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# 7 Community Attitudes and Perceptions

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## 7.1 Introduction

This chapter sets the social and economic context of the Tarawera River catchment and provides an indication of community attitudes and perceptions about the state of catchment water quality. The issues, objectives and policies give direction that in promoting the sustainable management of natural and physical resources in the catchment, regard be had to the social, economic and cultural wellbeing of the local community, and that changes required to promote the aims of the plan be made in ways or at rates that enable the community to pursue their social and economic aspirations.

## 7.2 The Social and Economic Context

A number of social and economic matters are affected by decisions on how natural and physical resources are managed. The effects of resource management on social and economic aspirations should be taken into account in a holistic approach to managing the environment<sup>13</sup>.

### 7.2.1 Population Distribution

Approximately 14,900 (1991 Census)<sup>14</sup> people live within the Tarawera River catchment. Seventy-eight percent of the catchment's population live in settlements of more than 500 people. The largest settlement in the catchment is Kawerau (population 8,136) (Table 1). Kawerau is the centre of wood processing in the Bay of Plenty, with two pulp and paper plants and a lumber plant. The next biggest town is Edgecumbe (population 1,782), which straddles the Rangitaiki River on the eastern side of the Tarawera River catchment. Edgecumbe is the focus of the dairy processing industry for the Bay of Plenty. (See Map 3).

Other smaller settlements in the catchment are Matata and Te Teko. Both settlements have populations of just over 600. The Okareka and Tarawera settlements were originally subdivided around 1938-1943 and 1948-1950 respectively. Holiday baches and houses have been established in the Settlements and over time the permanent resident population has increased. Okareka is within comfortable commuting distance of Rotorua. In 1999 some 70% of the property owners at Okareka and a Rotorua address and it was estimated that the permanent resident population was approximately 534. Some 40% of the property owners at Tarawera had a Rotorua address and it was estimated that the permanent resident population was approximately 471. These populations increase during holiday periods (For further information see Appendix 3 – Population Statistics for the Tarawera River Catchment).

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<sup>13</sup> It should be noted section 2 of the Resource Management Act 1991, defines "environment" to include:

- (a) *Ecosystems and their constituent parts, including people and communities; and*
- (b) *All natural and physical resources; and*
- (c) *Amenity values; and*
- (d) *The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.*

<sup>14</sup> The statistical areas for population and demographic figures, as defined by Statistics New Zealand, do not directly coincide with the catchment of the Tarawera River.

**Table 1****MAJOR SETTLEMENTS IN THE TARAWERA CATCHMENT 1991 CENSUS**

<b>Settlement</b>	<b>Total Population (1991)</b>	<b>% of Total Catchment Population (14,877)</b>
<b>Kawerau</b>	8,136	57.75%
<b>Edgecumbe</b>	1,782	11.97%
<b>Matata</b>	612	4.11%
<b>Te Teko</b>	606	4.07%
<b>Other Rural</b>	3,285	22.08%
<b>Total Population</b>	<b>14,877</b>	<b>100.00%</b>

Statistics NZ, 1991

**7.2.2 Ethnic Composition**

The Tarawera River catchment includes a very high percentage of Maori (45.9% or 6,369 persons) compared with both the Bay of Plenty (25%) and New Zealand (13%) total populations (Figure 3).

