

# Forestry Communities in Transition

## Abstract

Resource communities, those at the interface between a society and its natural resources, are very dynamic, and have experienced considerable change in New Zealand. There are characteristic cycles of boom and bust. This paper reports research on forestry communities, with case studies of Kawerau, Murupara and Tuatapere. Results show that the economic context has changed with the internationalisation of the industry and the changed role of the state. The communities are vulnerable to global prices for wood products, pulp and paper. With rationalisation and capital-intensive technology, workforces have been reduced substantially, and productivity raised through shift work and contracting. Other government and private sector rationalisation has concentrated services and businesses in regional centres, with multiple effects on local economies. Although populations have fallen, they have become more socially and culturally diverse, with greater levels of poverty. They have lost people who played strong roles in local community organisations. These local economies can be strengthened by reducing their dependence on forestry.

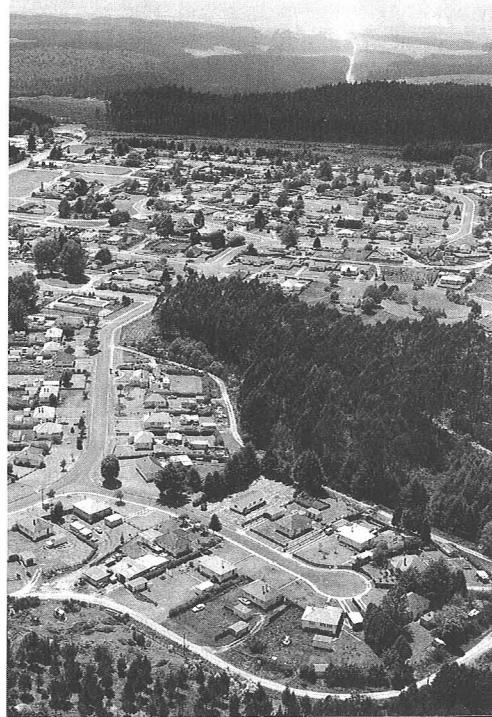
## Introduction

Rural communities in New Zealand appear to have borne the brunt of social and economic change in New Zealand over the last two decades. A large number of communities, including numerous communities which depend on the forestry sector for their main livelihood, have experienced significant changes in population, and losses of businesses and services. Others, have maintained a strong measure of vitality, even growth. Cycles of boom and bust are evident. The status of a community, perhaps in the doldrums after the loss of a processing plant, or experiencing the expansion of a plant, can change relatively quickly.

Since the passing of the Resource Management Act (RMA) in 1991, planning for resource utilisation must consider biophysical, social and economic effects, with the purpose of ensuring environmental sustainability. Developments causing effects are often encountered in communities that appear to be highly dynamic socially and economically. Physical, social and economic planning by the communities themselves, and by government agencies, is very difficult under such conditions. The demand for provision of services by the public and private sectors is unclear. The risks induced by rapid and/or unforeseen change exacerbate the planning difficulties, and can compromise the stability and sustainability of such communities.

This article reports findings from a study funded by the Foundation for Research, Science and Technology. It is a four year programme of work, and the first two years have recently been completed. The first two years have focussed on developing a practical and conceptual understanding of community formation and change in the resource sectors of forestry, mining and agriculture. The

next two years will focus on energy, tourism and fishing communities.



Forestry communities are at the interface between society and the natural resources.

The programme aims to assist planning for sustainable development in New Zealand through an improved understanding of the relationship between people and communities and their natural resource base. Of particular interest is increased knowledge of the processes of social change in communities that depend directly on the primary production or processing of natural resources. These communities have been previously referred to as "resource communities" or "communities that stand at the interface between a society and its natural resources" (Taylor and Fitzgerald 1988). They make a major social and economic contribution to New Zealand society. The research is providing a base of information about these types of communities and the change that has been taking place in them. Sector developments will benefit from having a substantial base of information to draw on for future impact assessments and for research on issues of sustainability. The findings will also benefit local and regional authorities obliged to develop resource management policies and plans, assess resource consent applications, and provide infrastructure such as roads and waste management facilities. There is also information that will assist the planning of social services.

