Environment Waikato Technical Report 2001/02

Environmental Awareness, Attitudes and Actions: A Survey of the People of the Waikato Region 2000

Prepared by:
Key Research & Marketing Ltd
&
Eclectic Energy

For:
Environment Waikato
PO Box 4010
HAMILTON EAST

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1.1 Research Method

This report describes the views of 1873 residents of the Environment Waikato region. Interviews were conducted by telephone in October and November 2000.

The sample was selected using variable sample fractions and weighted appropriately. Telephone numbers were selected for inclusion using Telecom's random number service. Accurate sub-samples were achieved through both electronic and manual screening.

A sample of 1873 has a maximum margin of error of ±2.26 at the 95% confidence level. Sub-samples have a higher maximum margin of error.

The results are summarised in this Key Point Summary and described in the remainder of the report. More detailed analysis is available in the following documents which are available under separate cover:

- "Key Data"
- "Key Demographic and Geographic Analysis including Confidence Levels".

1.2 Participant Description

Rural people were deliberately over-represented in the sample, to achieve a statistically significant sample in each rural area. Thus almost half (46%) of participants were rural and just over half (54%) were urban. Weighting was used to adjust the total results to account for this.

Half (49%) of the participants were male and half (51%) were female. This exactly replicates the gender balance of the region and was achieved through quota sampling.

Quota sampling was planned to ensure Maori were adequately represented in the study, but was only used in two districts. In some districts, Maori were slightly over-represented in the sample (+4%).

1.3 Environmental Issues

1.3.1 Perceived Changes In The Local Environment

Summary of Responses	Better	Same	Worse	Unsure	Total
The water quality in your local streams, rivers, and lakes	16%	45%	29%	10%	100%
The level of pollution or waste produced by nearby businesses, farms and industries	19%	37%	29%	15%	100%
The availability of waste recycling services and facilities in your area	39%	33%	25%	4%	100%
The careful use of chemicals and sprays	33%	33%	12%	21%	100%
Soil and land erosion	19%	42%	23%	16%	100%
The number of animal pests	20%	38%	31%	11%	100%
The number of plant pests and weeds	22%	38%	33%	7%	100%
The fencing off of areas of native bush or wetland on private property	33%	29%	4%	34%	100%
The correct disposal of rubbish and waste	42%	32%	22%	4%	100%
Change in overall state of environment	45%	38%	16%	1%	100%

Some rows may not appear to equal 100% due to rounding

Participants were read a list of environmental issues and asked to say whether they considered each had become better, worse or stayed the same.

Two-fifths said the correct disposal of waste (42%) and availability of recycling facilities and services (39%) had become better. One-third said the careful use of chemicals and sprays (33%) and fencing off of native bush or wetland on private property (32%) had become better.

One-fifth said each other issue had become better, except the water quality in local streams, rivers and lakes that only sixteen percent (16%) answered had become better. This is evident in the table above.

Participants were also asked to use the same scale to rate how the overall state of the environment had changed. Forty-five percent (45%) of participants said the overall state of the environment had become better.

Compared with results from the 1998 survey, the results for this survey indicate that there was a decline in the number of participants who considered that the following issues had become better:

- water quality in your local streams, rivers, and lakes
- level of polution or waste produced by nearby businesses, farms and industries
- availability of waste recycling services and facilities in your area
- careful use of chemicals and sprays
- number of plant pests and weeds
- overall change in the state of the environment.

There was an increase in the number of people who considered that soil and land erosion had become better.

% change 1998 - 2000	Better	Same	Worse	Unsure
The water quality in your local streams, rivers, and lakes	-4%	2%	4%	-2%
The level of pollution or waste produced by nearby businesses, farms and industries	-10%	1%	8%	0%
The availability of waste recycling services and facilities in your area	-2%	4%	4%	-5%
The careful use of chemicals and sprays	-10%	11%	3%	-5%
Soil and land erosion	6%	-2%	1%	-5%
The number of animal pests	-9%	4%	-3%	8%
The number of plant pests and weeds	-2%	-5%	3%	4%
The fencing off of areas of native bush or wetland on private property	-21%	7%	-3%	17%
Change in overall state of environment	-10%	6%	4%	0%

Percentage change may not appear to equal 0 due to rounding

1.3.2 Most Important Environmental Issue

The results suggest water pollution and refuse issues, including recycling, were considered the most important current and future issues:

- When asked to name the most important environmental issue facing the Waikato region today, the most common responses related to water pollution (30%), water-quality or supply (9%) and rubbish disposal or refuse issues (19%).
- When asked to name the next most important issue water pollution (13%), water quality and supply issues (7%) and rubbish disposal (10%) were the most common issues.
- When asked what they thought would be the most important environmental issue facing them in five years time the most common response was rubbish disposal (19%). Two percent (2%) specified recycling. Fourteen percent (14%) said water pollution and one-tenth (10%) said water quality and supply.

Water Pollution (25%) and Water Quality (8%), Correct Rubbish Disposal (17%) and recycling (7%), and Air Pollution were also the key issues facing the Waikato Region in the 1998 Survey.

1.3.3 Level Of Concern

Summary of Responses	Not concerned	Neither/nor	Concerned	Don't know	Total
Water pollution from industry	13%	4%	80%	3%	100%
The state of native bush and wetlands on private property	28%	11%	52%	9%	100%
Water pollution from farmland	18%	5%	71%	5%	100%
Loss of the natural character of the region's beaches through development	19%	9%	65%	6%	100%
Water pollution from towns and city areas	13%	5%	80%	3%	100%
Soil and land erosion	21%	9%	65%	5%	100%
The state of our coasts	17%	9%	66%	9%	100%
The spread of cities/towns across farmland	27%	10%	62%	2%	100%

Some rows may not appear to equal 100% due to rounding

Participants were asked to say whether they were not concerned, concerned or neither concerned nor unconcerned with each of eight environmental issues.

Most participants were concerned about water pollution from industry (80%) and water pollution from towns and city areas (80%). Fewer (72%) were concerned about water pollution from farmland.

Approximately two-thirds expressed concern with the state of coasts (66%), soil and land erosion (65%) and loss of the natural character of the region's beaches through development (65%).

The spread of cities and towns across farmland was of concern to three-fifths (61%), while half (52%) were concerned about the state of native bush and wetlands on private property.

1.4 Air Quality

Are activities damaging air quality?	Weighted total
Yes	46%
No	51%
Don't know	3%
Total	100%

Some rows may not appear to equal 100% due to rounding

Almost half (46%) of participants said there were activities damaging the air quality in the region. The most commonly mentioned air damaging activities were vehicle emissions (47%), industrial emissions (38%) and sprays or other chemicals (17%).

1.5 Environmental Knowledge

Summary of Responses	Agree	Depends	Disagree	Don't know	Total
Grazing stock in native bush is not harmful to the bush	10%	8%	77%	6%	100%
Most stormwater drains and road gutters drain directly into streams, rivers or the sea	71%	2%	15%	11%	100%
Pollution in the Region's rivers and streams comes mainly from farmland	35%	8%	49%	7%	100%
Most of the oil in our lakes, rivers and harbours gets there from spillage from industries	65%	6%	19%	9%	100%
Land-based activities have an effect on the health of our coasts and harbours	83%	4%	8%	5%	100%

Some rows may not appear to equal 100% due to rounding

Participants were read a list of five things that might harm the environment and asked to say whether they agreed or disagreed about the environmental effects of each one. Most questions were framed in the positive and one in the negative. For sake of comparison this response is reported as disagreed.

Most participants (83%) agreed that land-based activities have an effect on the health of our coasts and harbours. Over three-quarters (77%) disagreed that grazing stock in native bush is not harmful to the bush.

The majority agreed that most stormwater drains and road gutters drain directly into streams, rivers or the sea (71% - similar to 1998 results) and that most of the oil in our lakes, rivers and harbours gets there from spillage from industries (65%). Only one-third (35%) said pollution in the Region's rivers and streams comes mainly from farmland.

1.6 Natural Hazards

When participants were asked to name natural hazards they considered could damage them or their property the most common responses were earthquakes (35%), flooding (33%) and high winds, storms and cyclones (26%). Eleven percent (11%) named erosion and slips and a further one-tenth (10%) named volcanic or thermal eruption. The main increases in hazard identification between the 1998 and 2000 surveys are: earthquakes (+24%), flooding (+11%) and high winds (+11%).

Nineteen percent (19%) considered there were no natural hazards that would be potentially damaging to them or their property. This is a significant decrease (24%) from the 1998 survey, when 43% of participants considered that there were no hazards that could damage them or their property.

How prepared for a natural disaster	Weighted Total
Very well	8%
Fairly well	42%
Not very well	33%
Not at all	15%
Don't know	1%
Total	100%

Half (50%) of the participants considered themselves well prepared for a natural disaster. This is similar to the 1998 results when only those who had identified natural hazards were asked to assess their level of preparedness.

1.7 Attitudes Towards The Environment

1.7.1 Environmental Issues

Summary of Responses	Disagree	Neither/nor	Agree	Don't know	Total
The balance of nature is very delicate and easily upset	7%	2%	90%	1%	100%
Modifying the environment for human use seldom causes serious problems	77%	5%	13%	4%	100%
Plants and animals exist primarily to be used by humans	68%	5%	25%	2%	100%
The earth is like a spaceship with only limited room and resources	10%	2%	84%	3%	100%
There are limits to economic growth even for developed countries like ours	21%	4%	71%	5%	100%
Humans were meant to rule over the rest of nature	73%	5%	19%	2%	100%

Some rows may not appear to equal 100% due to rounding

Participants were read a list of six statements about attitudes to the environment. Some were worded so that an "agree" response was environmentally positive.

Others were worded so that an “agree” response was environmentally negative. For the purpose of comparison, those significantly more likely than the average regional resident to “disagree” with the negative statements is discussed.

Most participants (90%) agreed that the balance of nature is very delicate and easily upset (same as in 1998) and many (84%) agreed that the earth is like a spaceship with only limited room and resources. Several disagreed that modifying the environment for human use seldom causes serious problems (78%).

Seven-tenths (71%) of participants agreed that there are limits to economic growth even for developed countries like ours. Similar proportions disagreed with each other environmentally negative response, as demonstrated in the table.

Responses to these questions were combined to produce a “New Environmental Paradigm” (NEP) rating for each participant. The maximum obtainable score for the exercise is “30”, indicating complete agreement with positive environmental statements. The mean score was 23.26.

1.7.2 Balancing Environmental And Economic Interests

Summary of Responses	Disagree	Depends	Agree	Don't know	Total
Council should enforce its rules and laws to make sure that the environment is well looked after	3%	9%	87%	1%	100%
The public have enough to say in the way the environment is managed	56%	10%	28%	5%	100%
Landowners should be allowed to do what they like on their own land	51%	35%	14%	0%	100%
The most important objective of any business should be to maximise profit even if that means damaging the environment	95%	3%	1%	1%	100%
Businesses usually find it is too expensive to be more environmentally friendly	28%	10%	58%	4%	100%
Government restrictions on the use of private property are necessary so that the environment will not be harmed	9%	20%	67%	3%	100%
A healthy environment is necessary for a healthy economy	5%	3%	90%	2%	100%
It is okay to sacrifice environmental quality for economic growth	82%	10%	7%	2%	100%
Environmental protection and economic development can go hand in hand	3%	5%	89%	2%	100%
There is a lot I, as an individual, can do to protect the environment	5%	4%	90%	1%	100%
The use of biological controls, such as immuno-contraceptives for possum control, is acceptable to me	11%	8%	70%	12%	100%

Some rows may not appear to equal 100% due to rounding

When asked questions about economic and environmental concepts, most (95%) disagreed that the most important objective of any business should be to maximise profit, even if that means damaging the environment. Most agreed that:

- A healthy environment is necessary for a healthy economy (90%).
- There is a lot they, as an individual, can do to protect the environment (90%).

- Environmental protection and economic development can go hand in hand (89%).

- Council should enforce its rules and laws to make sure that the environment is well looked after (87%).

Four-fifths (82%) agreed that it is not okay to sacrifice environmental quality for economic growth and two-thirds (67%) agreed that government restrictions on the use of private property are necessary so that the environment will not be harmed.

The majority (58%) agreed that businesses usually find it too expensive to become more environmentally friendly. Over half (56%) disagreed that the public have enough say in the way the environment is managed and half (51%) disagreed that landowners should be allowed to do what they like on their own land.

Seven-tenths (70%) agreed that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable to them.

% change 1998 - 2000	Disagree	Depends	Agree	Don't know
The public have enough to say in the way the environment is managed	9%	-2%	-9%	2%
Landowners should be allowed to do what they like on their own land	3%	4%	-7%	0%
Businesses usually find it is too expensive to be more environmentally friendly	4%	0%	-2%	-1%
There is a lot I, as an individual, can do to protect the environment	-3%	-1%	4%	0%
The use of biological controls, such as immuno-contraceptives for possum control, is acceptable to me*	-17%	-12%	22%	8%

Percentage change may not appear to equal 0% due to rounding
** Question was simplified from 1998 Survey*

Compared to 1998 results, participants in this survey are less likely to agree that the public have enough say in the way the environment is managed (-9%), that landowners should be allowed to do what they like on their own land (-7%), and that businesses usually find it is too expensive to be more environmentally friendly.

In the 2000 survey, people are more likely to agree that there is a lot they, as individuals, can do to protect the environment (+4%) and that the use of biological controls, such as immunocontraceptives for possum control, is acceptable to them (+22%).

Responses to key indicator questions were combined to produce a "Balancing Economy and Environment" rating for each participant. The maximum obtainable score for the exercise was 15, indicating complete agreement with statements favouring the environment. The mean score was 13.78.

A "Regulation versus environment" rating was calculated using the same method. The maximum obtainable score was 9, indicating complete agreement with statements favouring regulation for protection of the environment. The mean score for participants was 7.8.

1.8 Participation In Processes With The Aim Of Protecting The Environment

1.8.1 Took Action To Protect The Environment

Reported Behaviour – Protecting the Environment	Weighted total
Yes	23%
No	77%
Total	100%

Almost one-quarter (23%) of participants said that they had tried to get information, advice or been involved in some kind of public meeting, official hearing or consent process with the aim of protecting the environment. A large majority (77%) said they had not.

Of those participants who had taken action with the aim of protecting the environment, approximately two-fifths (43%) had attended a meeting and one-fifth (18%) had joined an action group. Approximately one-tenth had:

- Made a formal submission (13%)
- Read or sought information (12%).
- Been involved in a resource consent procedure (11%).
- Complained to a Council or other organisation (8%).
- Telephoned a council or other organisation (7%).

1.8.2 Views On Environmental Practices

Summary of Responses	Disagree	Already do this	Agree	Unsure/ don't know	Total
I would recycle more if there were convenient recycling facilities available	5%	16%	79%	1%	100%
I would dispose of things properly if I knew where to take them	6%	22%	72%	1%	100%
I'm not convinced that products that claim to be better for the environment actually are	17%	0%	71%	12%	100%
I would use public transport instead of my car if it were available and convenient	30%	2%	62%	6%	100%
Lack of time prevents me from doing more to help the environment	47%	0%	50%	2%	100%
I am not interested in doing things that help the environment	95%	1%	3%	1%	100%
Actions to help the environment cost more money than I can afford	58%	1%	34%	8%	100%

Some rows may not appear to equal 100% due to rounding

Participants were read a list of statements about their views on environmental practices. Most (95%) disagreed that they were not interested in doing things that helped the environment. Many agreed they would recycle more if there were convenient recycling facilities available (79%) and that they would dispose of things properly if they knew where to take them (72%).

Three-fifths said they would use public transport instead of their car if it were available and convenient (62%), and a similar proportion disagreed that actions to

help the environment cost more money than they could afford (58%). Half (50%) agreed lack of time prevented them from doing more to help the environment. Many (71%) agreed they were not convinced that products that claim to be better for the environment actually are.

1.8.3 Reported Behaviour

Summary of Responses	Never do it	Sometimes do it	Often do it	Always do it	NA/Don't do it	Total
Decide for environmental reasons to re-use something yourself instead of throwing it away	9%	37%	38%	17%	1%	100%
Compost your food and/or garden wastes	21%	13%	15%	50%	0%	100%
Recycle bottles or cans or paper or plastic instead of throwing them away	16%	22%	24%	37%	1%	100%
Buy household products that you think are better for the environment	19%	33%	25%	20%	3%	100%
Get the car tuned regularly	9%	11%	18%	58%	5%	100%
Make an effort to reduce water consumption	21%	24%	26%	28%	1%	100%
Use buses, walk or ride a bicycle to reduce car use	48%	22%	18%	8%	5%	100%
Put things into the gutters or stormwater drains, like oil or detergent	97%	2%	0%	0%	0%	100%

Some rows may not appear to equal 100% due to rounding

Participants were read a list of environmental practices and asked to say how frequently they undertook each one. When asked whether they put oil, detergent or the like into the gutters or stormwater drains, most (97%) said they did not.

