average as Table 4 reveals, with over half of the township's households (cf. 35% for New Zealand) reporting earnings in the \$10,000 - \$30,000 range for the 1991 financial year. However, the incidence of home ownership among Tuatapere's households increased from 58 per cent in 1971 to 67 per cent in 1996 (see Table 5); mainly as a result of the reorganisation of the New Zealand Forest Service.

Table 3: Highest educational qualifications held by residents of Tuatapere - 1991

Highest educational qualification	% of residents	
	Tuatapere	New Zealand
University & other tertiary	17.7	34.5
Secondary	10.5	18.8
No qualifications	49.7	30.6

Source: New Zealand Census 1991

Table 4: Distribution of Household Incomes in Tuatapere - 1991

Household income range	% of households	
	Tuatapere	New Zealand
Less than \$10,000	10.4	7.5
\$10,000 - \$30,000	52.9	34.6
\$30,000 & over	26.4	44.4

Source: New Zealand Census 1991

Table 5: *Tenure of Dwellings in Tuatapere - 1971 & 1996*

Form of Tenure	% of dwellings	
	1971	1996
Provided rent free	10.3	4.5
Rented	31.8	19.1
Owned with a mortgage	31.8	31.5
Owned without a mortgage	26.0	36.0
Total Number of Dwellings	242	267

Source: New Zealand Census 1971 & 1996

INDUSTRY, WORK AND OCCUPATIONS

The changing structure of the forest industry in the Tuatapere district

There were numerous sawmills in the Tuatapere district before 1950. A local historian we interviewed, for instance, documented approximately 125 sawmills in the area since the indigenous forests were first harvested at the end of the last century. By the 1940's there were 25 sawmills operating within a short distance of Tuatapere. Most of them were family firms, although Port Craig was owned by the Marlborough Timber Company. A lot of the smaller sawmills either went out of business, merged or were taken over by larger operators during the following three decades. Several sawmill firms, for instance, amalgamated into Lindsay and Dixon which was purchased by Feltex, stripped of its assets and then sold to Paynter Timber Ltd. Feltex also bought the Kennally's mill and closed it down, while Port Craig (now known as Craigpine) relocated its operations to Invercargill. Lindsay and Dixon's built a new mill in the late 1960's and Johnston's opened their current mill in 1972. Today only these two major operators and three small private sawmills remain in the district. Johnston's employ 50 to 60 people and are the largest employer in the township, while Paynter Timber Ltd has recently laid off many of its staff. despite receiving a substantial sum of compensation from the government to enable its mill to process exotic timber.

There were a number of factors contributing to the changing structure of the industry. The poor quality and low volume of timber available from their cutting rights forced many sawmills to lay off staff and close down their operations. And after the economic recession of 1966-67 the market for timber shrunk. Furthermore, changes in logging and processing technology required greater levels of capital expenditure that were beyond the resources of the family firms (McLeod, 1984: 95).

With both of the sawmills remaining in Tuatapere struggling to secure enough wood supply to keep operating (Paynter Timber's mill had effectively been closed for four months at the time of our field research), the forest industry is not likely to provide much additional employment for the residents of Tuatapere in the immediate future.

The state and the indigenous forests of Southland

The state exercises a high degree of regulatory control over the indigenous forest resources of New Zealand. An amendment of the Forests Act which came into force on 1 July 1993 requires landowners to formulate a sustainable management plan or apply for a permit before they are allowed to mill and/or export indigenous timber. There are several exceptions to this amendment, however, including timber

from forests on land reserved under the South Island Landless Maoris Act (SILMA) of 1906 (Ministry of Forestry, 1996: 18).

The SILMA allocated land, mainly in Otago and Southland, to impoverished Maori. Some 21,000 hectares of harvested and unharvested indigenous forest remain from the original allocation. Many of these SILMA forest areas are considered to have high conservation values however. Thus when the owners of Waitutu forest (near Tuatapere and adjoining Fiordland National Park) sold the cutting rights to Paynter Timber Ltd in 1993, the government negotiated with the two parties to prevent the indigenous forest from being harvested (Ministry of Forestry, 1996: 20). Paynter Timber Ltd received several million dollars under the settlement, as well as cutting rights for exotic species, and the owners of Waitutu forest were given 12,000 hectares of state-owned beech forest in exchange for their forests. Afterwards Paynter Timber Ltd acquired the right to log this 12,000 hectare forest and reopened their mill in Tuatapere.