The research team undertook ten comparative case studies of communities during the first phase of the programme. Three of the case studies were of forestry communities - Kawerau, Murupara and Tuatapere - and this article draws on findings from all three of them to provide an overview of social and economic change in communities that mainly depend on the forestry industry (McClintock 1997, McClintock 1998A, McClintock 1998B and McClintock and Fitzgerald 1998). The case studies of Kawerau and Murupara also update earlier research about those towns by McClintock and Taylor (1983) during the early 1980's.

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## The forestry communities

Kawerau is north of the Kaingaroa Forest in the eastern Bay of Plenty. The town was established in the 1950's to house the workers at the pulp and paper processing plant of the Tasman Pulp and Paper Company Ltd. The population of Kawerau grew rapidly during the first fifteen years of its development. Thereafter the rate of growth slowed until the middle of 1980's, when rationalisation in the pulp and paper industry led to a decline in the town's population. The town's population peaked at 8,718 in 1981, but by 1996 it had fallen to 7,830.

Murupara is located on the eastern boundary of the Kaingaroa Forest in the eastern Bay of Plenty. It became the centre for logging operations in the forest during the 1950's. The population of Murupara increased rapidly after it became the centre for logging operations in the Kaingaroa Forest during the 1950's. After 1966 the rate of growth slowed until the middle of the 1980's, when reductions in the workforce, following the corporatisation of the New Zealand Forest Service and the increasing mechanisation of logging operations, led to a decline in the town's population. Murupara's population had grown to just over 3,000 in 1981, but by 1996 it had fallen to 2,208.

Tuatapere is a township in western Southland that has long associations with indigenous and plantation forestry, and sawmilling. The population of Tuatapere grew rapidly for a short period in the early 1950's and then more slowly until 1966, peaking at 954. 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.

## The forestry sector in New Zealand

Social and economic changes within these three forestry communities have been influenced by several national trends in the industry and three significant processes that have shaped the development of the forestry sector since 1980.

There was a 68% growth in the area forested in exotic species over the 15 year period from 1980 to 1995; with the national forest estate increasing from 0.88 million to

1.48 million hectares. Since the 1992-93 year there has been a rapid increase in the planting of exotic species of trees in New Zealand. This recent expansion of the forest estate exceeds the previous planting "booms" of the 1930's and the early 1970's to mid 1980's. Unlike previous booms, where much of the new area planted was in state-owned forests, this latest upsurge in plantings has been financed by urban investors, farmers and the residents of rural districts. Nevertheless over half of the forest estate is now owned by three companies, Fletcher Challenge, Carter Holt Harvey and Rayonier New Zealand Ltd (Statistics New Zealand 1997).

The total number of persons employed in forest related industry (excluding sawmilling and timber processing) declined by 272 between 1988 and 1992, whereas the number of activity units rose by 1,921 (129%) during the same period. These changes partly reflect the restructuring of the New Zealand Forest Service after 1987 as a large number of forestry employees left government service and established themselves as self-employed contractors on a small scale, while others were forced to move out of the workforce of the forestry related industry. Over the next three years (1992-95), however, there was a much smaller decline in the number of people employed in planting and silviculture activities as the rate of new planting rapidly increased. Furthermore, the numbers of people employed in all the other sub sectors - services, logging and consultants - increased significantly, and thus there was an overall gain of 2,828 full-time equivalent jobs between 1992 and 1995. By contrast the number of activity units for the sector as a whole remained unchanged indicating that the production tasks of planting, silviculture and logging were being undertaken by larger scale enterprises than in the early 1990's.

Significant changes have also occurred in the milling and processing of timber over the last two decades. Between 1980 and 1995 the production of wood pulp grew by 21%, and paper and cardboard by 30%; a period when the volume of rough sawn timber produced increased by 47% (Department of Statistics 1992A, Statistics New Zealand 1996). The value of exports of forest products rose by 240% from \$768 million in 1986 to \$2,614 million in 1995. Over the same period the value of wood and wood products exported grew by 432%, wood pulp by 118%, and paper and paper products by 85%. Thus wood and wood products contributed two-thirds of forest exports in 1995 compared with 42% in 1986 (Department of Statistics 1990, Statistics New Zealand 1996A).