The majority (58%) said they always get their car tuned regularly, and half (50%) said they always compost organic wastes like food or garden waste. Thirty-seven percent (37%) said they always recycle bottles, cans, paper or plastic instead of throwing them away and twenty-eight percent (28%) said they always make an effort to reduce water consumption.

One-fifth (20%) said they always buy household products that they think are better for the environment and a similar proportion (17%) said they always decide for environmental reasons to re-use something themselves instead of throwing it away. Few (8%) said they always used a bus, walked or rode a bicycle to reduce car use.

1.8.4 Additional Action Taken

Almost two-fifths (37%) were able to describe additional actions they had taken to help the environment. The most commonly reported actions were planting trees, shrubs or other flora (33%), taking care to dispose of waste effectively (18%) and becoming more aware or taking up educational opportunities (17%).

1.9 Satisfaction With Local Environment

Satisfaction with local environment	Weighted total
1	1%
2	1%
3	2%
4	6%
5	16%
6	22%
7	30%
8	17%
9	3%
10	1%
Don't Know	1%
Total	100%

Toward the end of the interview participants were asked to rate their satisfaction with their local environment on a scale from one to ten, where one indicated "completely unsatisfactory" and ten indicated "perfect in every way". The mean score was 6.42. The most common responses were on or above the mid point:

1.10 Advanced Analysis

Cluster analysis divided the participants into five clusters. The key differentiators were participants' views on the level of pollution or waste, water quality in streams, overall satisfaction with environment and availability of recycling services. Cluster membership was analysed demographically and by area. Multivariate analysis was used to explore which people are most or least likely to perform pro-environmental behaviours and who is most likely to have barriers to positive environmental behaviour.

The main demographic variable that emerged for all three scales of NEP, Attitudes to Environmental Regulation and Economy Versus Environment Rating was education. The higher the educational qualification, the stronger the membership of the high group.

2 Research Method

2.1 Overview

This report describes the views of 1873 residents of the Environment Waikato region. Interviews were conducted by telephone from 13th October 2000 to 14th November 2000. The sample was selected using variable sample fractions and weighted appropriately.

2.2 Questionnaire Development and Pilot Survey

The questionnaire was designed by Environment Waikato and Key Research, building on previous environmental attitude and perceptions studies. Since this is a regular monitor, priority was placed on maintaining questions in their current format for sake of comparison. The research needs of the organisation were also reviewed to ensure the current type and range of questions are still appropriate.

A pilot survey of thirty participants was conducted. At the conclusion of the trial, recommendations about questionnaire and analysis were made to Environment Waikato. A peer reviewer checked the questionnaire and trial results before alterations were made to the questionnaire.

2.3 Sampling

2.3.1 Source Of And Selection Method For Telephone Numbers

Telephone numbers were selected for inclusion using Telecom's random number service. Accurate sub-samples were achieved through both electronic and manual screening. Numbers were selected independently for each district council area and for rural and urban areas within each council, other than Hamilton and Franklin.

This approach was preferred to manual selection from the telephone directory because there is no room for interviewer bias and the numbers are up-to-date. It was preferred to random digit dialling due to issues of practicality and nuisance. Both electronic and manual checks were made to ensure people from outside the region were excluded from the study (for example parts of Franklin and Rotorua that are not in the Waikato Region).

2.3.2 Sampling Method

The variable sample fractions approach to sampling was used. The number interviewed from each category was weighted. Weighting ensured that each category of respondent was given their due importance in the overall results.

Variable sample fractions were attached to "place of residence" so that there was a minimum of 80 rural per territorial local authority (TLA) excluding Hamilton that is predominantly urban. Urban participants were represented on a "proportion of urban population" basis.

Stratified sampling (using quota) was applied within each group to ensure that each category was represented in the sample in the same proportion that it is represented in the total population. Stratified sampling was applied to gender and ethnicity. Details of quota targets and achievements are presented in Appendix Two.

2.4 Interviewing Procedures

Trained, experienced and well-briefed professional interviewers conducted all interviews. They attended a specific project briefing before commencing work on this project. Interviewers were provided with a list of random numbers to call. They called the numbers in the order provided.

Unanswered or engaged numbers were recalled at least four times before being replaced in the sample by a new number. The second attempt was made at least two hours after the first. Third and fourth calls were made on a different day. The date, time and outcome of each attempt were recorded on the call sheet as an audit trail. Telephone interviewing hours were limited to:

- Urban sample: 5pm to 9pm on weekdays and 10am to 9pm on weekends.
- Rural sample: 8:30am to 8:30pm.

Where possible interviewers avoided making calls during national sports fixtures on free television, as doing so may have resulted in a decreased response rate. The interviewers were instructed not to reword the questions if the participant had difficulty understanding and were trained to restate the question.

Interviewer quality was assessed by re-calling five percent (5%) of participants to check interviewer performance. This was in addition to other regular performance monitoring techniques.

Any concerns about the questionnaire were immediately reported to a researcher. A researcher was available by telephone at all interviewing times. Two participants took the opportunity to ring the research team because they were unhappy with the questionnaire content. Both stated the questions were too "theoretic". The interviewers also reported this concern on behalf of participants.

2.5 Response Rate

The response rate for this survey was 60%. Environment Waikato's decision to offer a prize draw incentive to encourage participation is considered to have had a positive impact on responses, as did stressing the name Environment Waikato and the public benefits of the survey.

The questionnaire length and complexity had a negative impact on response, with interviewers noting that several potential participants chose not to take part in the study after enquiring about the interview length. The average interview length was seventeen minutes.

Reasons participants offered for non-participation were, in order of frequency: lack of interest in the topic, being too busy, feeling the interview was too long, considering themselves too old to participate, being hard of hearing, unwell or having poor English language skills, or being new to the area and therefore considering themselves unable to participate.

2.6 Statistical Analysis

A sample of 1873 has a maximum margin of error of $\pm$2.26 at the 95% confidence level. Sub-samples have a higher maximum margin of error. All responses have been subjected to tests of statistical significance at the 95% and 90% confidence level. In the sections of this report which report the results by demographic characteristics and area, only those differences which are significant to the 90% confidence level or better, are discussed.

Approximately eighty (80) rural participants were interviewed from each of the districts in the region. Urban participants were interviewed in proportion to their share of the urban population. All weighting was completed on the basis of data obtained directly from Statistics New Zealand relating to the Environment Waikato results from the 1996 census.

Basis of Weighting		Percent in population	Percent in sample	Weighting factor	Margin of Error
Franklin District (Part)*	Urban	1.43%	0.96%	149.03%	10.5%
	Rural	2.33%	4.11%	56.58%	
Thames-Coromandel District	Urban	5.33%	3.58%	148.97%	8.08%
	Rural	2.31%	4.27%	54.20%	
Hauraki District*	Urban	2.51%	1.71%	146.81%	9.22%
	Rural	2.29%	4.32%	52.97%	
Waikato District	Urban	7.57%	5.29%	143.24%	7.32%
	Rural	3.15%	4.27%	73.67%	
Matamata-Piako District*	Urban	4.62%	3.26%	141.71%	8.22%
	Rural	3.79%	4.32%	87.58%	
Hamilton City	Urban	32.21%	21.94%	146.78%	4.83%
Waipa District	Urban	9.04%	6.19%	146.02%	6.98%
	Rural	1.96%	4.32%	45.32%	
Otorohanga District*	Urban	0.76%	0.48%	157.64%	10.76%
	Rural	1.93%	3.95%	48.81%	
South Waikato District	Urban	5.14%	3.63%	141.49%	8.06%
	Rural	1.47%	4.27%	34.36%	
Waitomo District*	Urban	1.26%	0.85%	147.88%	9.56%
	Rural	1.40%	4.75%	29.37%	
Taupo District (Part)	Urban	6.93%	4.86%	142.71%	7.45%
	Rural	1.69%	4.38%	38.60%	
Rotorua District (Part)*	Rural	0.89%	4.27%	20.92%	10.96%

In the tables of data, which accompany this report, responses are analysed by demographics and area. Some of these results related to very small sample sizes and should be treated with caution. The affected areas, which are indicated by "*" are:

- Franklin Urban
- Hauraki Urban
- Otorohanga Urban
- Waitomo Urban

Scales and indices were calculated by totalling the scores for all indicator questions. Environmentally negative questions were re-coded to be compatible with the positive questions and non-responses were treated as environmentally neutral.

Cluster analysis was performed using a K-means cluster and F-ratio calculation. The data was also investigated with AnswerTree, which uses chi-squared automatic interaction detection. Cluster membership was analysed across the demographic and area categories used in this report.

Multivariate analysis was conducted using a variety of procedures including cross tabulations of mean scores, error-bar graphs to test for significance (95% confidence level) correlation tests to indicate relationships between variables, AnswerTree analysis and one-way ANOVA tests (95% confidence level).

2.7 Reporting

This report :

- Describes the overall results.
- Compares these to previous results from the 1998 survey.
- Highlights significant differences in the results when analysed by demographic variables.
- Highlights significant differences in the results when analysed by District and area.

Full analysis of demographic and geographic variables is contained in the supplementary technical publication "Key Demographic and Geographic Analysis". This includes:

- Demographic analysis – age, gender, residence, income, ethnicity.
- Geographic analysis – TLA, with urban and rural participants separately identified.
- Qualification, Education and Occupation analysis.
- These analyses are presented with five step scales shown in full and collapsed to three steps for ease of interpretation.
- Comparative analysis – the 2000 results compared with 1998 responses.
- Confidence levels - statistical significance test to denote whether demographic and geographic groups differ significantly from the mean.

Full statistical analysis is available in the supplementary technical publication "Key Data". This includes:

- New Environmental Paradigm Scale
- Environment versus Economy
- Environment Vs Regulations
- Cluster analysis
- Multivariate analysis

3 Participant Description

3.1 District And Area

Selected Variables	Area	Target Sample	Actual Sample	Target Percent in Sample	Actual Percent in Sample	Percent Population
Franklin District (Part)*	Urban	18	18	1%	1%	1%
	Rural	80	77	4%	4%	2%
Thames-Coromandel District	Urban	67	67	4%	4%	5%
	Rural	80	80	4%	4%	2%
Hauraki District*	Urban	31	32	2%	2%	3%
	Rural	80	81	4%	4%	2%
Waikato District	Urban	95	99	5%	5%	8%
	Rural	80	80	4%	4%	3%
Matamata-Piako District*	Urban	58	61	3%	3%	5%
	Rural	80	81	4%	4%	4%
Hamilton City	Urban	403	411	22%	22%	32%
	Rural					
Waipa District	Urban	113	116	6%	6%	9%
	Rural	80	81	4%	4%	2%
Otorohanga District*	Urban	9	9	1%	0%	1%
	Rural	80	74	4%	4%	2%
South Waikato District	Urban	64	68	3%	4%	5%
	Rural	80	80	4%	4%	1%
Waitomo District*	Urban	16	16	1%	1%	1%
	Rural	80	89	4%	5%	1%
Taupo District (Part)	Urban	87	91	5%	5%	7%
	Rural	80	82	4%	4%	2%
Rotorua District (Part)*	Urban			0%	0%	
	Rural	80	80	4%	4%	1%
Sample compositions		1840	1873	100%	100%	100%

The Environment Waikato region covers all or part of twelve District Council areas. Data for this study was collected using variable sample fractions, with specific quotas for each area, and for rural and urban participants within each area.

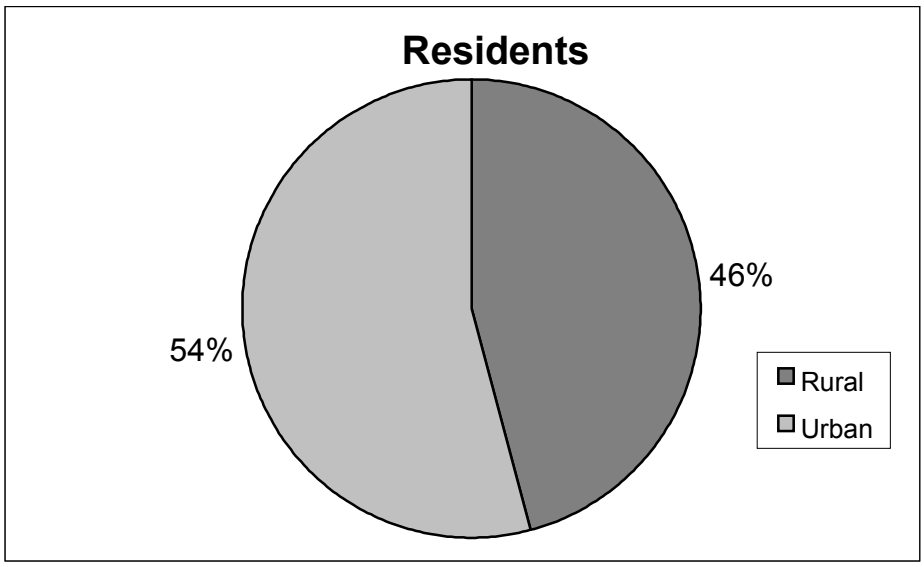
The resulting sample matched the project requirements and provides a good basis for analysis by both District and place of residence. A full comparison of the project targets and achievements is attached as Appendix Two.

The table shows the target and actual sample sizes, along with the proportion of population for each area.

3.2 Place Of Residence

Participants were classified as either "urban" or "rural" for analysis purposes. Self-reported definitions of place of residence were not consistent with Environment Waikato classifications and were re-coded. Those living in townships of less than 1000 residents were classified as rural based on Department of Statistics' definitions of rural.

A variable sample fractions approach was used to ensure the rural people were sufficiently represented in the sample to allow for meaningful comparisons to be made between the responses of the two groups. This means rural people were deliberately over-represented in the sample (46% of the sample compared with 23% of the actual population). Weighting was used to adjust the total results to account for this.

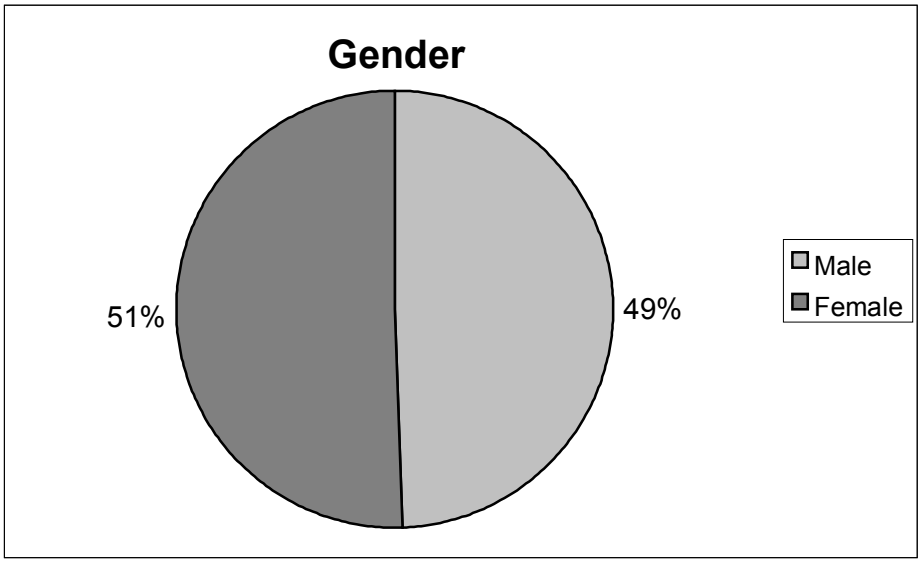


*Graph shows percentage of sample.

3.3 Gender

Half (49%) of participants were male and half (51%) were female. This exactly replicates the gender balance of the region and was achieved through quota sampling.