In Southland the state has been heavily involved in the management of indigenous forests since the 1930's. During the 1960's and 1970's the Forest Service provided inspection and other services to the owners of the SILMA forestry blocks, and on State Forest lands trialed the regeneration of indigenous species and established plantations of exotic trees. It owned a large cluster of houses and a single men's camp in Tuatapere. After the reorganisation of the Forest Service as part of government restructuring in 1987 the plantation forests and state-owned mills in the region were sold to multinational companies such as ITT Rayonier. Local sawmilling operators were largely excluded from these transactions and had to find alternative supplies of timber from private forest owners. Moreover, much of the indigenous forests (some 100,000 hectares) were removed by the government from the production resource. Only 12,000 hectares were left under the beech management scheme, and it was this land that was exchanged by the government for the Waitutu forest. With large tracts of forest either controlled by multinational companies or included in the conservation estate, local mills have had to secure alternative supplies of indigenous timber from the owners of SILMA lands. Virgin SILMA forest blocks are relatively small, however, and may have hundreds of owners. Thus it is a major challenge for the owners of these forests to develop sustainable management plans that could secure an adequate supply of timber to keep the mills operating. The current requirement is that the SILMA forest blocks will have to comply with the 1993 amendment of the Forests Act in 1999.

The aftermath of the restructuring of the Forest Service

Before the sale of the state-owned forests and sawmills in Southland the Forest Service was a major employer in Tuatapere. At Tuatapere in 1986 the Forest Service employed 69 people (staff 17, wage workers 35, contractors 17) who had 247 dependents (Houghton and Watt, 1987). They comprised a significant proportion of the township's population of 861 even though some of them probably resided elsewhere in the district. On 1st April 1987, however, the number of Forest Service staff retained in Tuatapere was reduced to ten with another three being employed by the Department of Conservation. Many forestry workers in the district, believing the work would return, remained on the unemployment register for a considerable period. Others vacated their houses owned by the Forest Service and left Tuatapere.

The organisation of work and the occupational hierarchy

Work, for forestry employees in Tuatapere, is organised spatially around two locations - the "bush" and the sawmill. Logging crews fell and haul the logs from the forest for processing at the mill. Formerly,

these crews were employed directly by the mill operators, but today they work for contractors who are hired by the mill operators to harvest the timber. Workers held their jobs for the long term when the industry depended solely on indigenous timber. Nowadays, multinational companies such as ITT Rayonier may withdraw a contract at short notice making it difficult for contractors to retain skilled people. Recruitment to the workforce has often been through family connections, with sons following in the footsteps of their fathers. Families in Tuatapere tended to specialise in logging or milling, and some of them had long associations with particular mill operators. There has been little activity by the Timber Workers Union in the district, although one of our informants reported that there had been a strike at the Lindsay and Dixon's mill.

Logging requires a high degree of skill and is a more hazardous occupation than working at the mill. It has enjoyed a higher status and better earnings than mill-based work. Although sawmill workers were generally lower paid, they also needed considerable skills to operate the machinery. These skills were usually learnt on the job.

Both bush and mill workers have a strong work ethic and there has been a culture of rivalry between them that has occasionally spilled over into the township with fights between work gangs. Moreover, different mills have competed over the quality and quantity of the cut timber. As the employers who owned the smaller mills often worked alongside their staff at the sawmill or in the bush there was little to distinguish the 'boss' from the worker (this can be seen at Johnston's mill today).

At the top of the occupational structure of the industry was the manager. He was assisted by the sawyer who would act as a foreman when the manager was in the bush. Next in status at the sawmill were the operator of the main breaking-down saw, and the engine driver who was often a mill wright. Below them were the skiddy and docker, while the slabby was at the bottom of the hierarchy. Logs came in on a rail tractor (otherwise known as a bush tram or "*lokie*") or lorry, then put onto skids, cut to length and rolled using a winch or hook to the breaking down bench. The operator of the breaking-down saw cut the log into large slabs which were sawed further into smaller sizes. Then the sawn boards were stacked or sent to waste. The slabby cut up the waste for the furnace, while the docker squared up the end of the sawn timber. There were also yard men, a lorry driver, a tramway operator (before the advent of logging roads) and office workers on the staff.

Nowadays work at one of the district's sawmills is highly repetitive, although there is little in the way of computer automation. Each person has to exercise discretion as to the type of cut to be made, where to dock a board, or what grade the board is for stacking. The work is physically demanding and the noise of the machinery generally prevents workers from talking casually to one another on the job. By contrast the factory attached to the sawmill has a quieter environment and some automated machines for making the various timber products. It manufactures, for example, kit sets for babies' cots, brush heads and handles for paint brushes.