A rapid expansion in the output of rough sawn timber between 1990 and 1995 led to substantial employment growth in the processing of wood products. There were large increases in the number of activity units (38%) and people employed (45%) in the processing of wood products during this period. This employment gain of 3,457 full-time equivalent positions in the processing of wood products, however, was partially offset by changes in the pulp and paper industry that reduced the number of activity units from 30 in 1990 to 28 in 1995, and the numbers of persons engaged from 4,396 to 3,629 (Department of Statistics 1992B, Statistics New Zealand 1996B).

Three processes - the internationalisation of the industry, the changed role of the state and the competition for land use between forestry and farming - have influenced these national trends in planting of forests, production, exports and employment. The forest industry in New Zealand has been dominated by a small number of companies such as Carter Holt Harvey (CHH), New Zealand Forest Products (NZFP) and Fletcher Challenge (FC). By the 1980's the focus of these companies, had shifted from making decisions about the utilisation of forest resources to developing corporate strategies that



Significant changes are taking place in employment.

would allow them to compete in a global market, and they began to expand their operations to North America, Latin America and Australia. Changes of ownership in the forest industry also accelerated the process of internationalisation. An Asian presence in the industry began in 1972 when CHH and Oji Kokusaki (of Japan) opened an integrated pulp mill and sawmill using wood from the Kaingaroa State Forest. While the Australian company Elders IXL secured a controlling interest in NZFP in 1987, and the latter was renamed Elders Resource New Zealand Forest Products (ERNZFP). In 1990 ERNZFP was purchased from Elders IXL by CHH. By 1996, however, the US based International Paper Company had secured over 50 % of the share capital of CHH.

Other factors such as the changing role of the state also helped to promote the internationalisation of the industry. The second forest planting boom ended in the mid 1980's with incentives for both landholders and companies to plant trees being removed as the Labour Government deregulated the economy. Another factor was the dissolution of the New Zealand Forest Service (NZFS) in April 1987. Two-thirds of its employees were shed and logging and forestry labour was reorganised on a contract basis. The New Zealand Forestry Corporation took over management of the production forests, and over several rounds of negotiated sales between 1990 and 1996 sold the major state-owned forests to both overseas and locally based companies.

Forestry became more attractive as agricultural profitability declined during the 1980's. In many localities the rapid departure from agriculture mainly occurred through the relatively independent expansion of exotic afforestation. Plantation forestry encroached onto sheep and beef farm land at an average rate of 45,000 hectares per annum during the decade to 1994. Initially this expansion arose from sales of low producing land to forest owners. In recent years, however, better producing farm land has been sold. The area of farm forestry, by contrast, remained static during this decade (Davison 1996).

### The forestry industry and its relationship with the regional and local economies

Global commodity prices for wood products, pulp and paper often vary widely over the medium term (three to five years), and during the downside of these commodity cycles both the major forestry companies and smaller business units have sought to maintain their profitability by investing in more capital-intensive technology, reorganising their work practices, and reducing the size of their workforces. This drive for cost reduction and greater productivity has had serious consequences for towns like Kawerau, Murupara and Tuatapere where a small number of forestry companies provide the bulk of employment for residents. Not only have many families been forced to move to other parts of the country to find work, but the diminished spending power in the community has reduced the profitability of local businesses resulting in further job losses and sometimes closures.

Large investments in plant have been made by Fletcher Challenge at both its sawmill and pulp and paper mill at Kawerau over the last two decades. As new technology has been introduced the workforces at these plants have been reduced substantially; with the number of persons employed at the Tasman Mill declining from around 2,000 in the mid 1980's to the current level of 1200. Job losses at the Tasman and Caxton Mills have had flow-on effects on other sectors of the regional economy. Every job lost at one of these mills means jobs are lost in other industries in the Bay of Plenty. The job

losses in timber processing, moreover, have been accompanied by declining employment opportunities in kiwifruit and other horticultural production on the Rangitaiki Plains. When the Tasman workforce was gradually reduced there was an exodus of employees from Kawerau. Nowadays only half of the employees at the Tasman Mill reside in the town. Those workers residing outside the town purchase their goods and services from other towns in the region, while many who live in Kawerau shop in Whakatane and Rotorua where prices are cheaper. There were a lot of empty houses, and unemployed people receiving benefits moved into these dwellings. The result was a loss of purchasing power in the town which has seriously affected the retail trade.