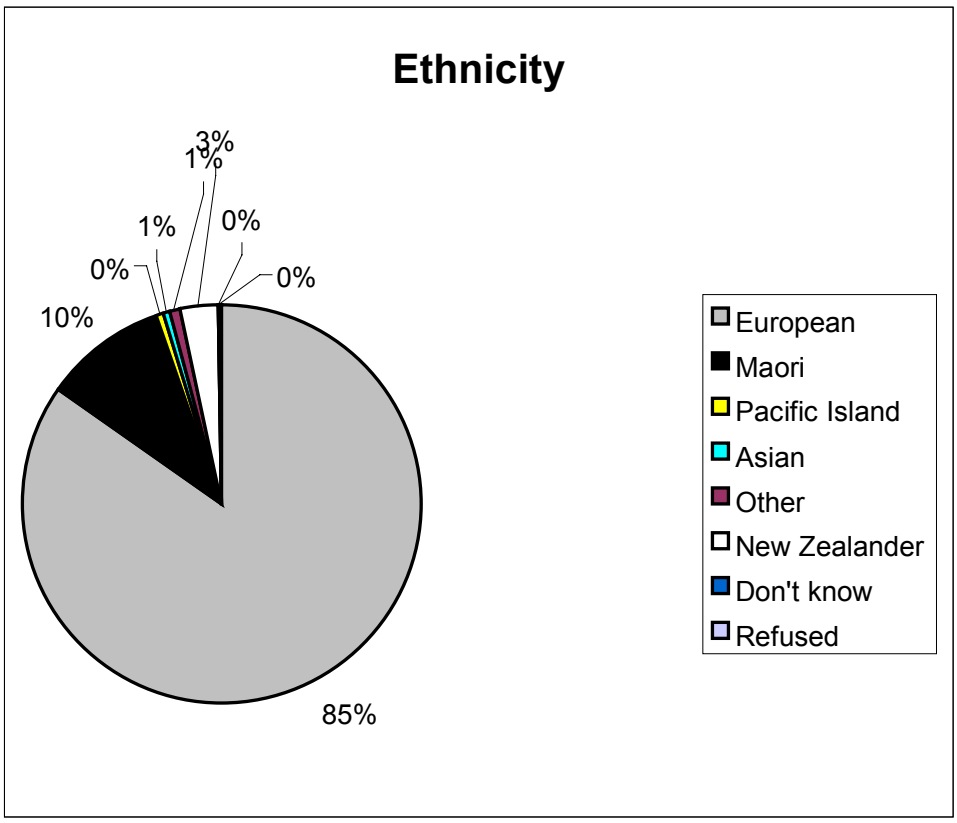
Gender composition of sample compared with census	Population*	Sample	Difference
Male	49%	49%	0%
Female	51%	51%	0%



**Graph shows percentage of sample.*

3.4 Ethnicity

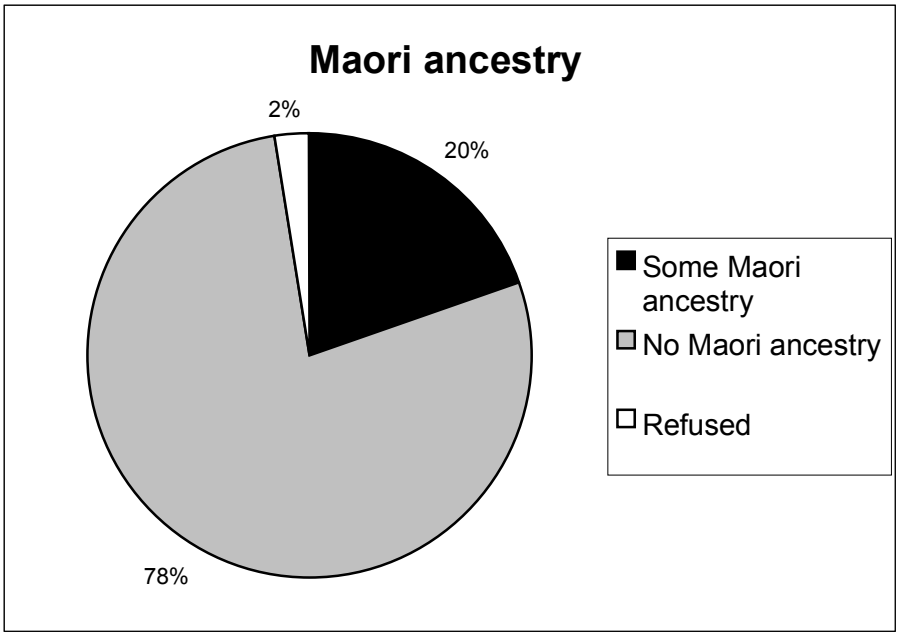
Most (85%) participants considered themselves European, one-tenth (10%) viewed themselves as Maori and a small proportion were from other ethnic groups.



**Graph shows percentage of sample.*

Since ethnicity information in census data treats all people with Maori ancestry as Maori, participants were also asked to say whether they had some Maori ancestry or no Maori ancestry.

As a result a further one-tenth (+10%) reported that they had some Maori ancestry, bringing the proportion of Maori interviewed up to one-fifth (20%), with most others being non-Maori (78%) and two percent (2%) being unwilling or unable to say.



**Graph shows percentage of sample.*

The responses to the question on ancestry have been used to analyse the results by ethnicity. They were also used to ensure Maori were represented in the sample to the same degree to which Maori are represented in the population.

Quota sampling was planned to ensure Maori were adequately represented in the study, but was only used in two districts. In some districts, Maori were slightly over-represented in the sample (+4%).

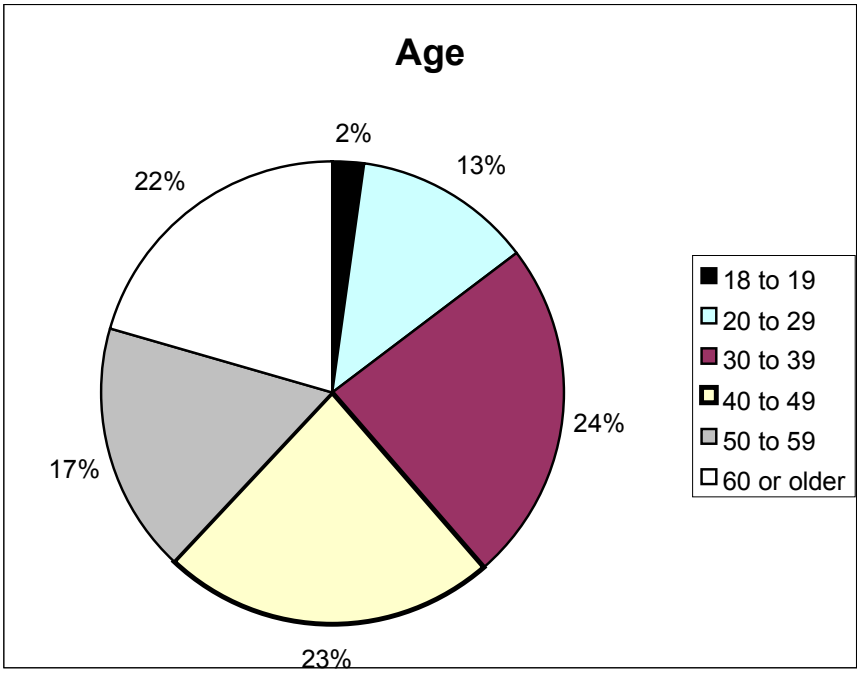
Ethnicity composition of sample compared with census	Population*	Sample	Difference
Maori	16%	20%	4%
Non-Maori	80%	78%	-2%
Not specified	4%	2%	-2%

** Source: Department of Statistics 1996 Census of Population and Dwellings*

3.5 Age

Fifteen percent (15%) of participants were aged under thirty years. One-quarter (24%) were aged 30-39, and a similar proportion (23%) were aged 40-49 years.

Almost one-fifth (17%) of participants were in the 50-59 age category and slightly more (22%) were aged sixty years or older.



**Graph shows percentage of sample.*

When the age of respondents is compared to the age profile evident in census data it was found that:

- Participants in the 18-29 age groups were under-represented by ten percent (-10%).
- There were small over-representations in each other age category.

It was expected that people under thirty might be under-represented in the sample and the decision was made not to correct for this through quota sampling, because priority was given to seeking quota's for gender and ethnicity. Under-representation of this age group is thought to reflect younger people being at home less often, living in group situations and being less interested in local body affairs.

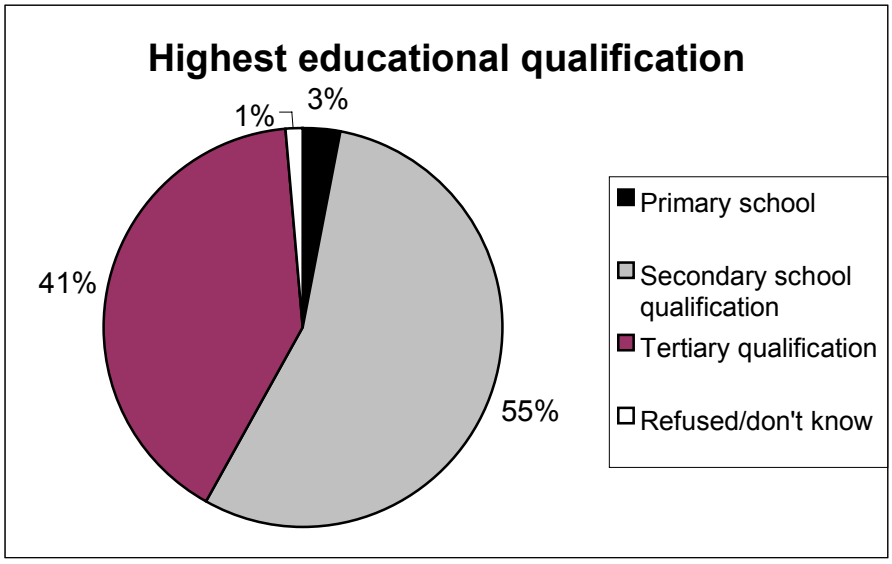
Age composition of sample compared with census	Population*	Sample	Difference
18-19 Years	4%	2%	-2%
20-29 Years	21%	13%	-8%
30-39 Years	22%	24%	2%
40-49 Years	19%	23%	4%
50-59 Years	13%	17%	4%
60 and over	21%	22%	1%

Source: Department of Statistics 1996 Census of Population and Dwellings
** May not add to 100% owing to rounding*

3.6 Highest Educational Qualification

Two-fifths (41%) of participants had tertiary level training. Trade certificate and other post-secondary school training were collapsed to one category "Tertiary education" for ease of analysis.

Over half (55%) reported that secondary school qualifications were their highest, while three percent (3%) listed primary school as their highest educational achievement. One percent (1%) did not respond.

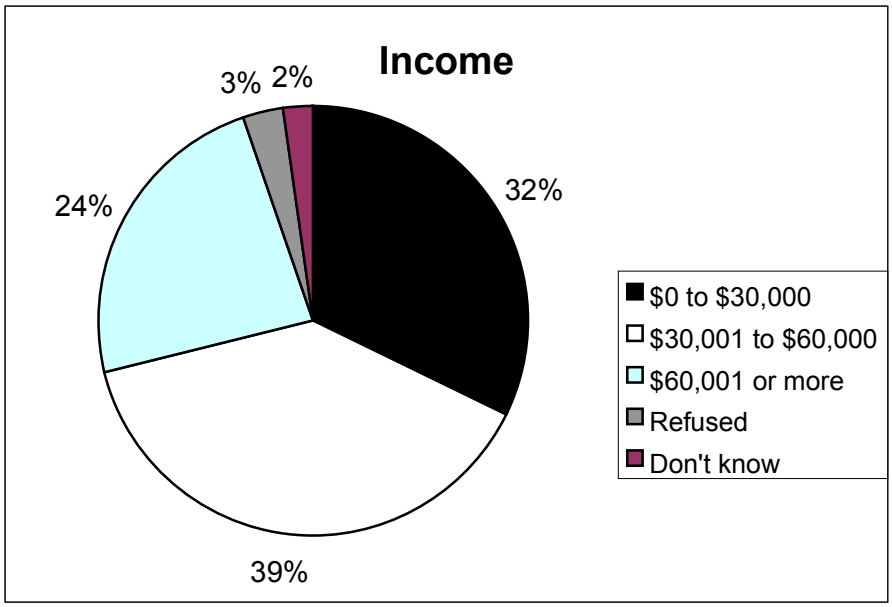


**Graph shows percentage of sample.*

In the tables of data, which accompany this report, responses are analysed by highest educational qualification. Since few participants (3%) reported primary school education as their highest qualification the results relating to this category should be treated with caution.

3.7 Income

One-third (32%) of participants reported having a total household income before taxation of up to $30,000. Two-fifths (39%) said their total household income before taxation was over $30,000 and up to $60,000. One-quarter (24%) reported a total household income before taxation of over $60,000, and a small proportion were unwilling or unable to answer (5%).



**Graph shows percentage of sample.*

The income profile of respondents cannot be accurately compared with census data due to changes in household income since the 1996 census was conducted.

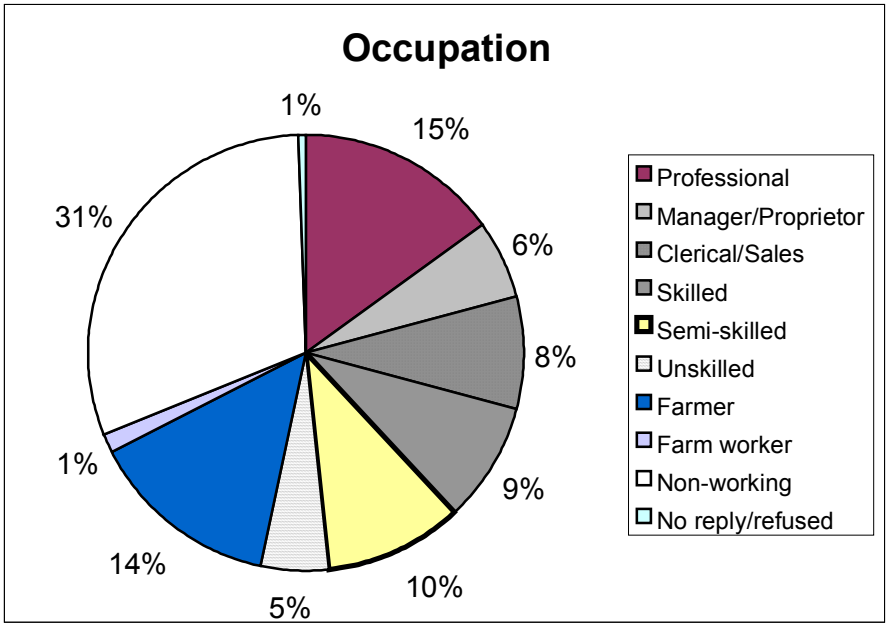
3.8 Occupation

Fifteen percent (15%) of participants listed themselves as having professional occupations. A further six percent (6%) were managers or business proprietors and eight percent (8%) were clerical or sales workers. Nine percent (9%) of participants

were in skilled occupations, 10% in semi-skilled, and five percent (5%) in unskilled work. These have all been included in the "non-farming" classification used for demographic analysis.

Fourteen percent (14%) of participants were farmers and a further one-percent (1%) listed their occupation as farm-worker. These have both been included in the "farming occupations" classification used for demographic analysis.

Almost one-third of participants (31%) were not in paid employment. This is almost identical (-1%) to the proportion reported in the 1998 survey. One percent (1%) did not disclose their occupation.



**Graph shows percentage of sample.*

4 Environmental Issues

4.1 Perceived Changes In The Local Environment

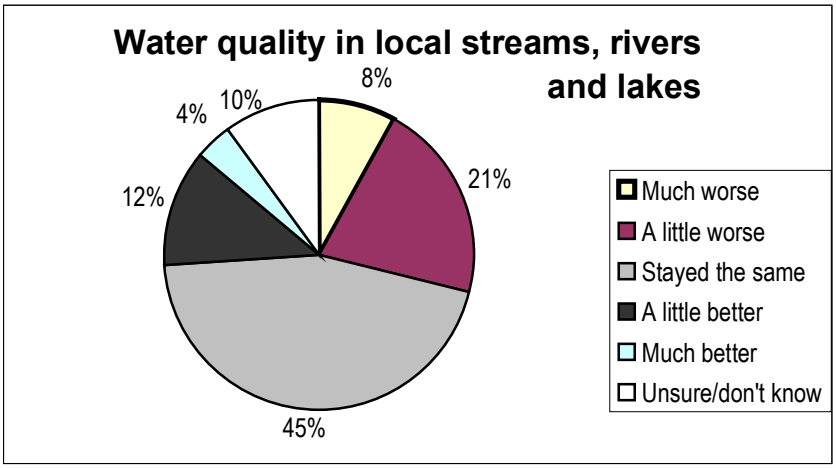
Environment Waikato monitors much of the region's physical environment using routine scientific testing. The following questions are designed to complement that scientific data with people's perceptions of whether aspects of their local environment are improving or becoming worse. These questions provide information on specific aspects of interest to Environment Waikato, such as water quality.

4.1.1 Water Quality In Local Streams, Rivers And Lakes

4.1.1.1 Overview Of Results

Eight percent (8%) of participants said the water quality in local streams, rivers and lakes had become much worse. A further one-fifth (21%) said it had become a little worse.