The logging crew was led by the head bushman. He did the breaking out and prepared the logs for hauling. Other members of the crew, in order of status, were the bush workers who felled the trees, a tramway man and/or tractor driver, the hauler who operated the steam or diesel hauler, the shoe man who attached the ropes to the log and guided it out, and the whistle boy who provided the communication to the hauler driver. Logs were manipulated onto the loading bank where they were loaded onto a tractor or bush tram to be taken to the sawmill.

Technological change in the industry

While many features of the above descriptions of mill and bush work persist, technological innovations have altered the nature of the work processes and the productivity of the individual firms. There has been a growing reliance on machinery and vehicles that require a large throughput of timber to meet their substantial capital costs.

Until the latter part of the 1940's logs were extracted from the bush by steam haulers with a low horsepower. They were then winched out to the track and loaded onto the bogies of the bush tram and transported to the mill. Around 1950 the introduction of overhead logging using ropes and pulleys attached to the hauler, chainsaws and bulldozers reduced the number of men required in the bush and greatly increased the productivity of the industry. Trucks also replaced the bush tram as the main means of conveyance to the mill. The rate of logging, moreover, was accelerated by the introduction of the Washington hauling machine in 1984 which allowed the crews to extract ten loads of logs a day from the forest. One of our informants observed that generally the older the logging method the less destructive it was to the indigenous forest.

There were similar innovations in the mills where animal and steam power were replaced by compressed air, electricity and hydraulics. Not all innovations were universally accepted however. For example, circular saws are still being used at one of Tuatapere's sawmills as they apparently provide a straighter cut with less variance than their more sophisticated counterparts.

REGIONAL AND LOCAL ECONOMY

Tuatapere's role in the Southland economy

Rural Southland has experienced major impacts from changes in government economic policy over the past decade that have been reflected in changing patterns of land use. There has been a shift away from traditional pastoral farming, with an expansion of dairy production in central and eastern districts of the region. Since the state sector restructuring of 1987, employment in the coal mining industry at Ohai and Nightcaps has remained low, but in the forest industry the opening of more processing plants and the increased planting of exotic forests (often on land formerly used for pastoral farming) has expanded employment. Ownership structures have also changed. Multinational companies and small scale family forestry have replaced the operations of the Forest Service, while a mixture of family and corporate enterprises are also a feature of the recent expansion of the dairy industry in the region (Houghton et al., 1996: 2-3).

Forestry production is widespread throughout Southland. Recent expansion in the industry, however, has not been evenly distributed among rural communities that have historically depended on this resource. While the planting of exotic forest has increased sharply during the first half of the 1990's, the harvesting of indigenous forest, as we have noted previously, has been restricted by government regulation. Thus "Tuatapere is no longer primarily sustained by the logging and milling of indigenous forest", but is now increasingly reliant on the region's tourism industry as evinced by the recent establishment in the township of an information centre, accommodation for backpackers, and retail craft outlets that are mainly servicing visitors to Fiordland (Houghton *et al.*, 1996: 3).

The economic and social impact of the forest industry on Tuatapere

Just how significant the forest industry has been for the economy of Tuatapere is illustrated by a study conducted by the Business Development Centre of the University of Otago in 1976 (Higham *et al.*, 1977). The authors state that there were two branches of the Forest Service and five sawmilling companies operating in the district. These organisations provided 158 jobs, or 51 per cent of all employment in Tuatapere, spent \$800,000 in after tax wages, and purchased \$300,000 in goods and services from other local firms. The number of people who belonged to families in which the major income earner was employed by the industry was 530, with 460 of them residing in the township and another 70 living in nearby settlements. These families were estimated to have spent \$700,000 on local purchases of goods and services from the shops, garages and the hotel in Tuatapere in 1976 (Higham *et al.*, 1977: 35-36).

The Business Development Centre's study also examined the social impact of the industry. After noting that 27 of the 40 organisations in Tuatapere had over a fifth of their membership drawn from families associated with forestry, the authors observe that amongst them was "a formidable list of presidents, secretaries, treasurers, and other officials" (Higham *et al.*, 1977: 35). Furthermore, both the primary school and Waiau College (28%) drew high proportions of their pupils from those families.