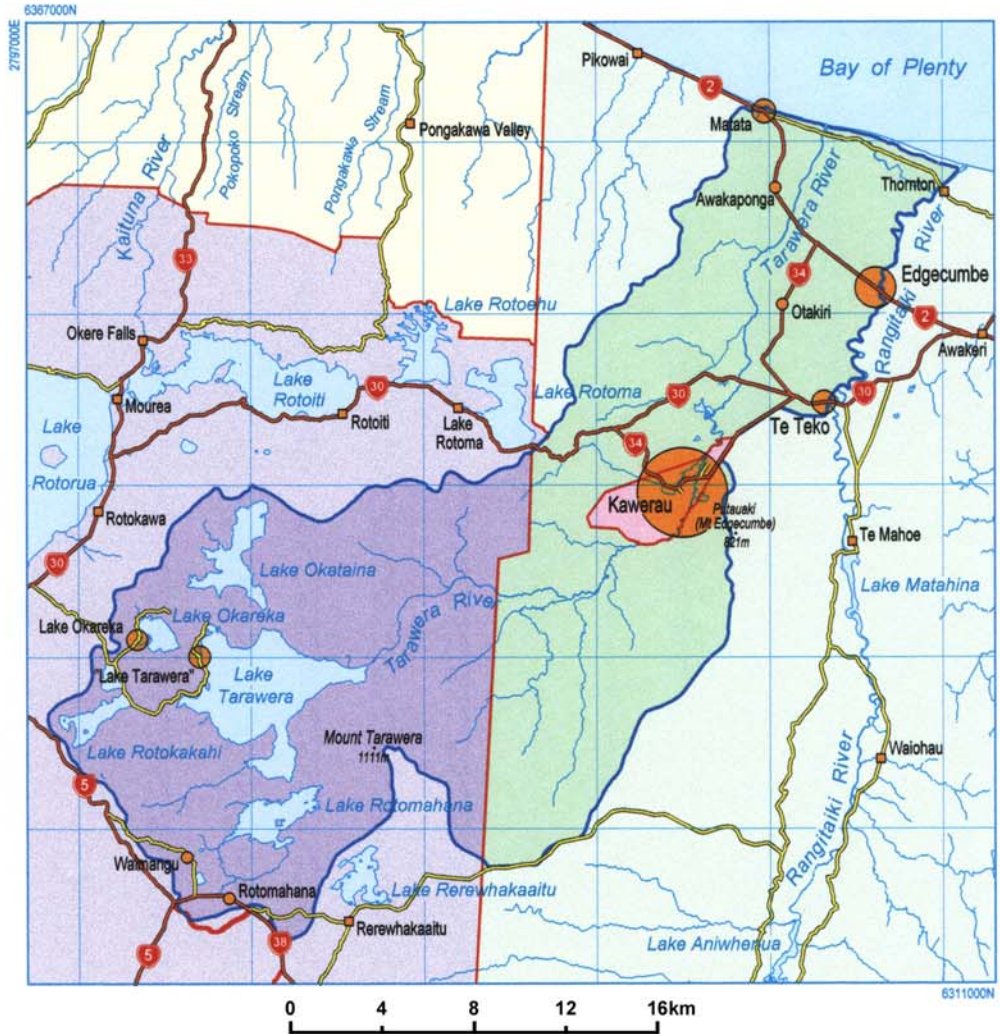
Prior to the establishment of the mills, tangata whenua of the district relied on the resources of the river for trade, transport and sustenance, both physical and cultural. The previous existence of a large area of swamp, and the river itself contributed to a thriving pre industry community but these had been displaced by government sponsored farm development schemes prior to the mills being built. More recently tau iwi and taura here have moved to the area to work in the forestry and wood processing sectors. A higher population growth rate among Maori is likely to result in the Maori population in the Tarawera River catchment exceeding that of the non-Maori population in the foreseeable future.



**Map 3**

# Regional Plan for the Tarawera River Catchment

## Territorial Local Authorities and Townships



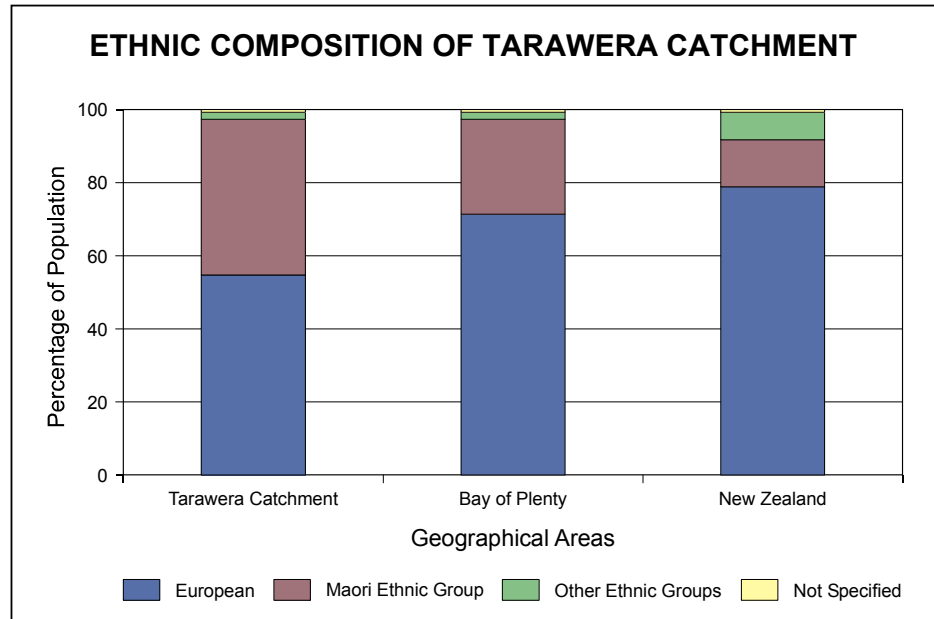
TERRITORIAL LOCAL AUTHORITY	POPULATION (1996 Census)	TOWNSHIP
Kawerau District	8592	Kawerau
Rotorua District	1782	Edgcumbe
Western Bay of Plenty District	612	Matata
Whakatane District	606	Te Teko
District Boundary	504	"Lake Tarawera"
Environment Bay of Plenty Regional Boundary	464	Lake Okareka
Tarawera River Catchment Boundary	<100	Other, eg. Otakiri
State Highway		Township outside Tarawera River Catchment
Major Road		