Forty-five percent (45%) of participants said it had stayed the same, while twelve percent (12%) thought it had become a little better and four percent (4%) said it had become much better. One-tenth (10%) were unsure.



**Graph shows percentage of weighted total*

4.1.1.2 Comparison To 1998 Study

When compared to the 1998 results there was a small increase in the perception that water quality in local streams, rivers and lakes had become worse (+4%) or stayed the same (+2%).

There was a decline in the proportion that considered water quality better (-4%) and a small decrease in the proportion who were unsure (-2%).

The water quality in your local streams, rivers, and lakes	1998	2000	Change	Change
Much worse	6%	8%	2%	4%
A little worse	19%	21%	2%	
Stayed the same	43%	45%	2%	2%
A little better	16%	12%	-4%	-4%
Much better	4%	4%	0%	
Unsure/don't know	12%	10%	-2%	-2%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.1.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to consider water quality in their local streams had become “a little worse” or “much worse” were:

- Aged 18-19 (95% confidence level).

Those significantly more likely than the average regional resident to consider water quality in their local streams had become “a little better” or “much better” were:

- In farming occupations (95% confidence level)

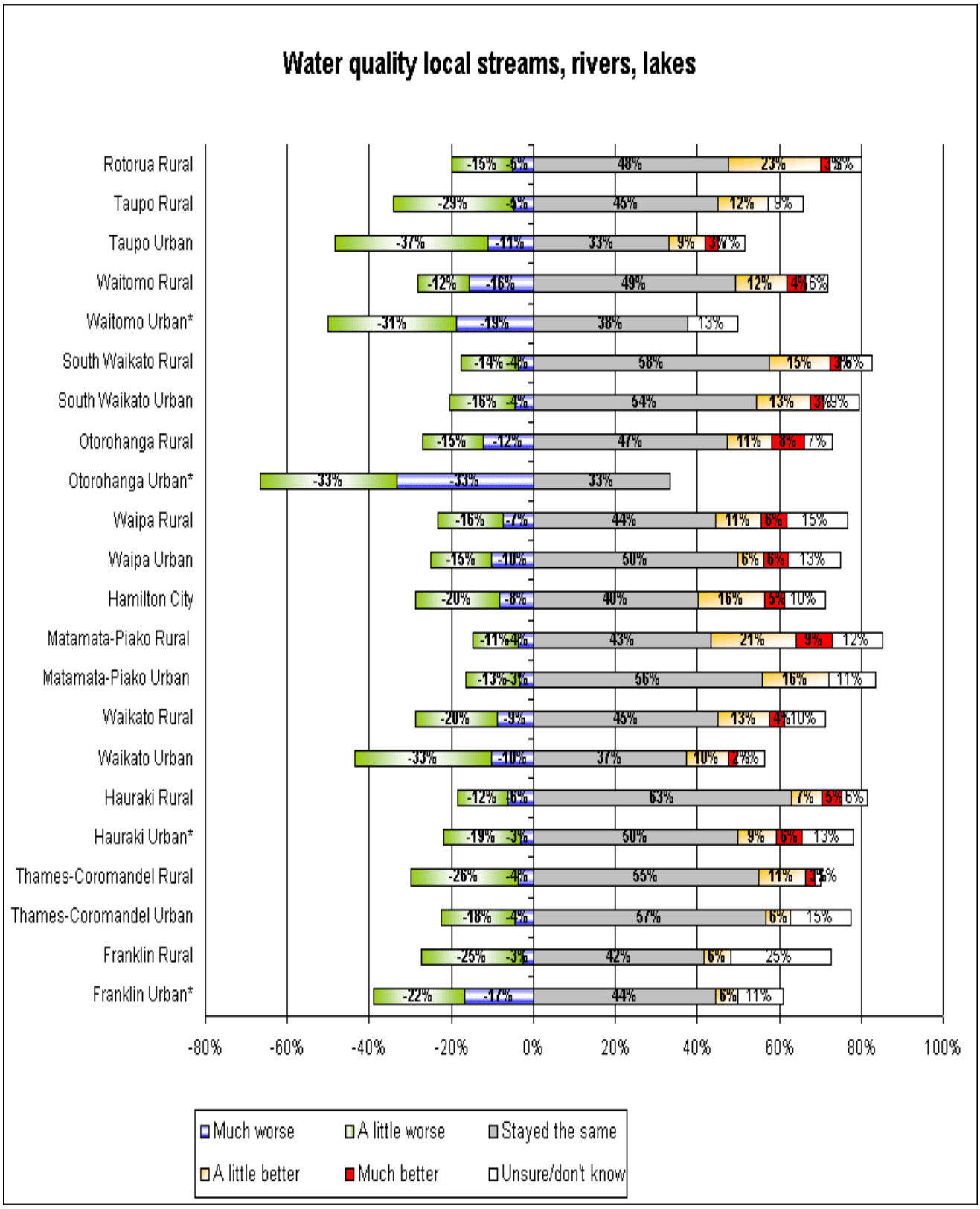
4.1.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider water quality in their local streams had become “a little worse” or “much worse” were in:

- Waikato Urban (95% confidence level)
- Otorohanga Urban (95% confidence level)
- Waitomo Urban (95% confidence level)
- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider water quality in their local streams had become “a little better” or “much better” were in:

- Matamata-Piako Rural (95% confidence level)
- Matamata-Piako Urban (90% confidence level)

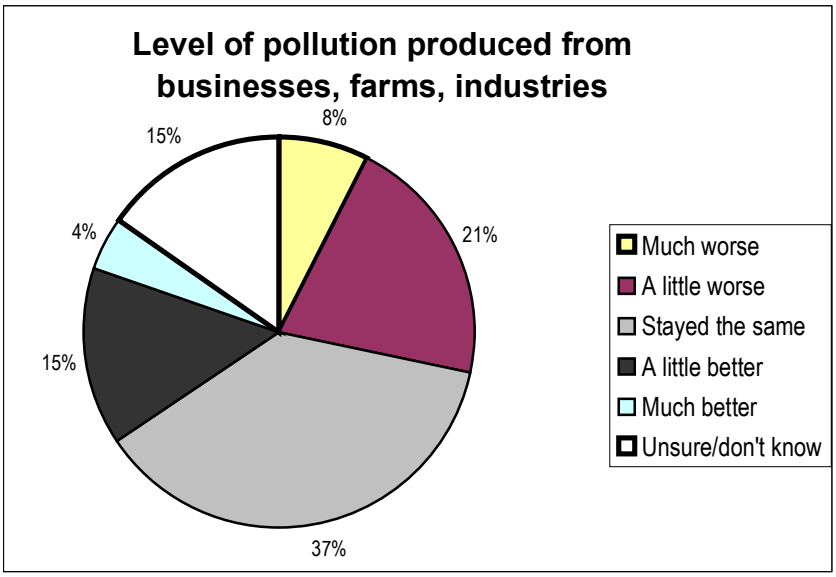


4.1.2 Level Of Pollution Or Waste Produced By Nearby Businesses, Farms And Industries

4.1.2.1 Overview Of Results

Eight percent (8%) of participants said the level of pollution or waste produced by nearby businesses, farms and industries had become much worse. A further one-fifth (21%) said it had become a little worse.

Over one-third (37%) of participants said it had stayed the same, while fifteen percent (15%) thought it had become a little better and four percent (4%) said it had become much better. Fifteen percent (15%) were unsure.



**Graph shows percentage of weighted total*

4.1.2.2 Comparison To 1998 Study

When compared to the 1998 results there was a small increase in the perception that the level of pollution or waste produced by nearby businesses, farms and industries had become worse (+7%) or stayed the same (+1%).

There was a decline in the proportion that considered the level of pollution or waste produced by nearby businesses, farms and industries to be better (-10%).

The level of pollution or waste produced by nearby businesses, farms and industries	1998	2000	Change	Change
Much worse	6%	8%	2%	8%
A little worse	15%	21%	6%	
Stayed the same	36%	37%	1%	1%
A little better	23%	15%	-8%	-10%
Much better	6%	4%	-2%	
Unsure/don't know	15%	15%	-0%	-0%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.2.3 Results by Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to consider the level of pollution or waste produced by nearby businesses, farms and industries had become "a little worse" or "much worse" were:

- Maori (95% confidence level)

Those significantly more likely than the average regional resident to consider the level of pollution or waste produced by nearby businesses, farms and industries had become “a little better” or “much better” were:

- Rural (95% confidence level)

- In farming occupations (95% confidence level)

4.1.2.4 Results by Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the level of pollution or waste produced by nearby businesses, farms and industries had become “a little worse” or “much worse” were in:

- Hamilton Urban (95% confidence level)

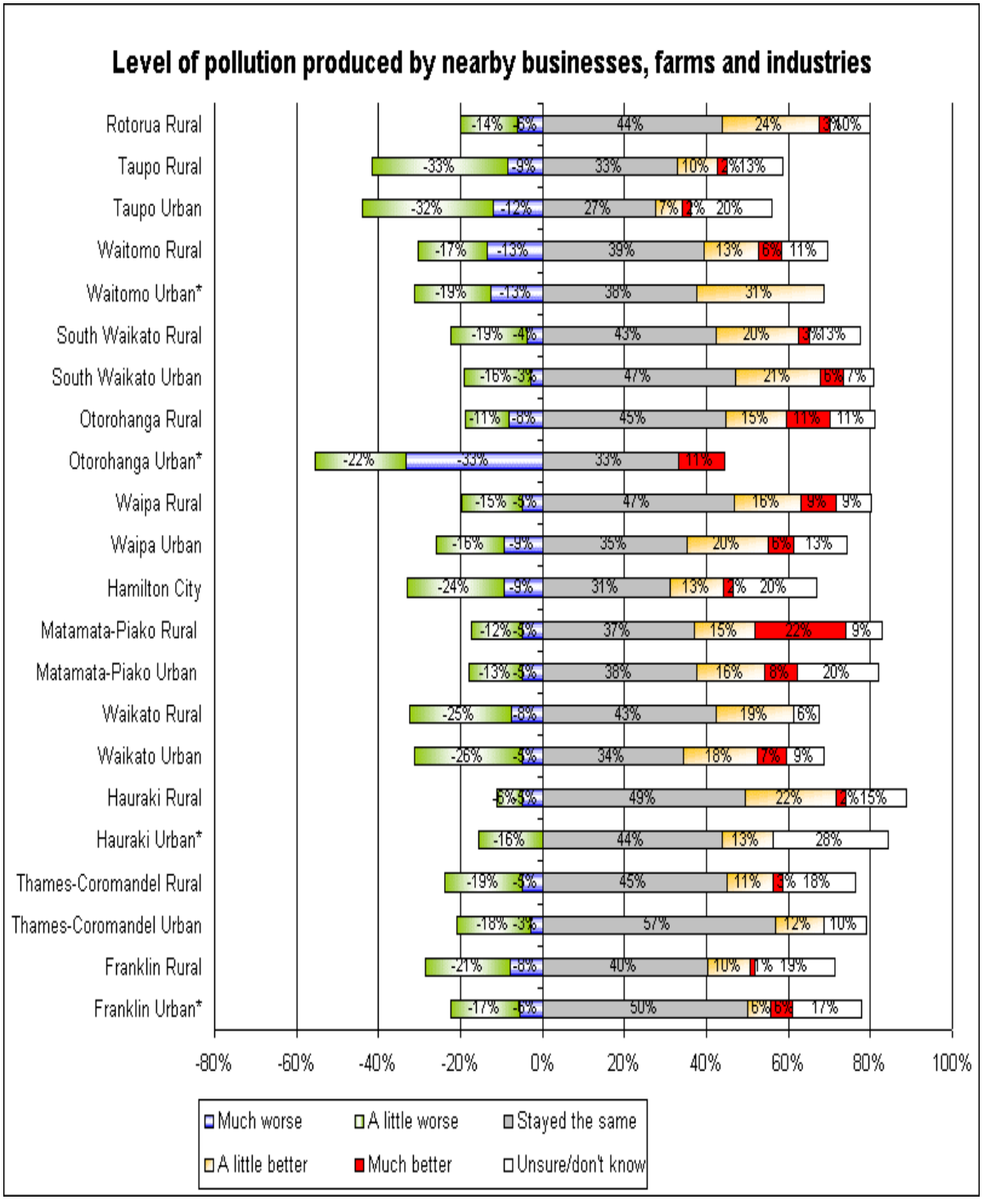
- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider the level of pollution or waste produced by nearby businesses, farms and industries had become “a little better” or “much better” were in:

- South Waikato Urban (95% confidence level)

- Matamata-Piako Rural (95% confidence level)

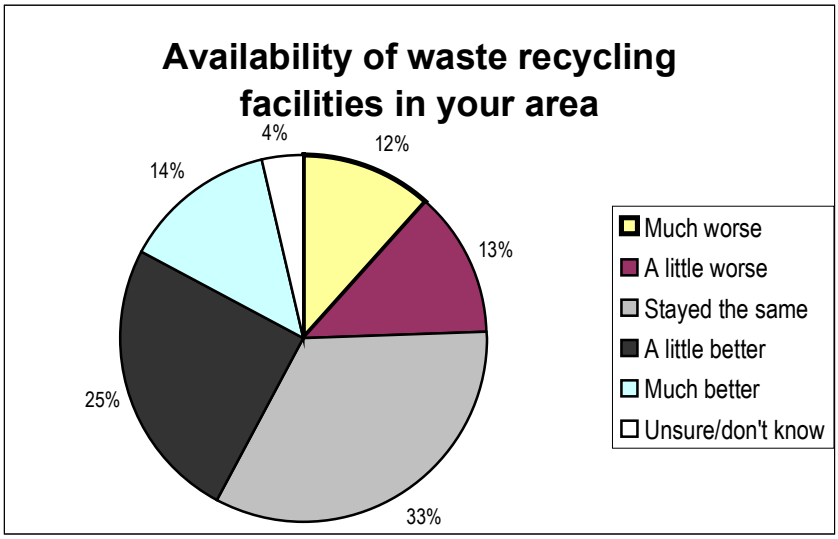
- Matamata-Piako Urban (90% confidence level)



4.1.3 Availability Of Waste Recycling Services And Facilities In Your Area

4.1.3.1 Overview Of Results

Twelve percent (12%) of participants said the availability of waste recycling services and facilities in their area had become much worse. A further thirteen percent (13%) said it had become a little worse. One-third (33%) of participants said it had stayed the same, while one-quarter (25%) thought it had become a little better and fourteen percent (14%) said it had become much better. Four percent (4%) were unsure.



**Graph shows percentage of weighted total*

4.1.3.2 Comparison To 1998 Study

When compared to the 1998 results there was a small increase in the perception that the availability of waste recycling services and facilities in their area had become worse (+4%) or stayed the same (+4%). There was a decline in the proportion that considered the availability of waste recycling facilities to be better (-2%) and a decrease in the proportion significantly who were unsure (-5%).

The availability of waste recycling services and facilities in your area	1998	2000	Change	Change
Much worse	8%	12%	4%	4%
A little worse	13%	13%	0%	
Stayed the same	29%	33%	4%	4%
A little better	28%	25%	-3%	-2%
Much better	13%	14%	1%	
Unsure/don't know	9%	4%	-5%	-5%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.3.3 Results By Demographic Characteristics

When these results were analysed demographically no significant differences were found.