The environment

There are reported to be several endangered bird species in the indigenous forests around Tuatapere, including the Mohua, and these and other environmental concerns, such as the destructive effects of logging, have led environmental groups to lobby government to control the harvesting of indigenous timber. Many residents of the township, however, resent this interference in the forest industry which they consider unfairly restricts their economic interests (e.g. opportunities for employment). This is a debate that has occurred elsewhere in the country (e.g. the West Coast and Coromandel) when the developmental values of small communities which are heavily dependent on a natural resource for their economic well-being come into conflict with the environmental values of well-organised lobby groups. The debate continues with the proposed inclusion of the SILMA forests in the Forests Act next year requiring Maori owners to forgo current uncontrolled logging (and the financial benefits) in favour of sustainable management. This change of management practice will have major consequences for the operations of the two local mills in Tuatapere.

The local economy of Tuatapere

As we have already noted Tuatapere was a thriving service centre for the district by the 1940's. Over the last twenty years, however, the fortunes of the commercial and retail sectors in the township have been seriously affected by the restructuring of the Forest Service and the downturn in logging activities in the local forests.

A profile of local businesses and organisations in Tuatapere compiled by Houghton *et al.*, (1996), which is summarised in Table 6, reveals that the number of firms operating in the local commercial and retail sector between 1980 and 1995 remained relatively constant. Within these types of economic activity, however, there were several significant changes. Two of the firms in the other retail sector in 1995, for instance, were craft shops, while the accommodation sector expanded by five enterprises over the fifteen year period with the addition of two camping grounds, a backpackers hostel, and two motels. These gains were offset by the closures of branches of the Post Office Savings Bank and two stock and station agents. Since this profile was compiled, moreover, the National Bank and Totalisator Agency Board have also closed their branches in the township. The township's automatic teller

machine was removed when the National Bank departed, and those firms with EFTPOS are now carrying more cash and acting as quasi-banks.

Table 6: *Business firms operating in Tuatapere in 1980 and 1995*

Type of economic activity	Number of Firms	
	1980	1995
Food retailers	5	5
Other retail shops	3	5
Finance/Business	2	2
Service stations	3	2
Transport services	3	3
Accommodation	1	6
Entertainment/Dining	3	2
Tourist services	nil	1
Builders	2	2
Painters	1	nil
Plumbers	1	1
Mechanical services	nil	1
Electrical services	3	2
Forest related	4	2
Saleyards/Stock agents	4	2
Other services	nil	1
TOTAL	35	37

Source: Houghton *et al.*, 1996: Appendix A

The downturn in the local economy was not just related to the restructuring of the Forest Service and changes in the logging industry however. Declining dairy, beef and deer prices reduced the purchasing power of the local farming community, and when the stock and station companies amalgamated two of them (Dalgety Crown and Wrightson NMA) left Tuatapere. Local farmers then had to travel to Otautau or Invercargill to conduct business with their stock firms. This took retail sales away from Tuatapere. Other residents travel to Riverton, Otautau and Invercargill for their shopping and banking; with major supermarket and retail outlets in Invercargill, such as Countdown, Pak 'N Save and the Warehouse, being a major attraction. One local retailer estimates that his turnover fell by ten per cent when the National Bank closed.

Employment opportunities in the district are very limited. Jobs are available at the sawmills and in planting gangs, but there is less farm work than previously as dairy conversion has decreased demand for part-time and contract labour. Many farmers are struggling to survive and there has been a lot of farm aggregation. In the past there was regular seasonal work on farms available from late August to November. There are at least three shearing gangs in western Southland. The shearers work in Southland during the summer, and travel to England, Australia or the North Island in the winter. Many younger people from Tuatapere have migrated to other parts of the country or Australia for work, or to improve their incomes, as many of the jobs that are available in forestry and agriculture are poorly remunerated.

Diversifying the local economy

Horticulture and tourism are the industries that appear to have the most potential for diversifying the economic base of Tuatapere and its surrounding district.

Since 1993 there has been the development of a 'cool climate crops' strategy in Southland. There are two horticulturalists growing gentian violets in the Tuatapere district. Between them they employ 15 people during the peak season. Another eight farmers are trialing these flowers. Other local people, moreover, are growing hydrangeas, with the goal of developing a 'hydrangea highway' by planting them along the southern scenic route that runs from Invercargill, through Riverton and Tuatapere, to Te Anau.