External factors, such as the restructuring of the NZFS in 1987, further reforms in the state sector, the rationalisation of banking services and the environmental issues associated with the logging of indigenous timber, have also had negative impacts on the local economies of Murupara and Tuatapere.

Both the retail sector and other business firms in Murupara were seriously affected by the reduction of the workforces of Tasman Forestry and NZFS during the 1980's. State sector reforms also led to job losses in the town amongst employees of New Zealand Railways and the Ministry of Works and Development. Redundancy payments at first helped to cushion the impact on the local economy, but hundreds of workers and their families left Murupara. The town's economy has not recovered from the outflow of population during the 1980's. There are now more families in Murupara who rely on welfare benefits and have limited purchasing power. Moreover, the rationalisation of the banking sector has led to the closure of local branches or agencies of the Bank of New Zealand (October 1988), Post Bank (September 1991) and Westpac Trust (March 1997). Residents of Murupara depend on a branch of the Credit Union, which opened in 1997 following the closure of the local branch of WestpacTrust, and an automatic teller machine for their banking services. People from outlying settlements such as Kaingaroa, Galatea, Ruatahuna and Minginui are now more likely to travel to Rotorua to collect their benefit payments. While in Rotorua they shop at supermarkets and have a meal. Their custom is now lost to retailers in Murupara.

The state was also heavily involved in the management of indigenous forests in Southland since the 1930's. After the reorganisation of the NZFS in 1987 the plantation forests and stated-owned mills in the region were sold to multinational companies such as 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 to conservation. 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, both of the major sawmill operators (Johnston's and Paynter Timber Ltd) remaining in Tuatapere are struggling to secure enough wood supply to keep operating.

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 major attractions.

Employment opportunities in the district around Tuatapere 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.

### Strengthening and diversifying the local economic base

All three forestry communities have recognised the need to strengthen and diversify their local economies by reducing their dependence on an industry that is subject to wide variations in commodity prices. In Kawerau and Murupara, however, the emphasis has been on adding value to timber by further processing, while Tuatapere's leaders are looking to other sectors for business growth and employment.

The Kawerau District Council has established a fund to promote industrial diversification. A core group of councillors, and some members of the business community, are targeting enterprises that will either add value to timber by further processing or that will provide support for forestry processing ventures. This group has also concluded that the town cannot compete in the tourism industry with other centres in the region. The Tasman Pulp and Paper Co. Ltd has provided an interest free loan of \$1.2 million to establish a light industrial estate near its mill. This industrial estate has warehouses and workshops. Most of the firms service the Tasman Mill as contractors, but a rigging company has diversified its customer base by working in Taranaki and at the steel mill at Glenbrook.

When the government was seeking bids for the sale of the Bay of Plenty forests in 1996 the Whakatane District Council sought to attract investors to Murupara by promoting it as "a modern town with excellent services and facilities and vacant industrial land" (Whakatane District Council 1996). The objective of the council's strategy is the establishment of processing plants which will add value to timber milled from the nearby forest (Whakatane District Council 1997). Should this strategy be successful there may be significant benefits for the local economy, but Murupara's fortunes would still depend on the performance of the region's forest industry as it competes in a global market.

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 by the Southland District Council. 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 projects include the Port Craig Viaduct which was

completed in 1994, the renovation of the Borland Lodge which is enroute to Te Anau from Tuatapere, and the Hump track which is currently being developed by a locally based trust with a budget of \$2.7 million. 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 nearby Te Anau are already well organised to capture the benefits.



Community events can help spur growth.

### Technology and the organisation of work

The major forestry companies have responded to the challenges of the global market by investing in more capital intensive technology and reorganising their work practices. The capital-intensive technology which is used by the Tasman and Caxton Mills for manufacturing pulp and paper requires the plants to operate for 24 hours per day. Process workers are expected to work shifts and this has a direct impact on family life by altering domestic routines and limiting interaction between family members. Nowadays at the Tasman Mill most workers rotate the 12 pm to 8 am, 8 am to 4 pm and 4 pm to 12 pm shifts over one week instead of over three (the former practice). They work two days on each shift over a six day week, take two days off, and start the cycle again. The staff operating the new thermomechanical pulp plant, however, work four days of a 12 hour shift - midnight to midday or vice versa - which is rotated during the next four day period. On each shift three operators and a few ancillary staff use very sophisticated computer technology to control the production process. Fletcher Forests also uses similar computerised technology in its industrial sawmill at Kawerau.