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Figure 3



Statistics NZ 1991

### 7.3 Community Surveys

Community attitudes and perceptions can act as an important guide to how communities relate to and value their local environment. They provide an indication of issues and act as a barometer for measuring the strength of community attitudes toward matters. In an effort to gain a better understanding of attitudes and perceptions towards the environment, Environment Bay of Plenty commissioned three community surveys between June 1992 and March 1993<sup>15</sup>.

Results from the 1992 survey, *Attitudes Towards the Bay of Plenty Environment*<sup>16</sup> highlighted the Tarawera River as the cause of greatest concern in the Eastern Bay of Plenty when survey respondents were asked to name any particular lakes or rivers which they considered to be polluted (Figure 4). Nearly 38% of Eastern Bay of Plenty respondents considered the Tarawera River to be polluted. The Rangitaiki and Whakatane Rivers were also indicated as polluted rivers, but to a much lesser extent than Tarawera. The survey also indicated that nearly 20% of Eastern Bay of Plenty respondents considered polluted waterways to be a primary contributing factor to the “poor” or “very poor” environmental state of the Bay of Plenty. Eastern Bay of Plenty<sup>17</sup> respondents considered pollution from pulp and paper mills<sup>18</sup> to be the biggest factor contributing to the region’s “poor” or “very poor” environmental health<sup>19</sup>.

<sup>15</sup> Ponter, D M and Doorman, P J, 1992; Research Solutions, 1992; Research Solutions, 1993.

<sup>16</sup> Ponter, D M and Doorman, 1993.

<sup>17</sup> Including the Whakatane, Kawerau, and Opotiki District Council area, but excluding Rotorua (the Upper Lakes catchment).

<sup>18</sup> The three mills in the Eastern Bay of Plenty are Tasman Pulp and Paper Company Limited (Kawerau), Carter Holt Harvey Tissue (Kawerau), and Carter Holt Harvey Packaging – Whakatane Mill (Whakatane).

<sup>19</sup> No distinction was made between air and water pollution.

In a mid-1992 survey commissioned by Environment Bay of Plenty, Community Attitudes to the Rotorua Lakes<sup>20</sup> of 330 residents in the Rotorua Lakes catchment<sup>21</sup>, Lakes Tarawera, Blue (Tikitapu), Green (Rotokakahi), and Okataina were identified as being in a good environmental condition. The more common reasons given for these lakes being chosen are indicated in Table 2. In comparison, Lake Rotorua, which is not within the Tarawera River catchment, was judged, by 88% of respondents, the worst lake environmentally.

**Table 2**

**ATTITUDES AND PERCEPTIONS TO LAKES IN THE TARAWERA LAKES CATCHMENTS**

(10 = Excellent 1 = Poor)

Lake	Rating for Environmental Condition (out of ten)	Reasons
Lake Tarawera	24% rated this lake the best with a score of 7 out of 10	<ul style="list-style-type: none"> <li>• Lack of pollution</li> <li>• Quality of the water</li> <li>• The visual beauty of the lake</li> </ul>
Lakes Tikitapu and Rotokakahi	24% rated these lakes best with a score of 6.9 out of 10	<ul style="list-style-type: none"> <li>• Lack of pollution</li> <li>• Few people, buildings or noise</li> <li>• Visual beauty</li> </ul>
Lake Okataina	21% rated this lake as best with a score of 7.5 out of 10	<ul style="list-style-type: none"> <li>• Lack of people, noise or buildings</li> <li>• Lack of pollution</li> <li>• Bush setting</li> <li>• Unspoilt, natural, pristine state</li> </ul>
Lake Rotorua	88% rated this lake as the worst, with a score of 1.9 out of 10	<ul style="list-style-type: none"> <li>• Poor water quality seen as a health hazard</li> <li>• Lake weed seen as an indicator of poor health</li> </ul>