Several tourism development projects in western Southland may generate economic benefits for Tuatapere due to its close proximity to Fiordland National Park. The Port Craig Viaduct project was completed in 1994. This project involved the restoration of the largest wooden viaduct in the world that was formerly part of a railway that hauled logs from the forests to Port Craig. Visitors to the viaduct increased from 800 persons per year to 3,500 persons per year within six months of its opening. Another project was the renovation of the Borland Lodge (formerly a hostel for construction workers on the Manupouri power line) which is enroute to Te Anau from Tuatapere. Overnight stays in the Lodge increased from 2,600 to 6,200 per annum within two years of its being renovated. A third project hires personal locator beacons to trampers venturing into Fiordland and was funded by a grant from the Southland Community Trust for \$250,000. Currently the Hump track is being developed with a budget of \$2.7 million and is being managed by a locally based trust. The track begins at Te Waewae Bay near the Rowallan Alton Maori Incorporation land, passes along the coastal reserve and then over land administered by the Department of Conservation.

It is hoped that these projects and events organised by the community, such as the 'Wild Challenge' iron man competition and the 'Big Garage Sale', will generate increased turnover for the camping grounds, backpackers hostel, motels, craft shops, farm stays and other tourism enterprises based in the Tuatapere district. However, at present many overseas and domestic visitors spend very little in the township as they are either trampers or cyclists on low budgets or are merely passing through the district to enjoy the scenic beauty of Fiordland. Opinions vary as to the extent which the Hump track and other tourism activities will assist Tuatapere's economy as operators from Te Anau are well organised to capture the benefits.

PHYSICAL AND SOCIAL INFRASTRUCTURE

Infrastructure and funding

Tuatapere is administered by the Southland District Council and a local community board. The latter is also responsible for the rural district surrounding the township. The residents of Tuatapere obtain their water supply from the Waiau river and rely on septic tanks for sewage disposal. Following a large flood that inundated properties on Half Mile road in 1984 a stop bank was constructed.

The community board sets the local component of the rates. The general rate currently being levied for the township is \$82,305. This rate consists of two components: a flat rate of \$160 (GST exclusive) for each property which provides \$53,440 and the balance being assessed on the land value of 334 properties. Other charges levied by the community board on property owners are for the water supply (\$133 per annum) and the community centre (\$20 per annum). The nearest service centre of the Southland District Council where residents of Tuatapere can pay their rates is at Otautau.

Transport

Tuatapere is 87 kilometres by road from Invercargill. The railway which connected the township to other parts of Southland closed around 1970. A lot of the timber milled in the district was transported by rail, but trucks gradually took over the trade as door to door delivery lowered the handling costs. At this time many of the smaller sawmills had their own lorries. When the railway closed it affected farmers who used it to transport their stock, local firms who received bulk supplies of items such as cement, and children who travelled to other schools in the district.

Although there has been an economic downturn in the district since the mid 1980's, the township still has a daily bus service which travels to Invercargill via Otautau. Residents can also travel on the Spitfire Shuttle which connects Te Anau with Invercargill. Another bus operator based in Tuatapere, who holds a contract with the Ministry of Education, provides passenger services for local school children and charters buses to local sports clubs. Freight such as livestock, logs, and fertiliser is handled by D.T. King Company Ltd which has a fleet of over 70 vehicles serving western Southland. There are also several small local freight/courier firms operating in the district.

Housing

Historically sawmill firms provided housing for their married employees close to the mill site. Sometimes these mill houses were grouped together in small clusters. Housing was therefore a major issue for workers considering leaving their job as rentals were relatively cheap and they were given free firewood. When the sawmills closed, these houses were either sold or transferred to the company which was purchasing the business. As the number of sawmills in the district declined a growing number of timber workers and their families moved into the township to reside.

The Forest Service owned 14 houses in Tuatapere which were occupied by some of its staff and their families just prior to its reorganisation in 1987 (Houghton and Watt, 1987). After reorganisation it sold these houses to the Housing Corporation who rented them to solo parents and other welfare beneficiaries from Invercargill. Some of these tenants eventually purchased their dwellings from the Housing Corporation. Those workers with the Forest Service who owned their own houses were unable to sell them because the market had collapsed. They were "*trapped here*", according to one of our informants, went on the dole, and now are either receiving the sickness benefit or have taken early retirement.

Eight new houses have been built over the past five years, and the pensioner flats owned by the Southland District Council are fully occupied. Yet there are a number of houses, which are mostly owned by senior citizens, that have been on the market for some time. Apart from a cluster of houses occupied by low income families in Half Mile road there is no clear pattern of housing stratification in Tuatapere.

Health, education and training

Two general practitioners, a maternity home and the St Johns Ambulance provide medical services for the residents of the Tuatapere district. Clinics are also conducted by visiting specialists, a dentist and a Plunket nurse who is partly funded by Paynter Timber Ltd.