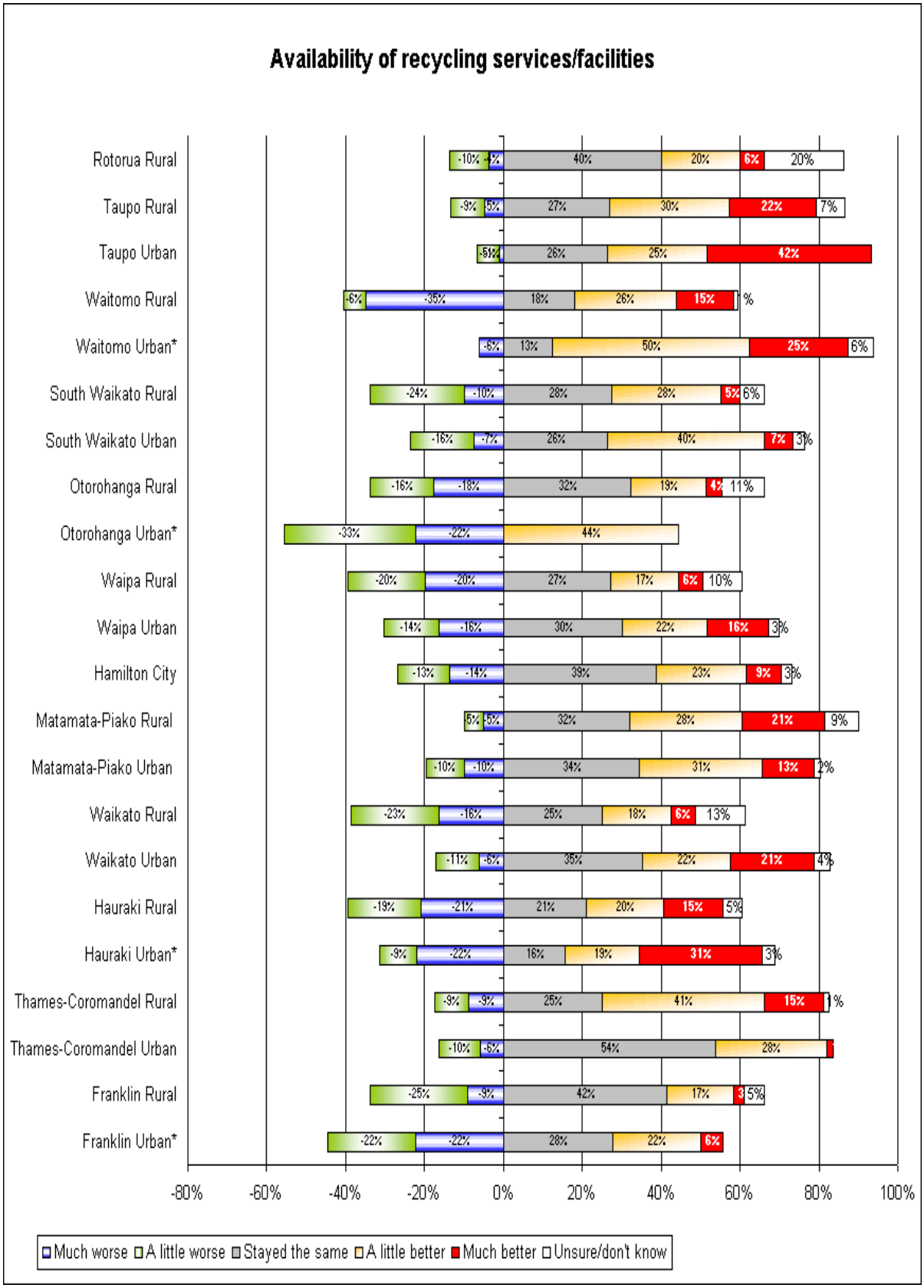
4.1.3.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the availability of waste recycling services and facilities in their area had become “a little worse” or “much worse” were in:

- Franklin Rural (95% confidence level)
- Waikato Rural (95% confidence level)
- Hamilton Urban (95% confidence level)
- Waipa Rural (95% confidence level)

Those significantly more likely than the average regional resident to consider the availability of waste recycling services and facilities in their area had become “a little better” or “much better” were in:

- Waikato Urban (95% confidence level)
- Matamata-Piako Rural (95% confidence level)
- Waitomo Urban (95% confidence level)
- Taupo Urban (95% confidence level)
- Taupo Rural (95% confidence level)

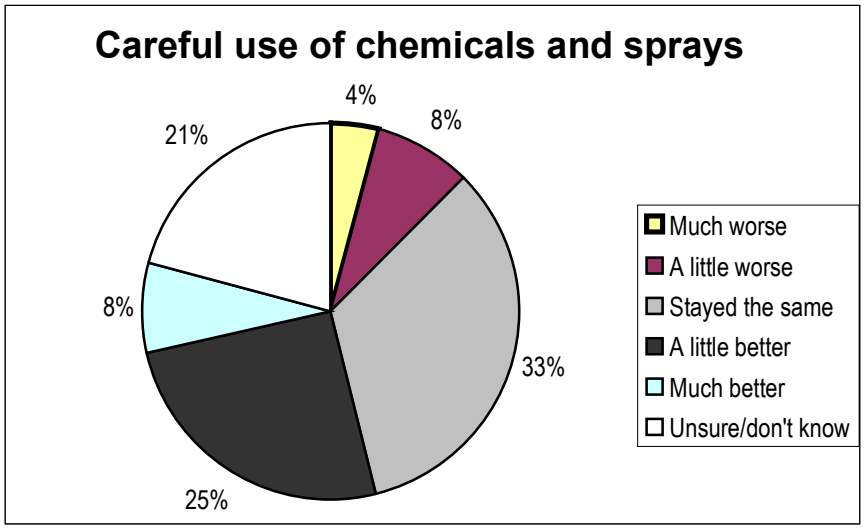


4.1.4 Careful Use Of Sprays And Chemicals

4.1.4.1 Overview Of Results

Four percent (4%) of participants said the careful use of sprays and chemicals had become much worse. A further eight percent (8%) said it had become a little worse.

One-third (33%) of participants said it had stayed the same, while one-quarter (25%) thought it had become a little better and eight percent (8%) said it had become much better. One-fifth (21%) were unsure.



**Graph shows percentage of weighted total*

4.1.4.2 Comparison To 1998 Study

When compared to the 1998 results there was a small increase in the perception that the careful use of sprays and chemicals had become worse (+3%) and an increase in those that considered the careful use of sprays and chemicals had stayed the same (+11%).

There was a decline in the proportion that considered the careful use of sprays and chemicals to be better (-10%) and a small decrease in the proportion who were unsure (-5%).

The careful use of chemicals and sprays	1998	2000	Change	Change
Much worse	2%	4%	2%	3%
A little worse	7%	8%	1%	
Stayed the same	22%	33%	11%	11%
A little better	32%	25%	-7%	-10%
Much better	11%	8%	-3%	
Unsure/don't know	26%	21%	-5%	-5%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.4.3 Results by Demographic Characteristics

When these results were analysed demographically the proportion that answered “a little worse” or “much worse” did not vary significantly.

Those significantly more likely than the average regional resident to consider the careful use of sprays and chemicals had become “a little better” or “much better” were:

- Aged 50-59 (95% confidence level)
- In farming occupations (95% confidence level)

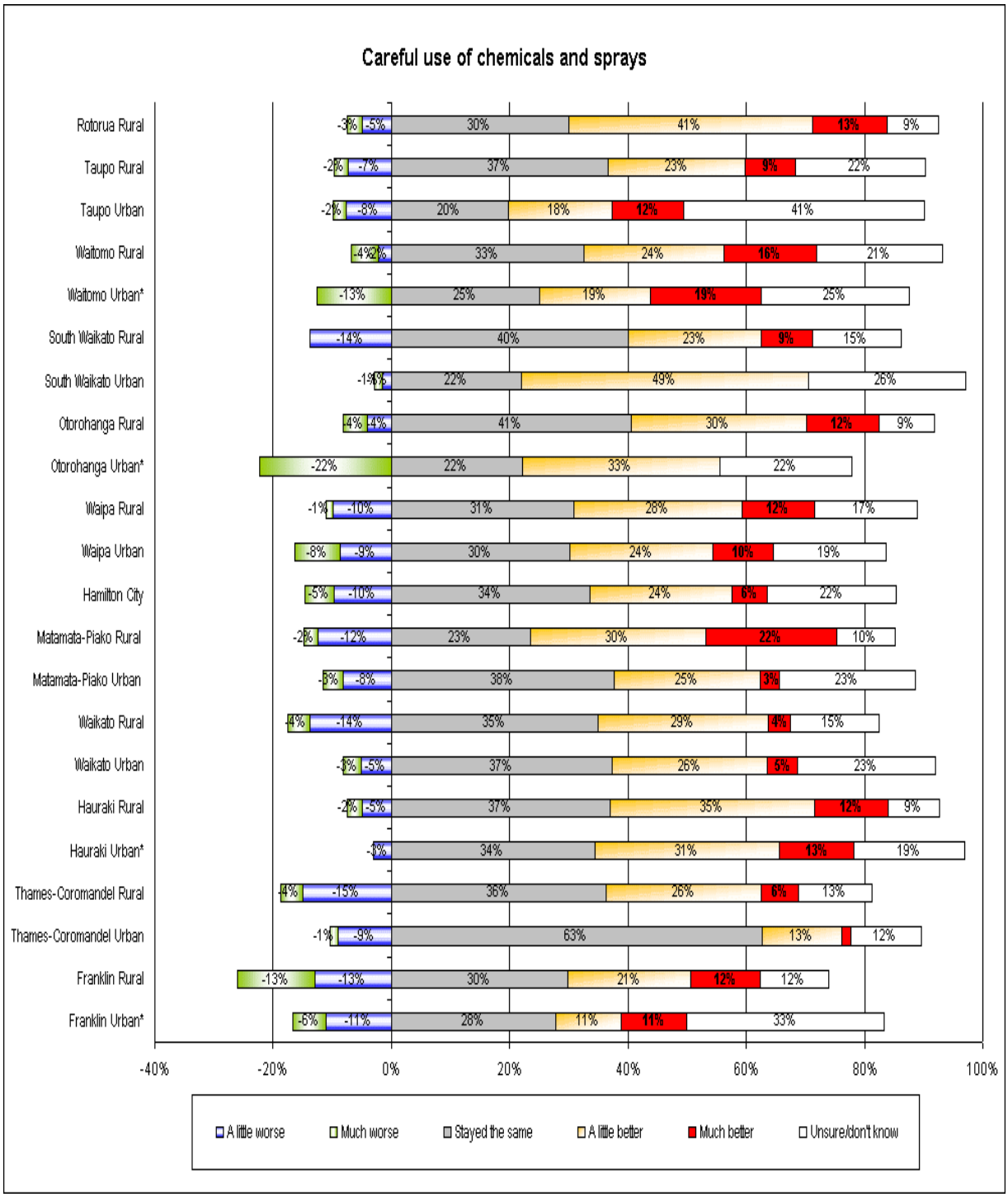
4.1.4.4 Results by Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the careful use of sprays and chemicals had become “a little worse” or “much worse” were in:

- Thames-Coromandel Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider the careful use of sprays and chemicals had become “a little better” or “much better” were in:

- Hauraki Urban (95% confidence level)
- Matamata-Piako Rural (95% confidence level)
- South Waikato Urban (95% confidence level)

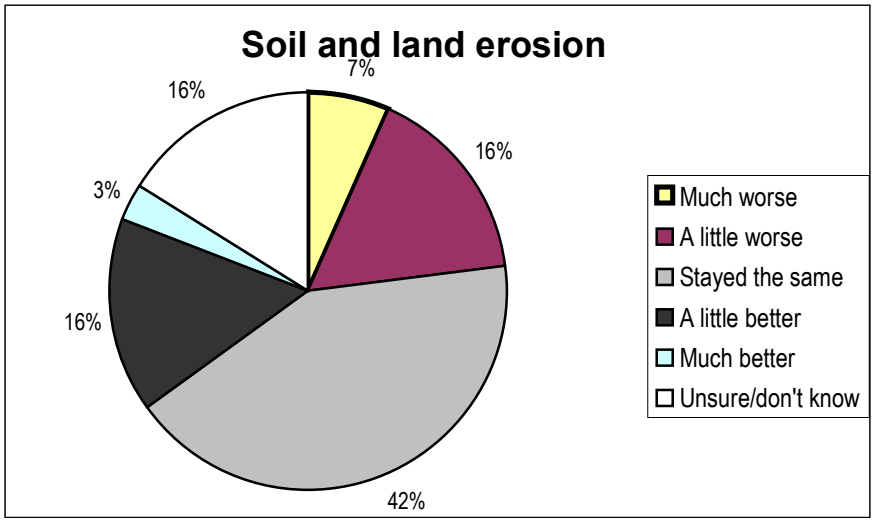


4.1.5 Soil And Land Erosion

4.1.5.1 Overview Of Results

Seven percent (7%) of participants said soil and land erosion had become much worse. A further sixteen percent (16%) said it had become a little worse.

Forty-two percent (42%) of participants said it had stayed the same, while sixteen percent (16%) thought it had become a little better and three percent (3%) said it had become much better. Sixteen percent (16%) were unsure.



**Graph shows percentage of weighted total*

4.1.5.2 Comparison to 1998 Study

When compared to the 1998 results there was a small increase in the perception that soil and land erosion had become worse (+1%) and an increase in the perception that soil and land erosion had become better (+6%).

There was a decline in the proportion that considered soil and land erosion had stayed the same (-2%) and a decline in the proportion who were unsure (-5%).

Soil and land erosion	1998	2000	Change	Change
Much worse	4%	7%	3%	1%
A little worse	18%	16%	-2%	
Stayed the same	44%	42%	-2%	-2%
A little better	11%	16%	5%	6%
Much better	2%	3%	1%	
Unsure/don't know	21%	16%	-5%	-5%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.5.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to consider soil and land erosion had become “a little worse” or “much worse” were:

- Aged 60+ (90% confidence level)
- Earning under $30,000 (95% confidence level)
- In unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to consider soil and land erosion had become “a little better” or “much better” were:

- Aged 50-59 (95% confidence level)
- Rural (95% confidence level)
- Earning $60,000 and over (95% confidence level)

- In farming occupations (95% confidence level)

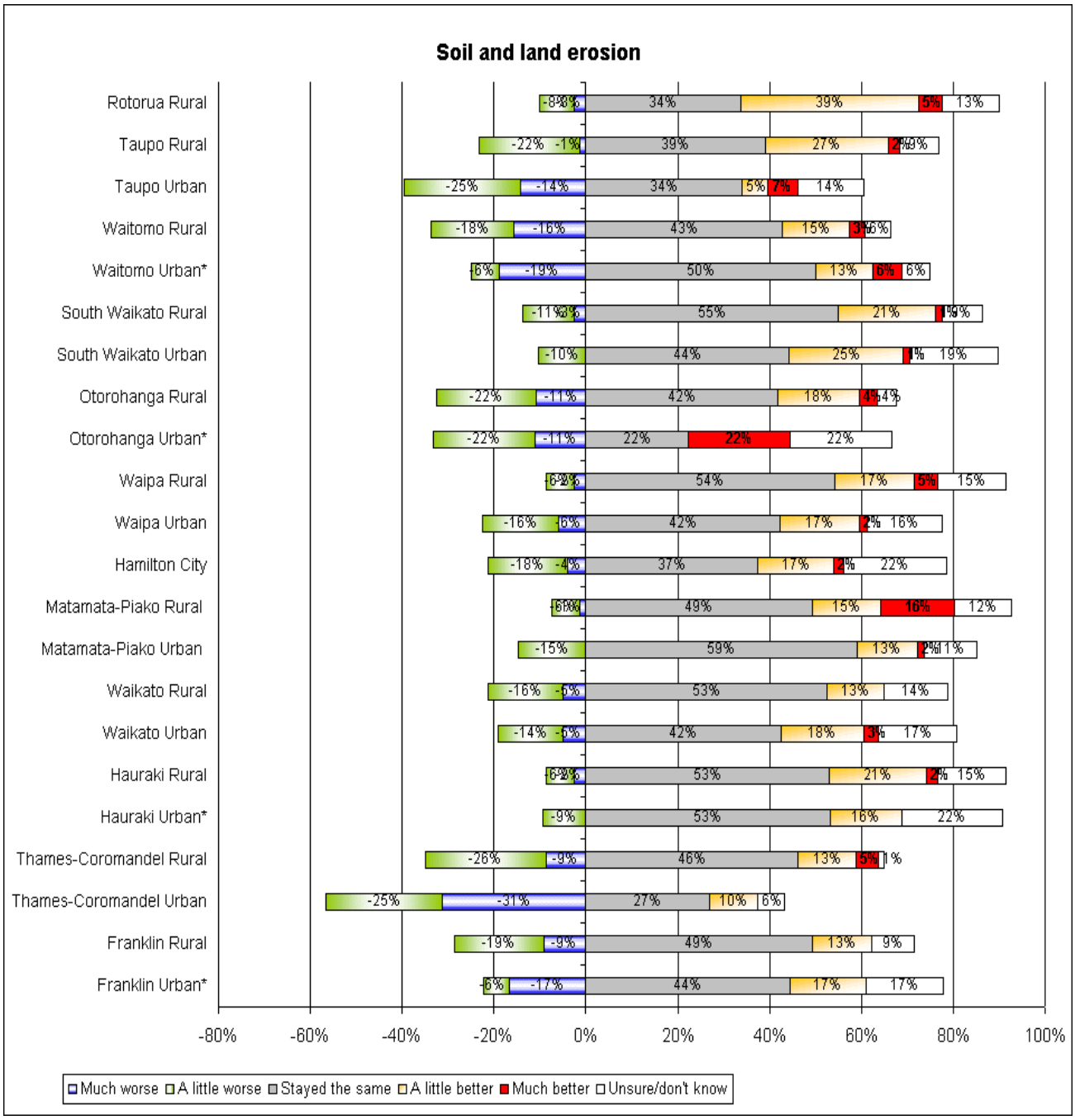
4.1.5.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider soil and land erosion had become “a little worse” or “much worse” were in:

- Thames-Coromandel Urban (95% confidence level)
- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider soil and land erosion had become “a little better” or “much better” were in:

- Matamata-Piako Rural (95% confidence level)
- South Waikato Urban (95% confidence level)
- Rotorua Rural (95% confidence level)
- Hauraki Rural (90% confidence level)
- Waipa Rural (90% confidence level)

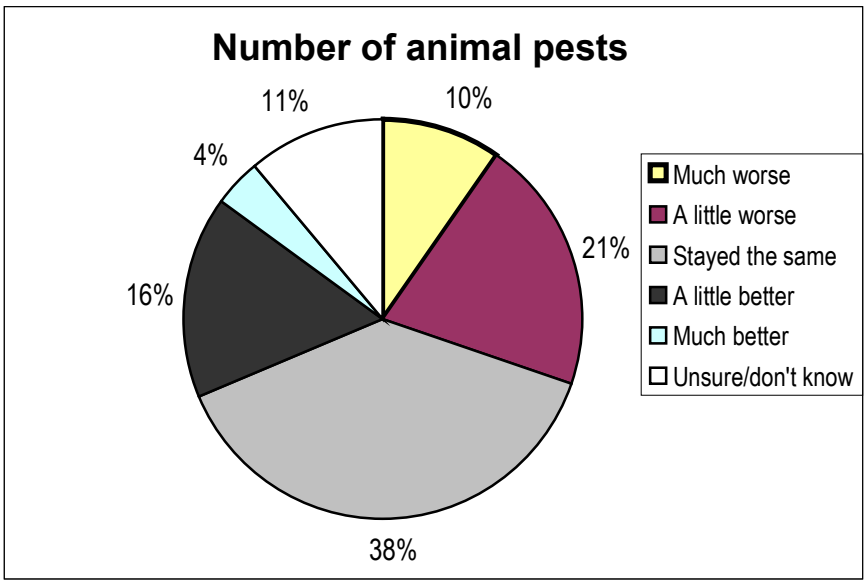


4.1.6 Number Of Animal Pests

4.1.6.1 Overview Of Results

One-tenth (10%) of participants said the number of animal pests had become much worse. A further one-fifth (21%) said it had become a little worse.