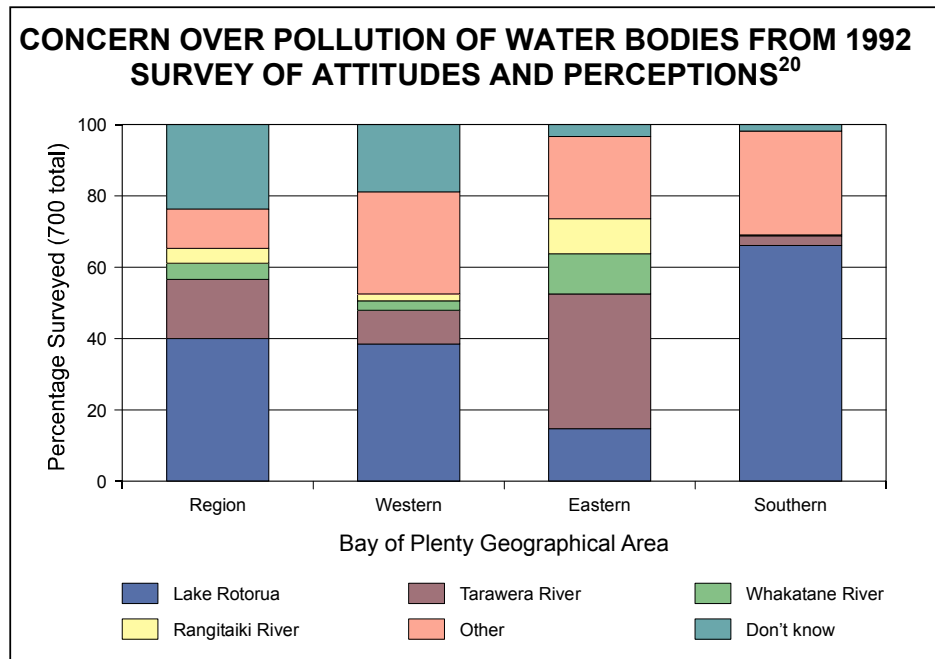
Research Solutions 1992

Of the 300 people surveyed in the Community Attitudes Towards the Tarawera River and its Catchment Survey, 46% considered the environmental state of the catchment of the Lower Reach of the Tarawera River area to be good or very good. A further 30% felt it was average, with only 15% rating the environmental state as poor (10%) or very poor (5%) (Figure 5). Kawerau residents gave a slightly higher rating to their environment, 48% rating it as good/very good, compared with 12% rating it as poor/very poor, than did those living in the Tarawera, Edgecumbe, or Matata wards. Those aged 45 or older tended to be more divided in their opinions than the younger residents.

<sup>20</sup> Research Solutions, 1992.

<sup>21</sup> This encompasses the Tarawera Lakes catchment of the regional plan.

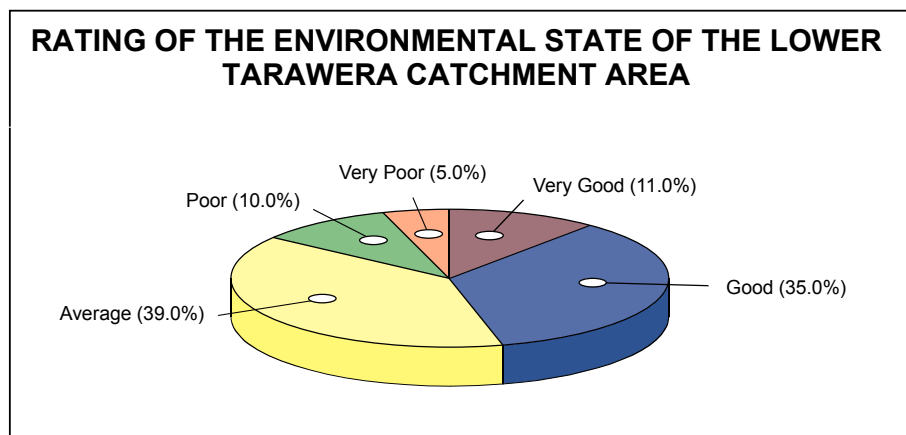
Figure 4



Ponter, D.M. and Doorman, P.J. 1992

When prompted with a series of issues, respondents expressed the highest level of concern for employment opportunities in the area (91% of respondents), followed by the state of the Tarawera River (84%). The greatest level of concern regarding employment opportunities was in the Kawerau Ward (94%), while concern at the state of the Tarawera River was greatest in Matata (95%). The overall ranking of concern of these issues is shown in Figure 6.