The medical practice and maternity home is managed by a charitable trust. This trust was established by the community about ten years ago when the Area Health Board announced it was going to close the local maternity hospital. It took over the operation of this facility from the Area Health Board and

divided up the building with the maternity service in one part and the local medical practice in the other. The trustees appointed a manager, contracted out the catering, and employed local midwives and a doctor to provide services when required.

Tuatapere is served by Waiau College and a primary school. Waiau College had a roll of 280 in 1984 (Roger, 1988: 70), but fourteen years later it had fallen to 150. Moreover, the loss of teaching staff has reduced the range of subjects which are taught at the college. Some residents of Tuatapere are sending their children to boarding schools outside the district, while recently there has been a proposal to downgrade Waiau College to a form one to five school and amalgamate it with the local primary school.

Training opportunities for the young people of Tuatapere who have left school are very limited. Without driving licenses and adequate public transport they are unable to attend training courses in other centres. Waiau College and one of the local forestry contractors are establishing a training programme for people wanting careers in the forest industry, but they lack suitable accommodation for trainees from outside the district. A coordinator of the Rural Education Activities Programme (REAP) based in Invercargill organises community education for adults.

Agencies and social welfare organisations

Tuatapere, like many other small rural settlements in New Zealand, is not well serviced by government agencies. Those agencies that operate in the township include the Police, Income Support and the New Zealand Employment Services. The latter two agencies provide their services on a visiting basis through the Tuatapere Resource Centre.

The Tuatapere Resource Centre was established in 1987 following the reorganisation of the Forest Service. It operates an advisory service for local residents, acts as a base for adult education and a community worker, and has a visitors information centre with an attached crafts shop and museum. Initial funding was provided for the resource centre by the States Services Commission and the building was purchased from a stock and station agent. Since then the resource centre has received short-term funding from a variety of local and central government sources. Initially the resource centre concentrated on helping residents adjust to the effects of the reorganisation of the Forest Service, while more recently the focus has shifted to community and economic development issues.

The St John's Ambulance Service in the township has been operating for about 25 years. The community resisted the restructuring of the ambulance service in the mid 1980's and ensured that the ambulance was retained in the district. These days St John's has difficulties ensuring the service is adequately manned as it only has twenty volunteers who are rostered on twelve hour shifts. While the local CHE provides a small grant, most of the other expenses are met by the national office of St John's and the local Lions Club.

RESOURCE AND ECONOMIC PLANNING AND LOCAL GOVERNMENT

Local government

Before local government amalgamation in 1989 Tuatapere itself was administered by a town board, while the surrounding rural area was governed by the Wallace County Council. Both the township and rural area are now part of Southland District, and residents elect a Community Board and representatives on the District Council.

Resource and economic planning

During the early 1980's the decision of the Wallace County Council to grant only one licence between W.J. Kennally & Son Ltd and Lindsay & Dixon led to the closure of the former's mill and the consolidation of both operations by Feltex at a new mill operated under the name of the later firm.

While obtaining its resource consent for using the Waiau river for power generation, the Electricity Corporation of New Zealand reached a settlement of \$9 million with various interest groups to compensate them for the reduction in water flow. Part of this settlement directly benefited the residents of Tuatapere. It was distributed in December 1996; with \$800,000 going to the Tuatapere Amenities Trust and \$200,000 to be used to finance a new water supply, ramps and toilets for the township.

The Proposed District Plan for Southland has been notified and hearings held. For indigenous forest areas, such as Tuatapere, a resource consent under the Forests Act is required to remove, alter or modify vegetation. Exotic forests must meet performance standards for planting, but require consents for felling and roads to protect water quality and archaeological sites.

COMMUNITY

Industry as citizen

The boundaries between the industry and the community are often indistinct in townships like Tuatapere that are largely dependent on a single industry and two major companies for their economic welfare. The relationship a particular company develops with the community, moreover, is shaped by its corporate culture. Only two major sawmills continue to operate in Tuatapere, yet their relationships with the community are entirely different. Johnston's is a family owned and operated company that has operated in the district for many years. In a township where forestry was regarded as "*the life and blood of the town*", Johnston's with its long term commitment to indigenous logging has become part of the township's ethos. Many other sawmills have prospered and since closed, but Johnston's is admired by many residents as a paragon of the triumph of local skills and resources over both government regulation and external market forces. While they view the other major sawmill operator, Paynter Timber Ltd (based in Christchurch), as a company which has more interest in short-term profits than the well-being of its staff and the strengthening of the local economy.