Two-fifths (38%) of participants said it had stayed the same, while sixteen percent (16%) thought it had become a little better and four percent (4%) said it had become much better. Eleven percent (11%) were unsure.



**Graph shows percentage of weighted total*

4.1.6.2 Comparison To 1998 Study

When compared to the 1998 results there was a small decline in the perception that the number of animal pests had become worse (-3%) and a decline in the perception that the number of animal pests had become better (-9%).

There was a small increase in the proportion that considered the number of animal pests had stayed the same (+4%) and an increase in the proportion who were unsure (+8%).

The number of animal pests	1998	2000	Change	Change
Much worse	9%	10%	1%	-3%
A little worse	25%	21%	-4%	
Stayed the same	34%	38%	4%	4%
A little better	24%	16%	-8%	-9%
Much better	5%	4%	-1%	
Unsure/don't know	3%	11%	8%	8%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.6.3 Results By Demographic Characteristics

When these results were analysed demographically the proportion that answered “a little worse” or “much worse” did not vary significantly.

Those significantly more likely than the average regional resident to consider that the number of animal pests had become “a little better” or “much better” were:

- In farming occupations (95% confidence level)

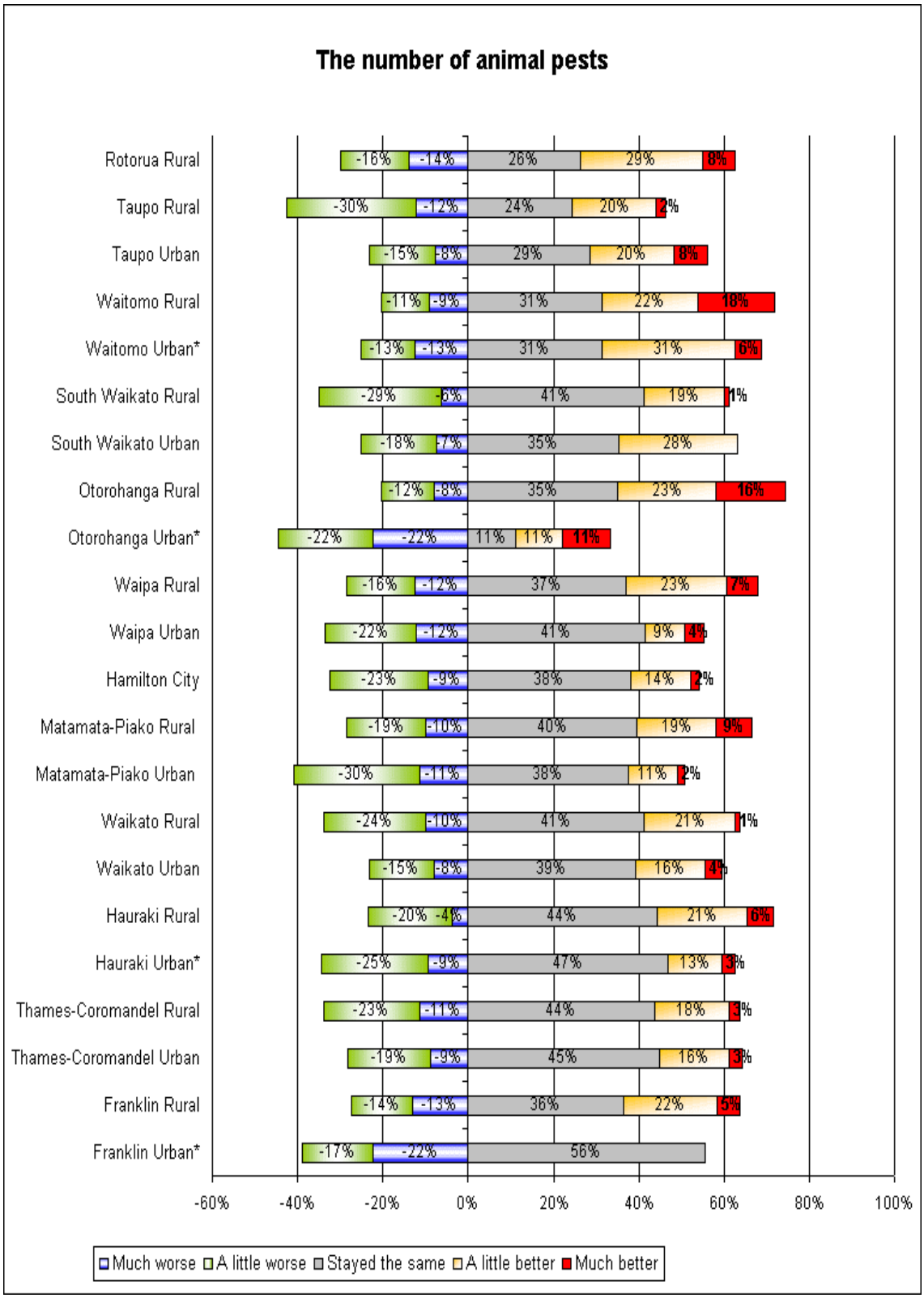
4.1.6.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the number of animal pests had become “a little worse” or “much worse” were in

- Franklin Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider the number of animal pests had become “a little better” or “much better” were in:

- Otorohanga Rural (90% confidence level)
- Waitomo Rural (90% confidence level)
- Taupo Urban (90% confidence level)

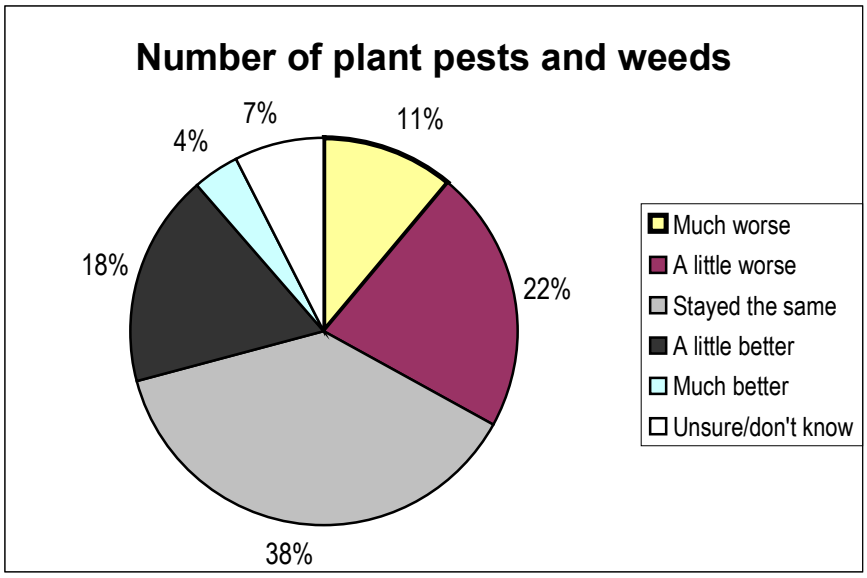


4.1.7 Number Of Plant Pests And Weeds

4.1.7.1 Overview Of results

Eleven percent (11%) of participants said the number of plant pests and weeds had become much worse. A further one-fifth (22%) said it had become a little worse.

Two-fifths (38%) of participants said it had stayed the same, while one-fifth (18%) thought it had become a little better and four percent (4%) said it had become much better. Seven percent (7%) were unsure.



**Graph shows percentage of weighted total*

4.1.7.2 Comparison to 1998 Study

When compared to the 1998 results there was a small increase in the perception that the number of plant pests and weeds had become worse (+3%) and a small increase in the proportion who were unsure (+4%).

There was a decline in the proportion that considered the number of plant pests and weeds had stayed the same (-5%) and a small decline in the proportion that considered the number of plant pests and weeds had become better (-2%).

The number of plant pests and weeds	1998	2000	Change	Change
Much worse	10%	11%	1%	3%
A little worse	20%	22%	2%	
Stayed the same	43%	38%	-5%	-5%
A little better	20%	18%	-2%	-2%
Much better	4%	4%	0%	
Unsure/don't know	3%	7%	4%	4%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.7.3 Results By Demographic Characteristics

When these results were analysed demographically the proportion that answered “a little worse” or “much worse” did not vary significantly.

Those significantly more likely than the average regional resident to consider the number of plant pests and weeds had become “a little better” or “much better” were:

- Aged 20-29 (95% confidence level)

4.1.7.4 Results By Area

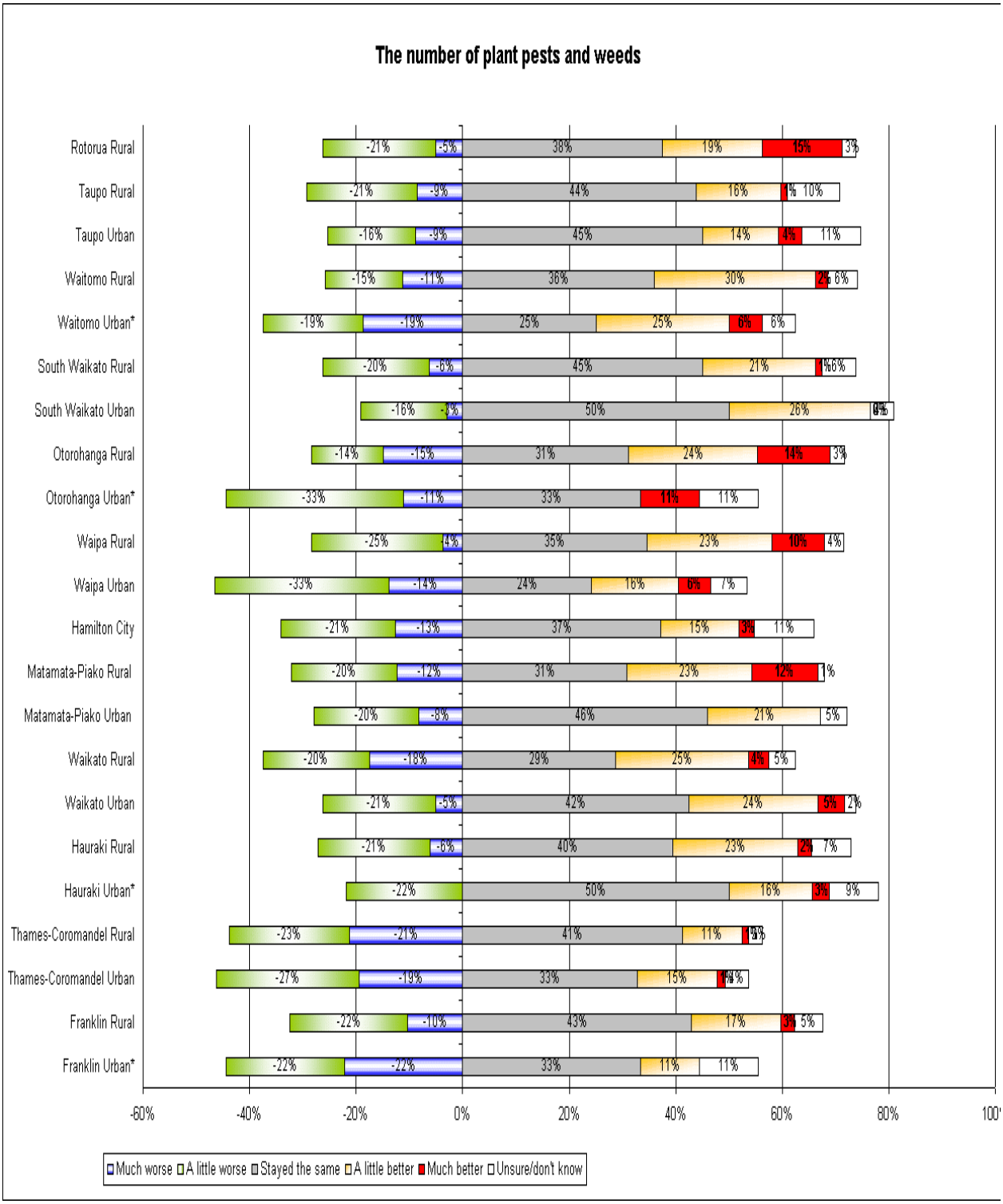
When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the

number of plant pests and weeds had become “a little worse” or “much worse” were in:

- Thames-Coromandel Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider the number of plant pests and weeds had become “a little better” or “much better” were in:

- Waikato Urban (95% confidence level)
- South Waikato Urban (95% confidence level)

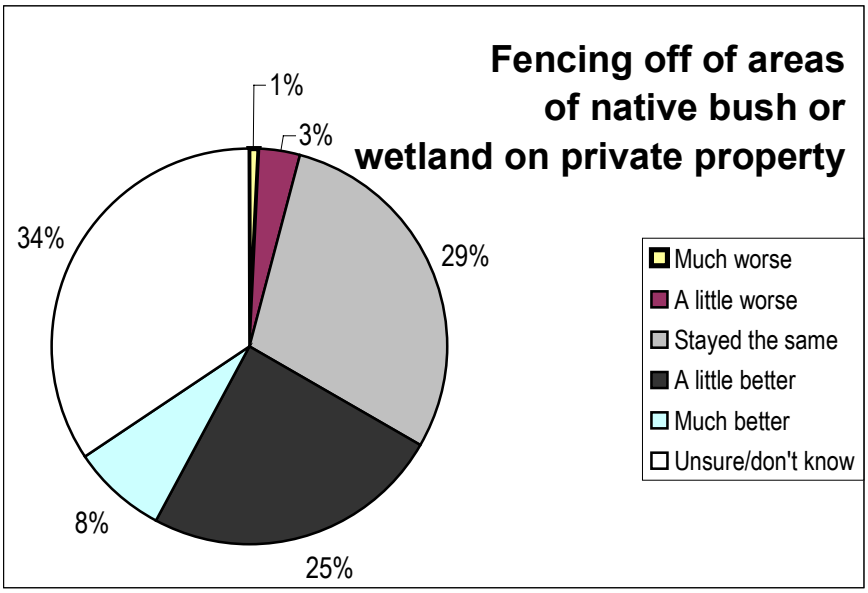


4.1.8 Fencing Off Of Areas Of Native Bush Or Wetland On Private Property

4.1.8.1 Overview Of Results

One percent (1%) of participants said the fencing off of areas of native bush or wetland on private property had become much worse. A further three percent (3%) said it had become a little worse.