Figure 5

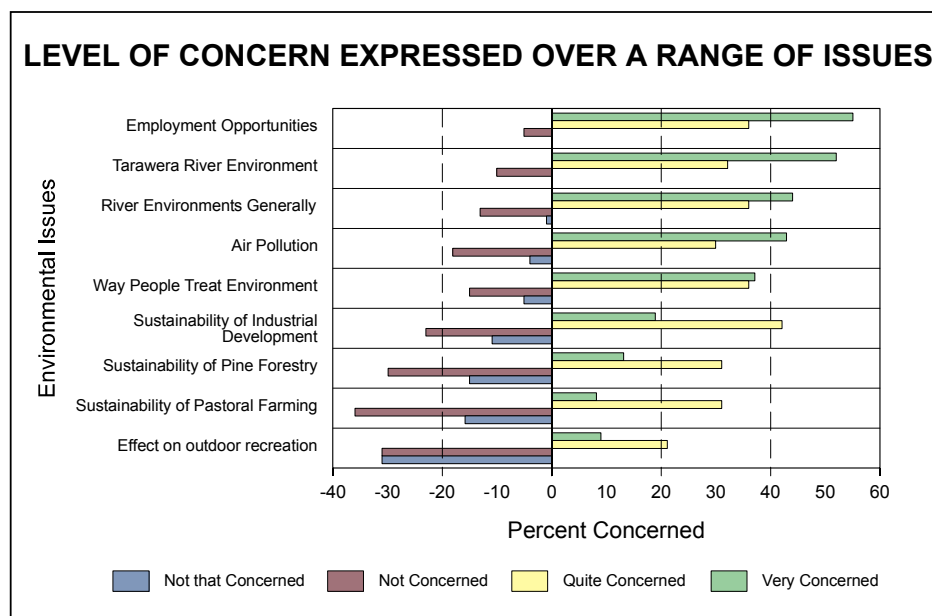


The survey result shows the importance of this regional plan to the community. Of those respondents concerned with the state of the Tarawera River environment, 22% mentioned pollution from the Tasman Pulp and Paper Company Limited mill, 10% noted pollution from the Carter Hold Harvey Tissue mill, and 19% indicated mill pollution (unspecified). Eighty-six percent of residents considered that the environment of the Tarawera River downstream of Kawerau was in need of improvement. Matata and Edgecumbe residents (94%) considered most strongly that the environment of the river was in need of improvement, compared with those in the Tarawera (78%) and Kawerau (82%) wards.

In the mid-1992 survey of *Community Attitudes Towards the Rotorua Lakes*, just under 31% of Rotorua area residents raised a concern about the environmental quality of Lake Okareka. In particular, this was related to the prevalence of lake weed, runoff from farms, the leaching of septic tanks, and the effect of agricultural sprays. Lakes Tarawera and Okataina, and the Blue and Green Lakes, were considered to be in a good environmental state due to their lack of pollution, lack of community settlements, and their beauty. In comparison, Lake Rotorua was highlighted by 88% of respondents as the worst lake environmentally, with a mean rating of 1.9 out of 10.

One in four Rotorua area residents was concerned about some environmental aspect of Lake Tarawera, with lake weed being the predominant issue. As a means of comparison, people in the Rotorua area rated the environmental quality of Lake Tarawera above that of the other lakes which were included in the survey questionnaire (Figure 7).

Figure 6



Research Solutions 1993

In the 1993 survey<sup>22</sup> of residents in the catchment of the Lower Reach of the Tarawera River, 43% of respondents wanted to see the quality of the Tarawera River downstream of Kawerau improved to such an extent as to be similar to upstream water quality. Thirty-nine percent considered that there is an intermediate stage between current downstream water quality and upstream water quality, which would be acceptable.