Cultural values

Indigenous forestry endows the residents of Tuatapere with a sense of autonomy. Their Scottish heritage unites them against the outside world with the attitude that "*life's tough, but we keep going*". In their eyes central government and the corporate millers have abrogated their responsibility to the community by extracting capital from the district. Moreover, those who would challenge their right to exploit the indigenous forests (e.g. environmental groups, government agencies) are perceived as a threat to their welfare, even though residents acknowledge that the remaining resources are limited and harvesting cannot be sustained in its current form.

The early settlers in the district were men of the axe who opened up the land for agriculture through hard work. Strong networks existed with many people being related to each other, although there has been some degree of separation between Protestants and Catholics in the community. Traditionally the way to earn respect in Tuatapere was to work hard, play sport and ensure one's children were clean and

had good manners. Earning this respect was a long-term process, but, with a more mobile population these days, people who show initiative and are prepared to participate regularly in community activities are more readily accepted. Other values held by residents include a conservative approach to life, a respect for neighbours and friends, and a love of outdoor activities such as hunting and fishing. Both residents of the township itself, and people living in the rural part of the district share these values.

Class and conflict

Farming and forestry have been the major economic activities in the Tuatapere district since the end of the nineteenth century. Therefore the community has been stratified into two distinct spheres. Status in the farming sphere is based on land ownership and related indicators of prestige, whereas forestry focuses on the individual's occupation. Bush workers, as we have already noted, have enjoyed a higher status than mill workers because of their perceived greater level of skill. Mill managers have a higher status than others in the township, but workers in the industry derive some of their prestige from the company which employs them. Sometimes competition between mills has led to fights between their gangs of workers. When the Forest Service was still operating in the township during the 1980's there were also some middle-ranked professionals and other white-collar workers who were part of the occupational hierarchy of the industry.

Over the last ten years there have been many newcomers to Tuatapere. The benefit cuts of 1991 and changes in state housing policy put pressure on low-income families, while the cost of housing became cheaper in the township due to redundancies in the forest industry. When low-income families attracted by this cheaper housing arrived the community became less homogenous. These newcomers were often younger, solo parents, and in receipt of welfare benefits - factors that have created barriers between them and the long-term residents of the township. The recent arrival of dairy farmers from the North Island, moreover, has further disrupted the traditional values and social structure of the district. Dairying has a different rhythm of life than pastoral sheep farming, and many dairy farmers have had little time to devote to community activities.

Community organisation and leadership

When staff from the Forest Service left Tuatapere after its reorganisation in 1987, their managerial, accounting and secretarial skills were lost to local community organisations and sporting clubs. This loss has been compounded by the closure of the post office, National Bank and two mercantile firms resulting in the departure of more professional and administrative workers. Long-term residents have had to acquire these skills themselves through 'hands-on' experience and leadership training programmes provided by REAP. Community organisations, however, still lack leaders in the 20 to 45 year old age group. One of our informants stated that a core group of 50 to 60 people run most of these local organisations, and suggested that the energy level in the community for voluntary activities of this type today is about half the level it was about fifteen years ago.

Community activities

There are about 160 organisations in Tuatapere according to a local community worker. These organisations include the Waiau Town and Country Club which opened about 12 years ago; four churches; a new marae with a cultural group and kohanga reo; a crafts shop in the Tuatapere Resource Centre; the Lions Club; a youth centre; and clubs for rugby, netball, squash, athletics, bowls, boxing,

small-bore shooting, highland dancing, etc. The Lions Club is the only service organisation still functioning as the Orange Lodge and Masonic Lodge have both been closed in recent years.

Social problems

Tuatapere has experienced some of the negative effects of the restructuring of the economy during the 1980's. These effects are evident from the growing incidence of welfare dependency, unemployment, domestic problems, and petty crime in the township.

Some of these negative effects have been associated with the arrival of newcomers attracted by the cheap housing vacated by Forest Service employees. Other effects stem from the economic impact of reduced incomes on the lifestyles of families that have been resident in the district for many years. The newcomers received a mixed response from long-term residents. Some of them had insufficient income to maintain their properties or were without relatives to help them. Others were solo mothers who had badly behaved children and were not accepted. Two or three families were 'lifestylers', with their own network, who also visibly challenged the traditional values of the well-established citizens of the township.

Residents became more aware of the social issues in the community with the arrival of these newcomers. Furthermore, the stress arising from unemployment and the downturn in the local economy revealed domestic problems among the long-term residents of the district that had previously been unacknowledged. Unemployment was demoralising for older men who had been working for many years in specialist areas such as the sustainable management of indigenous forests. Some tried other work, such as operating retail businesses, only to find that they lacked the skills to compete against other enterprises engaged in the same activity.