Twenty-nine percent (29%) of participants said it had stayed the same, while one-quarter (25%) thought it had become a little better and eight percent (8%) said it had become much better. One-third (34%) were unsure.



**Graph shows percentage of weighted total*

4.1.8.2 Comparison To 1998 Study

When compared to the 1998 results there was a decline in the perception that the fencing off of areas of native bush or wetland on private property had become better (-21%). There was also a small decline in the perception that the fencing off of areas of native bush or wetland on private property had become worse (-3%).

There was an increase in the proportion that considered the fencing off of areas of native bush or wetland on private property had stayed the same (+7%) and an increase in the proportion who were unsure (+17%).

The fencing off of areas of native bush or wetland on private property	1998	2000	Change	Change
Much worse	1%	1%	0%	-3%
A little worse	6%	3%	-3%	
Stayed the same	22%	29%	7%	7%
A little better	43%	25%	-18%	-21%
Much better	11%	8%	-3%	
Unsure/don't know	17%	34%	17%	17%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.1.8.3 Results By Demographic Characteristics

When these results were analysed demographically the proportion that answered a "little worse" or "much worse" did not vary significantly.

Those significantly more likely than the average regional resident to consider the fencing off of areas of native bush or wetland on private property had become a "little better" or "much better" were:

- In farming occupations (95% confidence level)

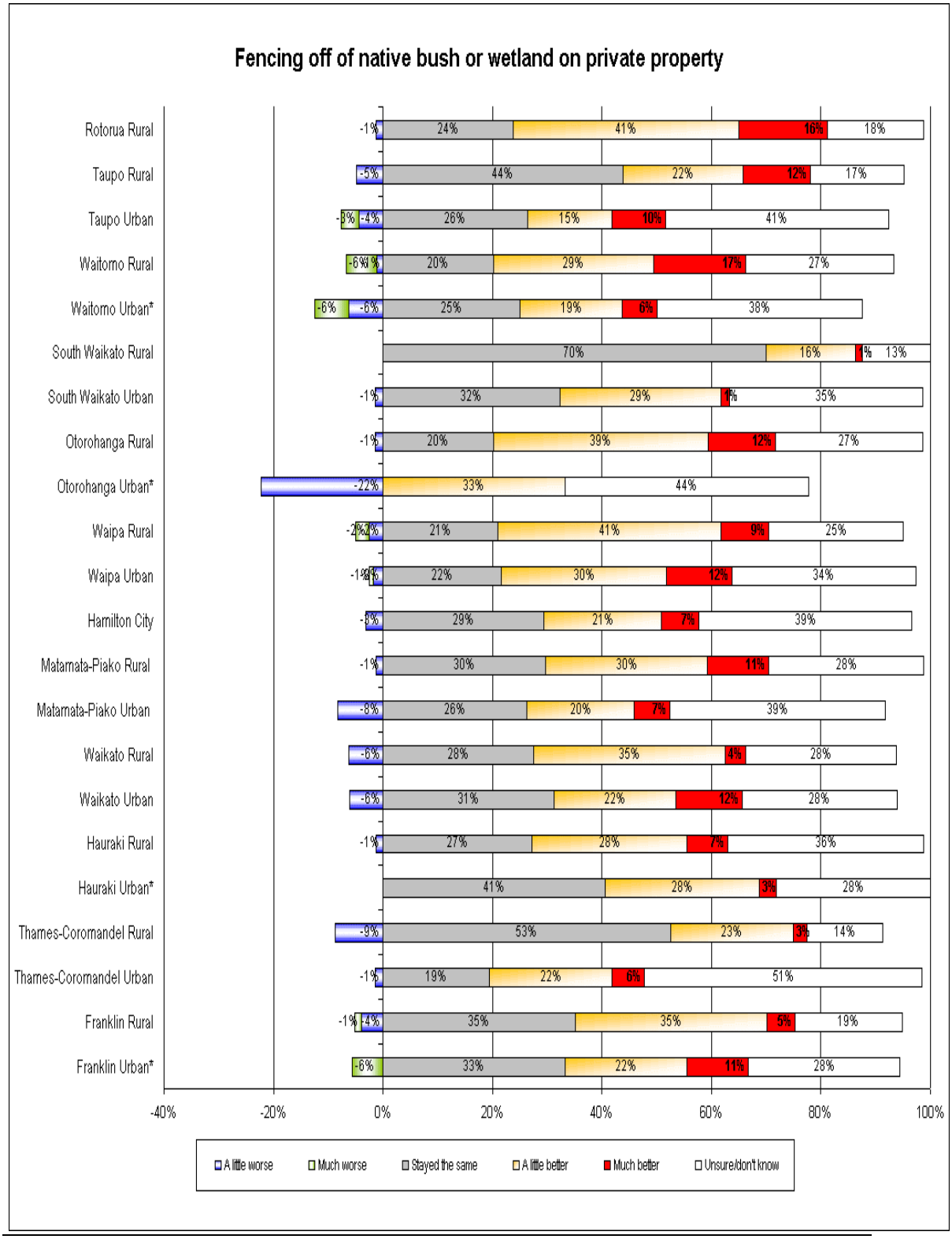
4.1.8.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the fencing off of areas of native bush or wetland on private property had become “a little worse” or “much worse” were in:

- Thames-Coromandel Rural (95% confidence level)

Those significantly more likely than the average regional resident to consider the fencing off of areas of native bush or wetland on private property had become “a little better” or “much better” were in:

- Waipa Urban (95% confidence level)

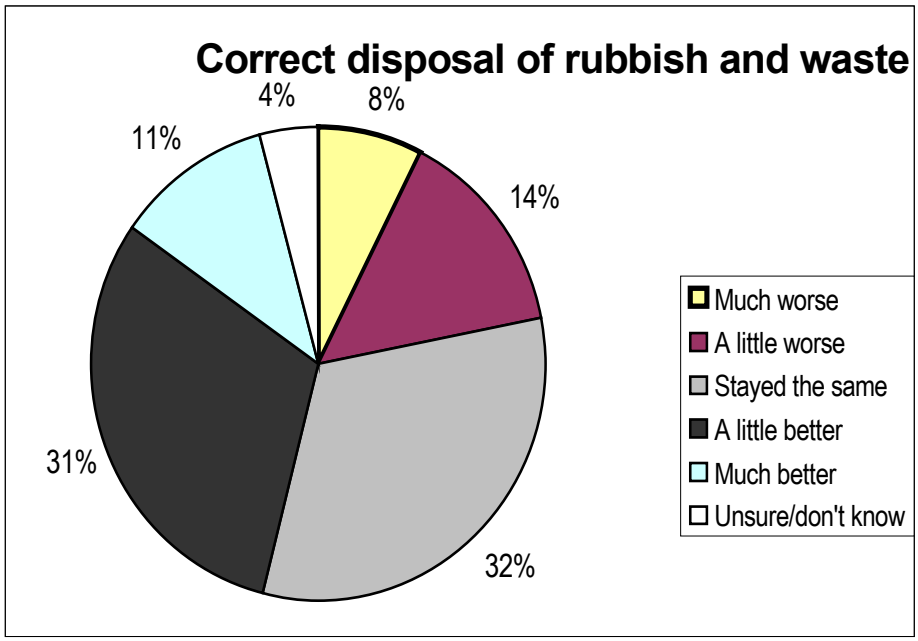


4.1.9 Correct Disposal Of Rubbish And Waste

4.1.9.1 Overview Of Results

Eight percent (8%) of participants said the correct disposal of rubbish and waste had become much worse. A further fourteen percent (14%) said it had become a little worse.

One-third (32%) of participants said it had stayed the same, while almost as many (31%) thought it had become a little better and eleven percent (11%) said it had become much better. Four percent (4%) were unsure.



**Graph shows percentage of weighted total*

4.1.9.2 Results By Demographic Characteristics

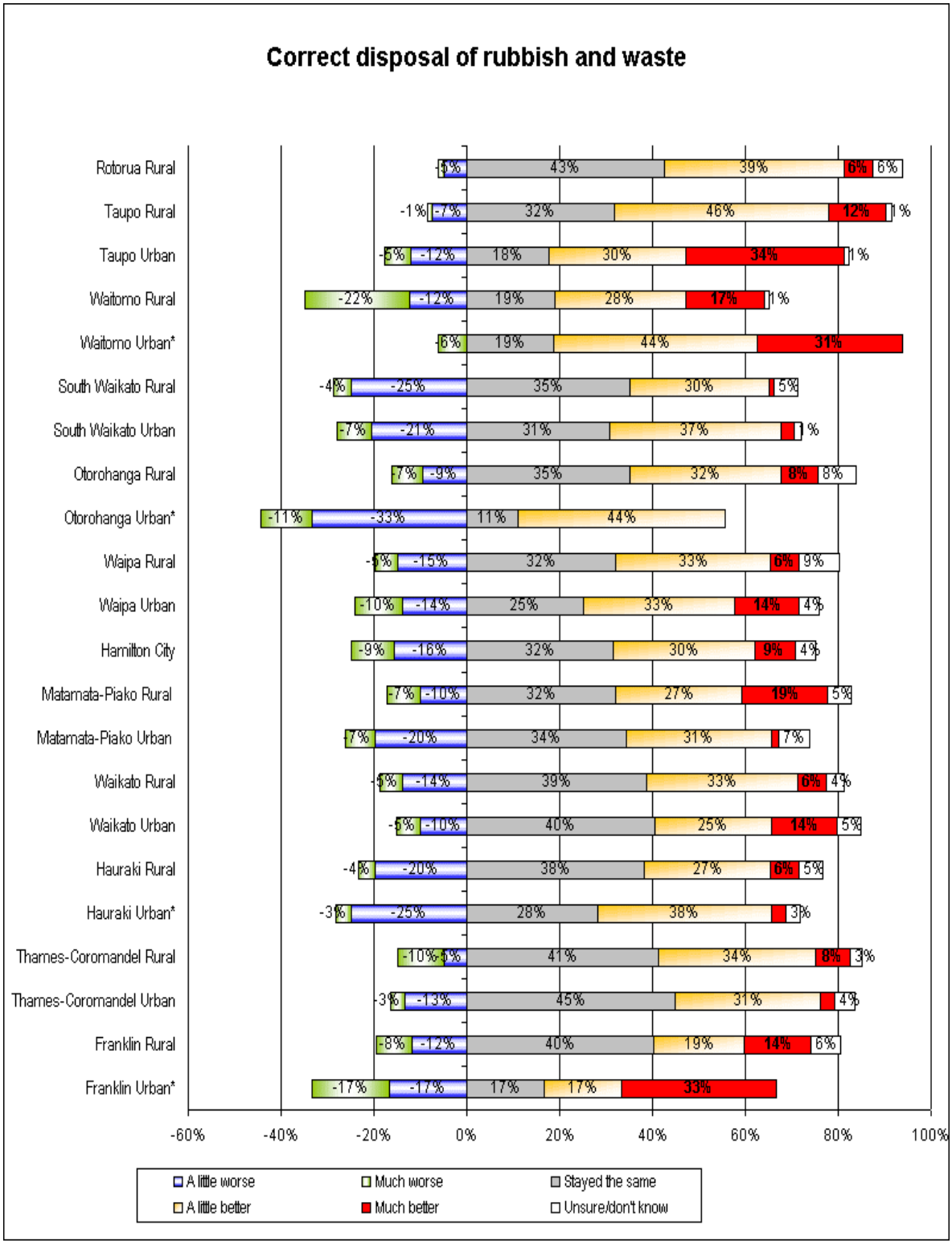
When these results were analysed demographically the results did not vary significantly.

4.1.9.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion that answered "a little worse" or "much worse" did not vary significantly.

Those significantly more likely than the average regional resident to consider the correct disposal of rubbish and waste had become "a little better" or "much better" were in:

- Waitomo Urban (95% confidence level)
- Taupo Urban (95% confidence level)
- Taupo Rural (90% confidence level)



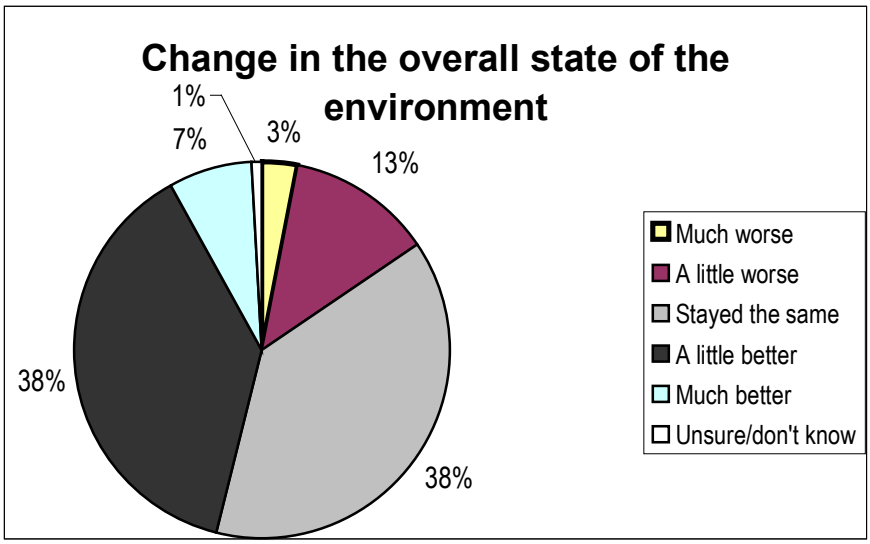
4.2 Change In Overall State Of Environment

Whilst the questions in the previous section focus on the state of specific aspects of the environment, such as pest numbers, this question provides an overall evaluation of the environment. This allowed people to weigh up whether the aspects that are deteriorating are compensated for by the parts of the local environment that are improving.

4.2.1.1 Overview Of Results

Three percent (3%) of participants said the overall state of their local environment had become much worse. A further thirteen percent (13%) said it had become a little worse.

Thirty-eight percent (38%) of participants said it had stayed the same, while a further thirty-eight percent (38%) thought it had become a little better and seven percent (7%) said it had become much better. One percent (1%) were unsure.



**Graph shows percentage of weighted total*

4.2.1.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the perception that the overall state of their local environment had become worse (+4%) and an increase in the proportion who considered it had stayed the same (+6%).

There was a decline in the proportion that considered the overall state of their local environment had become better (-10%).

Change in overall state of environment	1998	2000	Change	Change
Much worse	2%	3%	1%	4%
A little worse	10%	13%	3%	
Stayed the same	32%	38%	6%	6%
A little better	48%	38%	-10%	-10%
Much better	7%	7%	0%	
Unsure/don't know	1%	1%	0%	0%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

4.2.1.3 Results By Demographic Characteristics

When these results were analysed demographically the proportion that answered “a little worse” or “much worse” did not vary significantly.