Sixty-four of respondents thought that improvements to the state of the Lower Reach of the Tarawera River should be made on a user pays basis – that those responsible for the pollution of the river pay for its remediation. Eighteen percent thought that ratepayers should be responsible, while 14% did not think the river needed improving. Thirty-eight percent of respondents thought that the improvement of the river should be undertaken only if it could be done without the risk of job losses. Only slightly fewer, 32%, thought it should be carried out even if the costs resulted in a few job losses. There is little support, only 8%, for improvement, if job losses are significant.



Attitudes and perceptions toward the environment are not necessarily congruent with the definition of 'sustainable resource management' as defined in the Resource Management Act 1991. Indeed, at times the attitudes, values, and concerns of the community may directly conflict with the promotion of the sustainable management of natural and physical resources. This is particularly the case when short to medium term social and economic wellbeing is considered more important than long-term sustainability of natural and physical resources. Therefore, while community attitudes and perceptions can inform how we approach the promotion of the sustainable management of natural and physical resources in general, Environment Bay of Plenty must also take other matters into account, including those specified by tangata whenua.

Further community attitudes and perceptions, specific to certain aspects of the environment such as water quality, are presented in later chapters, most notably the water quality chapter.

## 7.4 The Economic Context

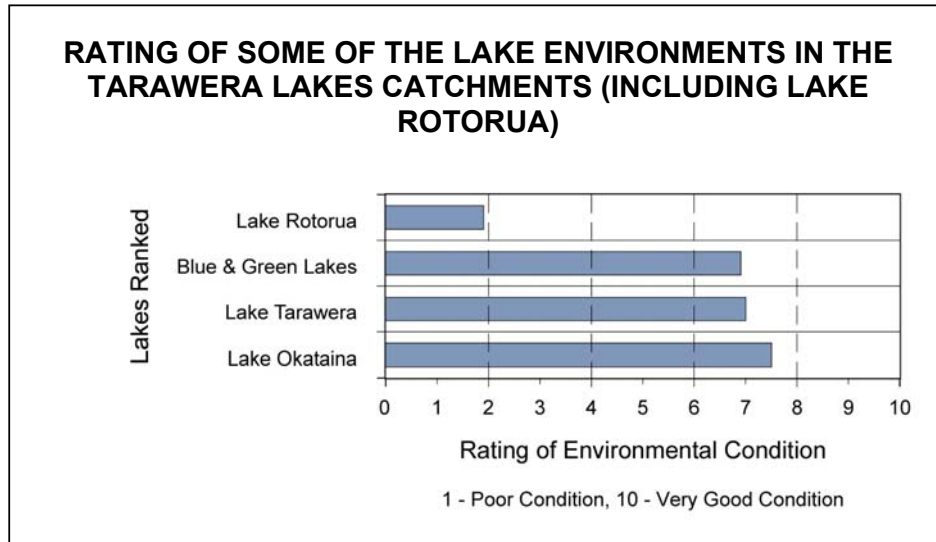
The economy of the Tarawera River catchment is dominated by the forestry/wood processing and dairy/dairy processing sectors. These two sectors are based in geographically discrete areas and result in virtual economic mono-cultures. Both the forestry/wood processing and dairy/dairy processing industries/sectors are well established. Exotic plantation forestry is concentrated in the Tarawera Lakes catchments and the catchment of the Upper Reach of the Tarawera River, with the wood processing industries based at Kawerau.

Wood processing can be divided into two sub-categories: pulp and paper manufacture and timber manufacture. Dairy farming predominates on the Rangitaiki Plains. Dairy processing for the whole of the Bay of Plenty is undertaken in Edgecumbe. District service industries have developed, particularly in Kawerau and Edgecumbe, in conjunction with the forestry/wood processing and dairy/dairy processing sectors (For further information see Appendix 4 – Tarawera Industries).

In addition to dairying, sheep grazing predominates in the coastal high country in the north west of the catchment. There is also some horticultural production of the Rangitaiki Plains. Tourism-related activities occur at various areas around the catchment directly related to the many natural features in the catchment, including the lakes and rivers, geothermal activity, and Mt Tarawera. However, tourism-related activities generally prove difficult to quantify as they belong in a number of different sectors.

The social and economic wellbeing of the local communities depends heavily on the major industries and related primary production. The clear dominance of the forestry/wood processing and dairy/dairy processing industries leaves the local economy and community extremely exposed to any short or long-term downturns in these industries. Any major down-sizing, or closure of either of the two sectors or the major industries would have significant direct adverse effects on the local communities. This needs to be taken into account in planning for the sustainable management of the natural and physical resources of the catchment, but not to the extent that it compromises the definition of sustainable management given in section 5(2) of the Resource Management Act 1991.