Seventy people were registered as unemployed in Tuatapere in October 1997. Registrations had increased by eight over the previous month as new rules implemented by Income Support require the partners of unemployed people also to register with the New Zealand Employment Service. The local employment adviser noted that it is very hard for someone who has been negatively labelled by the community to get a job in the district.

Local police described the crime scene in Tuatapere during the closing months of 1998 as relatively quiet with a few thefts from cars, a fight in the local pub, two incidents of domestic violence and the arrest of a couple of people for drug offences. There had been 212 crimes reported during the previous operating year; with a 41 per cent clearance rate. The mostly frequently reported categories of offences were dishonesty (104), property damage (34), property abuse (28) and drug/antisocial (25). The police sergeant observed that children and young adults had been involved in the burglaries (categorised as 'dishonesty'), and that the level of reporting of assault offences may have been low.

Maori

Maori comprised about 17 per cent of the residents of Tuatapere in 1996, whereas 25 years earlier they only represented four per cent of the population. Some 150 to 200 Maori are estimated to be living in the township and surrounding district. Their tribal origins are diverse: Ngati Tahu (the tangata whenua), Ngapuhi, Tainui, Ngati Porou, Ngati Kahungunu, Ngati Tuwharetoa and Tuhoe. Many Ngai Tahu were largely absorbed into the rest of the population of western Southland, but are now rediscovering their heritage and language.

After the closure of sawmills in south Westland several Maori families arrived in the district to work in the forest industry. Others have migrated from other parts of New Zealand; some of whom were attracted by the lower cost of housing in the township. Tuatapere also has attracted and retained people by providing the opportunity for them to live cheaply off the land through hunting and fishing.

The Waiiau Maori Committee are trying to build a community that is multi tribal. They are establishing a marae and have recently purchased the Orange Hall and the Masonic Lodge in the township. They use the former building for a kohanga reo, and have plans to open marae-style accommodation for tourists in the latter. Elders are concerned that kai moana is being over exploited, with some species of shellfish becoming scarce.

Women, young people and the elderly

Before 1950 there were many mill settlements in the Tuatapere district. Life for women in these settlements was harsh. They rose early to get their men off to work and the children to school, while they cooked on a black range and washed by hand. By the early 1970's Tuatapere was still a male dominated community, although Johnson's employed its first woman at the mill in 1973. Women did not generally participate in decision making and their lives centered on the home. Few women had paid employment, and those who had jobs were criticised by other members of the community. The only employment opportunities available for women were at the bank, shops or in the office at one of the sawmills. Furthermore, a journalist, who visited the township during 1988, commented that "people complain about their daughters having to leave home to find work in Invercargill, while married women take the few office jobs available in the town" (Roger, 1988: 78).

Nowadays employment opportunities for women in the district remain relatively limited, especially when compared with those available in urban areas, although there is more scope for them to work in the forest industry. Johnson's, for instance, employs women in its yard, sawmill and factory. Some are also employed by the kohanga reo and playcentre, while others work for the health services.

Many young people leave the district to seek work or training elsewhere in the region, or even further afield, as there is little prospect of employment for them apart from seasonal farm work and forestry occupations. A youth centre focussing on sports and the martial arts opens regularly after school, and many young people enjoy outdoor recreational activities on the river.

Some elderly people who have retired have settled in Tuatapere. There is a waiting list for the eight pensioner flats; all of which were occupied at the time of our field visit. The older residents of the township, like their peers in other parts of the country, need more options for widening their social contacts.

CONCLUSION

Tuatapere has been associated with indigenous forestry and sawmilling since the last century. After 1950 the nature of the logging industry in the district changed dramatically. The depletion of the easily accessible forest and the high capital outlay required for increasingly sophisticated equipment resulted in many of the smaller operators leaving the industry. Both of the sawmills remaining in Tuatapere are struggling to obtain a sufficient supply of wood to remain operating and are not likely to provide much additional employment for residents of the township in the immediate future. Furthermore, there is less farm work available in the district as the conversion of properties to dairying has decreased demand for part-time and contract labour. The commercial and retail sectors in the township were seriously affected by the restructuring of the Forest Service and the downturn in logging activities in the local forests. They have also lost custom to major commercial firms and retail outlets in Invercargill and other towns in the region. Tuatapere is becoming increasingly reliant on the region's tourism industry as a source of income and employment for its residents, and horticulture is also emerging as an industry that will further diversify the local economy.

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