Over the last decade the introduction of new technology and work practices at the Tasman Mill has cut staff numbers by 40%. Reductions have not only occurred amongst production staff however. Tradesmen, such as electricians and maintenance engineers were also laid off some years ago, but some have returned to work at the Mill as employees of contracting firms. Since the

introduction of the Employment Contracts Act, moreover, pulp and paper workers have been paid a salary and can be asked by Tasman to work an additional 200 hours of overtime a year without extra payment. Tasman recruits highly skilled people who can operate the improved production systems. Formerly jobs were available to people who held no school qualifications, but now employees are required to have School Certificate in English, Science and Mathematics, or higher qualifications.

Bush work, like the work routines of the pulp and paper mills and the industrial sawmills, has become more capital intensive with the use of increasingly sophisticated technology. Prior to the mid 1980's the Kaingaroa Logging Company (part of Tasman Forestry) based at Murupara employed a mixture of waged employees and contractors on their logging operations. The Timber Workers Union, to which most of the logging crews belonged, had secured good wages and allowances (e.g. housing and cheap loans) for its members and its strong bargaining power was a strong motivation for the company's switch to contract labour. Following the re-organisation of the Kaingaroa Logging Company, residents of Murupara, with the assistance of Tasman Forestry, organised themselves into a contract trucking fleet that uses the network of private roads that radiate from Murupara to transport logs to processing plants at Taupo, Rainbow Mountain and Kawerau. The capital cost of their equipment, such as a skidder, loader, and two vehicles, is considerable. Other tasks, such as constructing private forest roads and skid sites, are also performed by former employees of the Kaingaroa Logging Company on a contract basis.

The NZFS had employed contractors for such tasks as planting, establishing new blocks, clearfelling, and roading since 1978, while Tasman Forestry also hired growing numbers of contractors for silvicultural tasks from the mid 1980's. Following the Government's sale of the Kaingaroa and other Bay of Plenty forests to a consortium led by Fletcher Challenge in 1996, all the silvicultural and harvesting operations in the area around Murupara are now managed by Fletcher Forests. Contractors may be allocated work by Fletcher Forests all over the Central North Island. They may be brought from Rotorua to work near Murupara or vice versa. Most contractors are based at Rotorua, Tauranga and Taupo, although a few of them continue to be based at Murupara.

The two major sawmills at Tuatapere have also increasingly relied 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 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. 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.

## Community impacts

Many workers and their families left these towns after the restructuring of the NZFS and the shedding of staff by the major forestry companies. Important leadership skills were lost to community organisations, and the arrival of newcomers attracted by lower cost housing was not always welcome to residents who were still adjusting to the loss of families, friends and jobs.

Before the restructuring of the 1980's Murupara had a broader social structure. There were middle management staff from the Kaingaroa Logging Company Limited residing in the town who ran the community organisations. They organised the construction of community amenities such as swimming pools and buildings. There was even a competition between employees of the Kaingaroa Logging Company, the NZFS and Ministry of Works to raise funds for a swimming pool. Once the economic base of the community was weakened the ties that held the community together came under great pressure as friends, neighbours and family members moved elsewhere. Nowadays, there are fewer people capable of administering community organisations in Murupara, and it is also more difficult to get a community project started.