Figure 7



Research Solutions, 1992

## 7.5 Issues, Objective, Policies, Principal Reasons and Anticipated Environmental Results

### 7.5.1 Issues

Issues relating to community attitudes and perceptions include:

- 7.5.1(a) Survey results show that a significant proportion of the community is concerned that the Lower Reach of the Tarawera River is degraded by discharges.
- 7.5.1(b) Employment opportunities are perceived by the community to be linked to the continued operation of industry and primary production in the catchment.
- 7.5.1(c) Both the community and industry perceive an environmental, economic and employment advantage in the staged enhancement of Tarawera River quality.

### 7.5.2 Objective

Achieving the desired enhanced life supporting capacity of the Tarawera River at a rate that enables people and communities, including industry to adjust.

### 7.5.3 Policies

- 7.5.3(a) To consider the social and economic wellbeing of people and communities when making decisions about the sustainable management of the Tarawera River.
- 7.5.3(b) To stage the achievement of water quality standards as set out in the methods of Chapter 15 in a way that provides a defined schedule of goals to enable the community including industry to adjust.
- 7.5.3(c) To have particular regard to Kaitiakitanga when making decisions about the sustainable management of the Tarawera River and its catchment.

### 7.5.4 Principal Reasons

To limit risk to catchment industries and communities, and to achieve the aim of continued improvement of water quality in the Tarawera River Catchment. There is a need to develop and timetable goals, objectives, policies and methods of implementation in ways and at rates that are achievable and realistic. Without realistic staging to provide reasonable time for the consideration of options and the initiation of relevant capital works, the introduction of classification standards to enhance the quality of water in the Lower Reach of the Tarawera River will be compromised.

It should be noted that section 107 of the Resource Management Act 1991 would prevent Environment Bay of Plenty from granting any resource consent directly under section 15 of the Act that would affect mixing cause:

- (a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- (b) Any conspicuous change in the colour or visual clarity;
- (c) Any emission of objectionable odour;
- (d) The rendering of fresh water unsuitable for consumption by farm animals;
- (e) Any significant adverse effects on aquatic life.

The attitudes and perceptions of the local and wider community are vitally important when making resource management decisions. At times it is difficult to assess exactly what people want, and how that is to be achieved. However in the independent Tarawera River catchment surveys, the clear message to those composing this regional plan was: clean up the Lower Reach of the Tarawera River but do not compromise our employment opportunities in the process. Both these tasks can, with good cooperation, be achieved. Environment Bay of Plenty will promote the concept of a "win-win" situation by enabling, encouraging and working with industries to ensure that the staged progression of changes needed to clean up the Tarawera River are met, but will also defend those agreed stages with particular vigilance.

It is intended that when appropriate, for some existing resource users, rather than requiring immediate conformity to new resource management standards, new classification requirements will be introduced in stages. This approach is considered the most practicable way to ensure that existing resource users progress to meet the objectives of this regional plan within economic and temporal constraints.

Environment Bay of Plenty considers that, within the bounds of the Resource Management Act 1991 and the Local Government Act 1974, it has a legitimate role in promoting the sustainable use of natural and physical resources. This is especially the case when a resource could be utilised more effectively or for a range of additional purposes. As an example, Environment Bay of Plenty considers that the use of waste geothermal fluid should be promoted for other secondary uses, such as for hothouse production or exotic aquatic farming, providing that such a use does not conflict with the primary goal of limiting the effects of waste discharges on the quality of water resources. Uses that remove heat or nutrients from waste streams before discharge can help minimise adverse effects on the environment.

## 7.5.5 Anticipated Environmental Results

The anticipated environmental results are:

- 7.5.5(a) The achievement of continued improvements in waste treatment operations, and in reductions in waste disposal effects on the environment.
- 7.5.5(b) Both the sustainable management of natural and physical resources and the social and economic wellbeing of the community will be safeguarded and enhanced over time.

- 7.5.5(c) Ensuring that the community concerns about the degraded state of the Lower Reach of the Tarawera River are remedied.
- 7.5.5(d) Efficient use and re-use of resources, for example the use of geothermal wastewater, reduces effects on the environment and facilitates new development opportunities.
- 7.5.5(e) The eventual restoration of the water quality of the Tarawera River to facilitate the exercise of customary use by iwi.