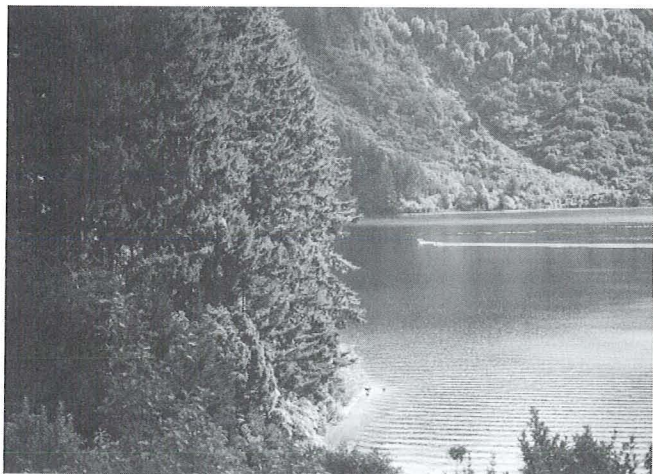
When staff from the Forest Service left Tuatapere after its reorganisation in 1987, their managerial, accounting and secretarial skills were lost to local community organisations and sporting clubs. This loss has been compounded by the closure of the post office, National Bank and two mercantile firms 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 the Rural Education Activities Programme (REAP). Community organisations, however, still lack leaders in the 20 to 45 year old age group.

The arrival of newcomers attracted by the lower cost housing vacated by departing workers and their families has not only changed the social and demographic character of these communities, but has sometimes challenged the values of long-term residents.

There were a lot of empty houses in Kawerau and younger unemployed people from the cities moved into them. Older people have also come to the town to retire. They usually know someone in Kawerau and come from a variety of places including Auckland, Hamilton, Waihi, Whakatane, Opotiki, Gisborne, Rotorua, Taupo and Wanganui. They sell their existing homes, buy a cheaper house in Kawerau, and have some surplus cash for a car or overseas holiday. Maori are also returning to the town to rejoin their extended family, to have access to jobs in the forest industry, or to live more economically on welfare benefits.

Over the last ten years there have also 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 town 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 Tuatapere. 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





Tourism provides another avenue to adding value to a natural resource.

pastoral sheep farming, and many dairy farmers have had little time to devote to community activities.

### Conclusion

Forestry communities, such as Kawerau, Murupara, and Tuatapere, are vulnerable to the price cycles of wood, pulp and paper products, as well as changes in the technology and capital structure of the industry. Changes in the prices of these commodities have major social and economic effects on the communities that rely on them for primary production or processing. Major technological changes in the forestry industry have increased labour productivity substantially in planting, logging and processing, and concentrated production in fewer centres. Forestry companies have reorganised their work practices by contracting out their logging and technical support to smaller firms. Employment opportunities in the industry have been reduced for unskilled (often older) workers who have either left town or remain in the community unemployed.

Other private sector rationalisation has included banks and mercantile firms that have become concentrated in regional centres as local branches have closed in the forestry communities. Government restructuring withdrew people from rural areas at the same time as private sector rationalisation was happening, leading to a multiple effect on local economies. There was a reduction in purchasing power and a shift to spending in regional centres, where centralised retailing was being established. Thus the forestry communities were struck by the multiple effects of restructuring across several sectors.

The loss of employment from forestry, other private and state sectors has led to vacant, lower cost housing becoming available to newcomers who are often characterised by being low income, beneficiaries, single parents, unemployed or unskilled, and Maori. The forestry communities are now more socially, culturally and economically diverse, with greater levels of poverty and disparities of wealth. They have lost many key people from the "middle management" level since the mid 1980's, people who previously played strong roles in local community organisations.

Although the forestry communities recognise the need to strengthen and diversify their local economic base, they must develop alternative economic activities that are not vulnerable to commodity price cycles. In this respect tourism is far from a panacea. Similarly, added

value should if possible be based on several sectors, and preferably on moving products as far from the influence of commodity prices as possible - e.g. end products such as furniture cf. timber milling. Local government is playing a vital role in developing local economic strategies.

Forestry communities in New Zealand can expect further change in the medium term. As the global prices for sawn logs, wood products, pulp and paper improve, new industrial plants will be established in some localities, while other districts will host expanded forest planting and silviculture activities. Some forestry communities will experience a decline or even a complete loss of forest sector employment as technological changes and rationalisation take place in the industry. Furthermore, communities that depend on other resource sectors for their livelihood can expect to host forestry sector activity in the future. Other external sources of social and economic change will also influence the cycle of growth and decline in these resource communities, and emphasise their highly dynamic character. These periods of rapid community change will provide key points for the conduct of social impact assessments of forestry development.

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