Those significantly more likely than the average regional resident to consider the overall state of their local environment had become “a little better” or “much better” were:

- In farming occupations (95% confidence level)

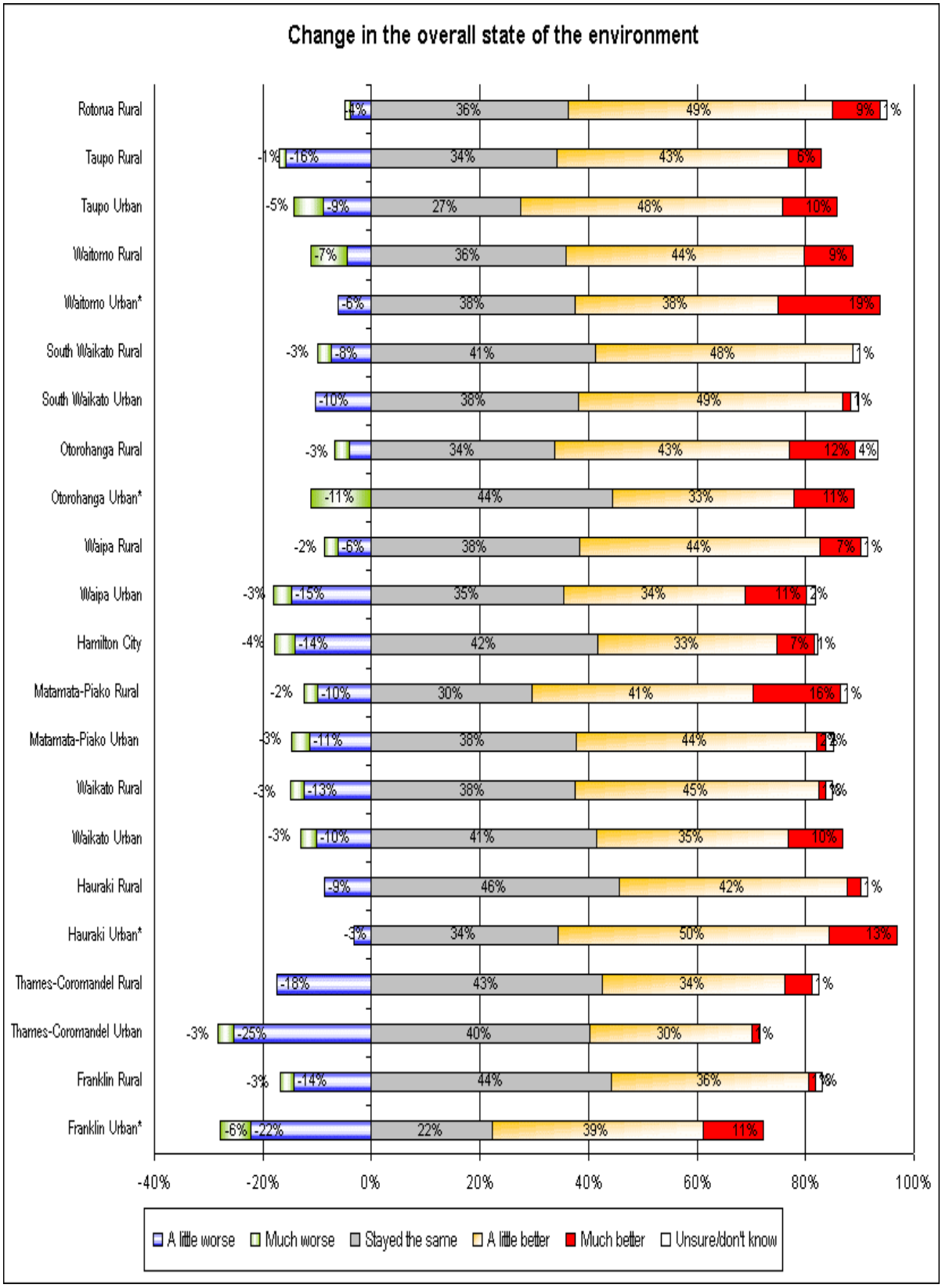
4.2.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider the overall state of their local environment had become “a little worse” or “much worse” were in:

- Thames-Coromandel Urban (95% confidence level)

Those significantly more likely than the average regional resident to consider the overall state of their local environment had become “a little better” or “much better” were in:

- Hauraki Urban (95% confidence level)
- Matamata-Piako Rural (90% confidence level)
- Waitomo Urban (90% confidence level)



4.3 Most Important Environmental Issue

The open-ended questions allowed people to nominate what issues are of most concern to them, including issues that are not within Environment Waikato's jurisdiction. This information provides rankings of the key issues for the community – now and projected for 2005. This is useful for assessing community environmental priorities against those of local government.

4.3.1 Single Most Important Environmental Issue

Participants were asked what they considered was the single most important environmental issue facing the Waikato Region. Almost one-third (30%) of participants said water pollution and nine percent (9%) of participants talked about water-quality or supply, rather than pollution.

One-fifth (19%) said rubbish disposal or refuse issues, while a further three percent (3%) specified recycling. Pollution in general (6%) and air pollution (4%) were common responses.

A wide variety of other answers were given by almost thirty percent (30%) of participants. Nine percent (9%) of participants said they were unable to specify an issue.

It should be noted that although participants were asked to give only one response to this question, some included more than one concept in their answer. All answers were included in the analysis. This is why the total results add to more than 100%.

Single Most Important Environmental Issue (unweighted results)	1998	2000
Water Pollution	25%	30%
Rubbish Disposal	17%	19%
Water Quality and Supply	8%	9%
Pollution/general pollution - industrial	5%	6%
Air pollution	10%	4%
Recycling	7%	3%
Sprays and Pesticides	4%	3%
Pest Control	5%	3%
Noxious weeds	3%	3%
Drainage/flooding	2%	2%
Erosion/deforestation		2%
Dumps/Landfills	5%	2%
Littering	3%	2%
Town planning/graffiti		1%
Ozone layer/global warming		1%
Transport	6%	1%
Native birds and trees		1%
Sewage		1%
Other negative		1%
Nothing/everything is fine		1%
General concern		1%
Managing Land Uses/Resources		1%
Environment Waikato administrative issues		1%
Parks and Reserves		0%
Charges and costs	1%	0%
Environmental education	2%	0%
Tourists		0%
Other water supply issues		0%
Population increase		0%
Mining	1%	0%
Won't be here/ not worried		0%
Other positive		0%
Other miscellaneous	15%	
Don't know/no reply	8%	9%

Multiple answers were allowed so percentages will not add to 100%

Percentages less than .5% are shown as 0%

4.3.2 Second Most Important Environmental Issue

Participants were asked what they considered was the second most important environmental issue facing the Waikato Region. Water pollution (13%) and water quality and supply issues (7%) were the most common responses. Rubbish disposal (10%), pest control (5%) and air pollution (5%) were also common. Four percent (4%) of participants answered each of pollution, noxious weeds, sprays and pesticides and deforestation.

A wide variety of other answers were given by approximately twenty two percent (22%) of participants. Over one-quarter (26%) were unable to specify a second issue. It should be noted that although participants were asked to give only one response to this question, some included more than one concept in their answer. This is why the total results add to more than 100%.

Next Most Important Environmental Issue (unweighted results)	2000
Water Pollution	13%
Rubbish Disposal	10%
Water Quality and Supply	7%
Pest Control	5%
Air pollution	5%
Pollution/general pollution - industrial	4%
Noxious weeds	4%
Sprays and Pesticides	4%
Erosion/deforestation	4%
Native birds and trees	3%
Recycling	3%
Nothing/everything is fine	2%
Sewage	1%
General concern	1%
Drainage/flooding	1%
Dumps/Landfills	1%
Littering	1%
Ozone layer/global warming	1%
Transport	1%
Managing Land Uses/Resources	1%
Town planning/graffiti	1%
Environmental education	1%
Charges and costs	0%
Environment Waikato administrative issues	0%
Parks and Reserves	0%
Population increase	0%
Tourists	0%
Mining	0%
Won't be here/ not worried	0%
Other water supply issues	0%
Other positive	0%
Other negative	1%
Don't know/no reply	26%

Multiple answers were allowed so percentages will not add to 100%

Percentages less than .5% are shown as 0%

4.3.3 Anticipated Most Important Issue In Five Years Time

Participants were asked what they considered would be the most important environmental issue facing them in five years time.

Most Important Environmental Issue Five Years Time (unweighted	2000
Rubbish Disposal	19%
Water Pollution	14%
Water Quality and Supply	10%
Air	8%
Ozone layer/global warming	7%
Pollution/general pollution - industrial	6%
Sprays and Pesticides	3%
Erosion/deforestation	3%
Pest Control	2%
Sewage	2%
Recycling	2%
General concern	2%
Dumps/Landfills	2%
Drainage/flooding	2%
Population increase	2%
Noxious weeds	1%
Native birds and trees	1%
Environment Waikato administrative issues	1%
Transport	1%
Nothing/everything is fine	1%
Managing Land Uses/Resources	1%
Town planning/graffiti	1%
Won't be here/ not worried	1%
Littering	0%
Charges and costs	0%
Mining	0%
Environmental education	0%
Tourists	0%
Parks and Reserves	0%
Other water supply issues	0%
Other positive	0%
Other negative	1%
Don't know/no reply	14%

Multiple answers were allowed so percentages will not add to 100%

Percentages less than .5% are shown as 0%

The most common response was rubbish disposal (19%) and two percent (2%) specified recycling. Fourteen percent (14%) said water pollution and one-tenth (10%) said water quality and supply. Air pollution was mentioned by eight percent (8%), with almost as many raising the depletion of the ozone layer or global warming (7%). Six percent (6%) gave general pollution-related answers.

A wide variety of other answers were given by approximately twenty-nine percent (29%) of participants. Fourteen percent (14%) were unable to specify an issue. It should be noted that although participants were asked to give only one response to this question, some included more than one concept in their answer. This is why the total results add to more than 100%.

4.4 Level Of Concern

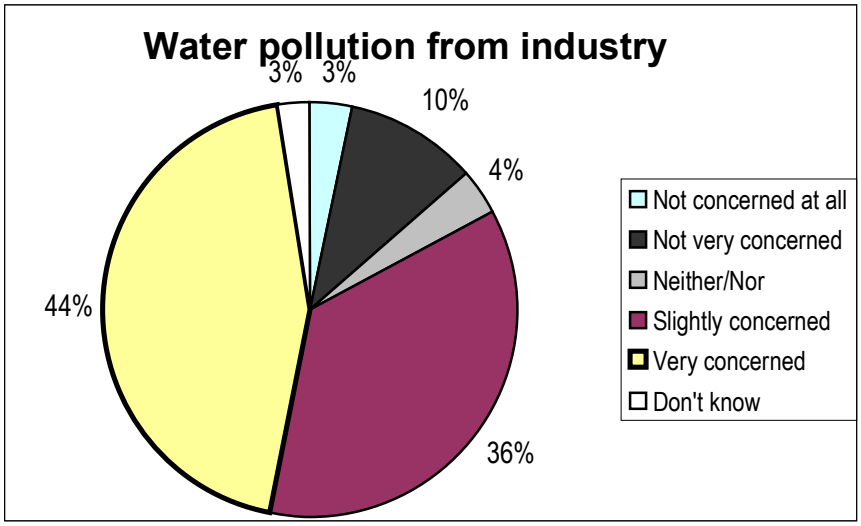
The issues listed in this section cover most of Environment Waikato's core functions, with a particular emphasis on water quality. Asking respondents to identify which issues were of concern to them and their degree of concern provides information on levels of concern for specific issues and also enables the ranking of these issues by level of concern in the community.

4.4.1 Water Pollution From Industry

4.4.1.1 Overview Of Results

Forty-four percent (44%) of participants were very concerned about water pollution from industry. A further thirty-six percent (36%) were slightly concerned.

Four percent (4%) were neither concerned nor unconcerned, while one-tenth (10%) were not very concerned and a small proportion (3%) were not concerned. Three percent (3%) were unsure.



*Graph shows percentage of weighted total

4.4.1.2 Results By Demographic Characteristics

When these results were analysed demographically the proportion to be concerned about water pollution from industry did not vary significantly.

Those significantly more likely than the average regional resident to be unconcerned about water pollution from industry were:

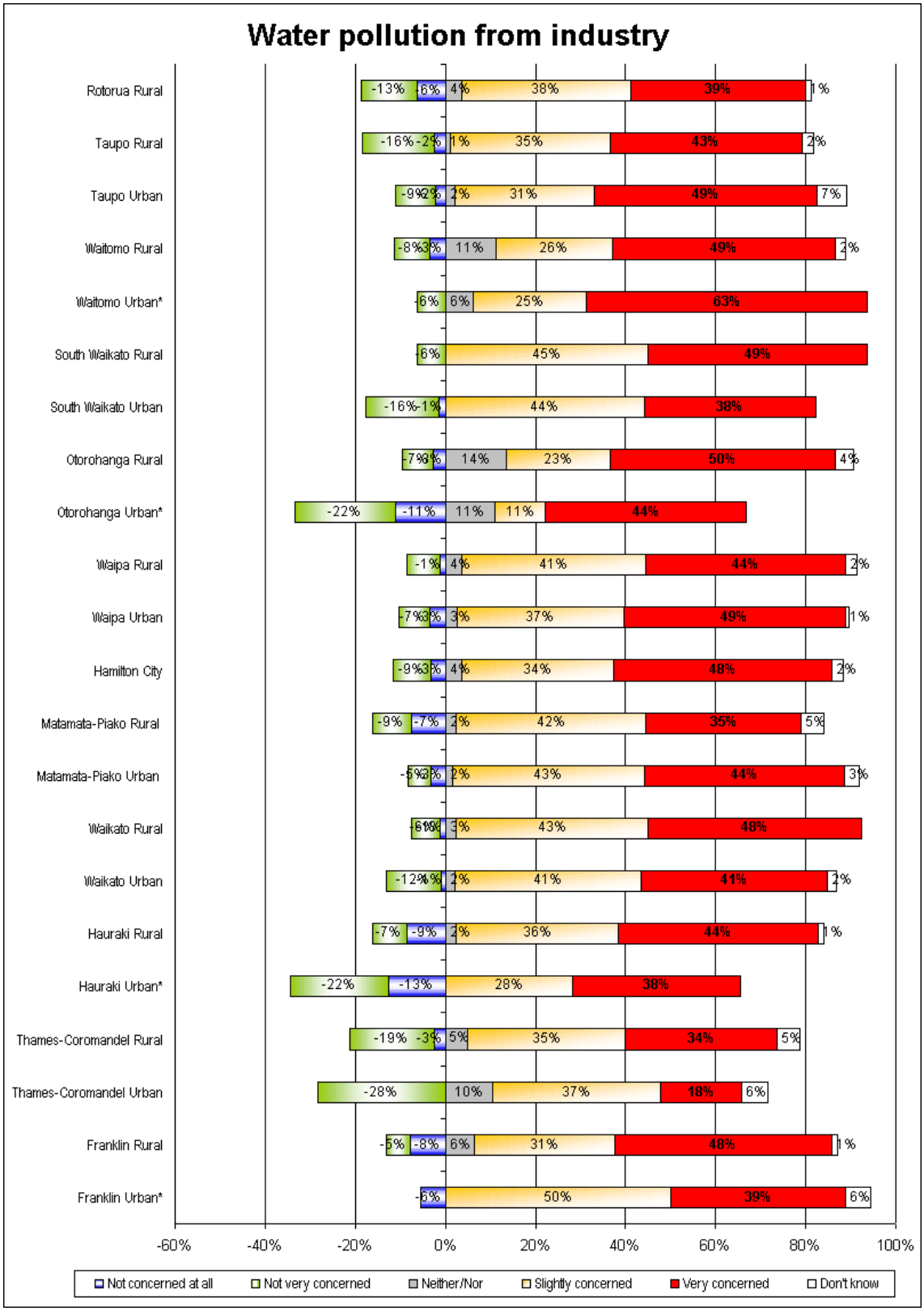
- Aged 60+ (95% confidence level)
- Refused to give ethnicity (95% confidence level)

4.4.1.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion to be concerned about water pollution from industry did not vary significantly.

Those significantly more likely than the average regional resident to be unconcerned about water pollution from industry were in:

- Thames-Coromandel Urban (95% confidence level)
- Hauraki Urban (95% confidence level)

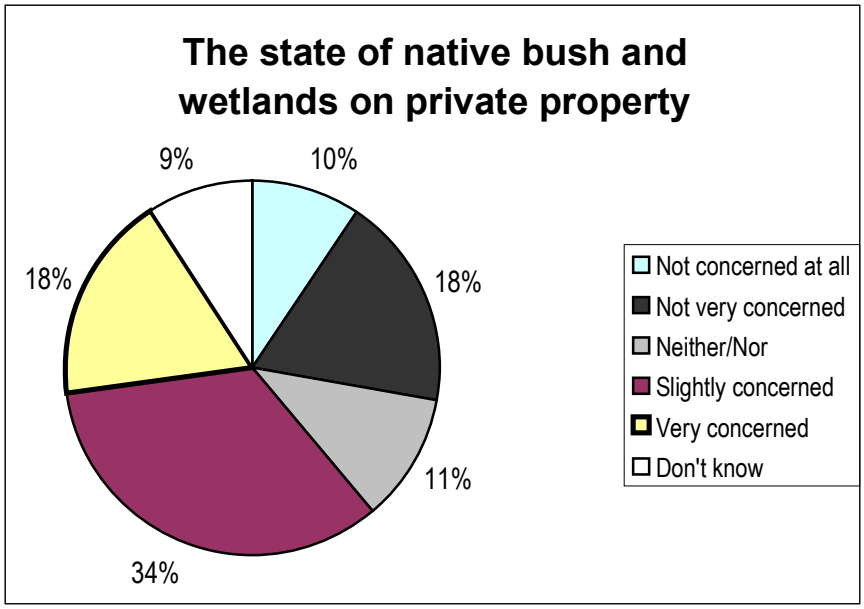


4.4.2 State Of Native Bush And Wetlands On Private Property

4.4.2.1 Overview Of results

One-fifth (18%) of participants were very concerned about the state of native bush and wetlands on private property. A further one-third (34%) were slightly concerned.

Eleven percent (11%) were neither concerned nor unconcerned, while one-fifth (18%) were not very concerned and one-tenth (10%) were not concerned. Nine percent (9%) were unsure.



**Graph shows percentage of weighted total*

4.4.2.2 Results By Demographic Characteristics

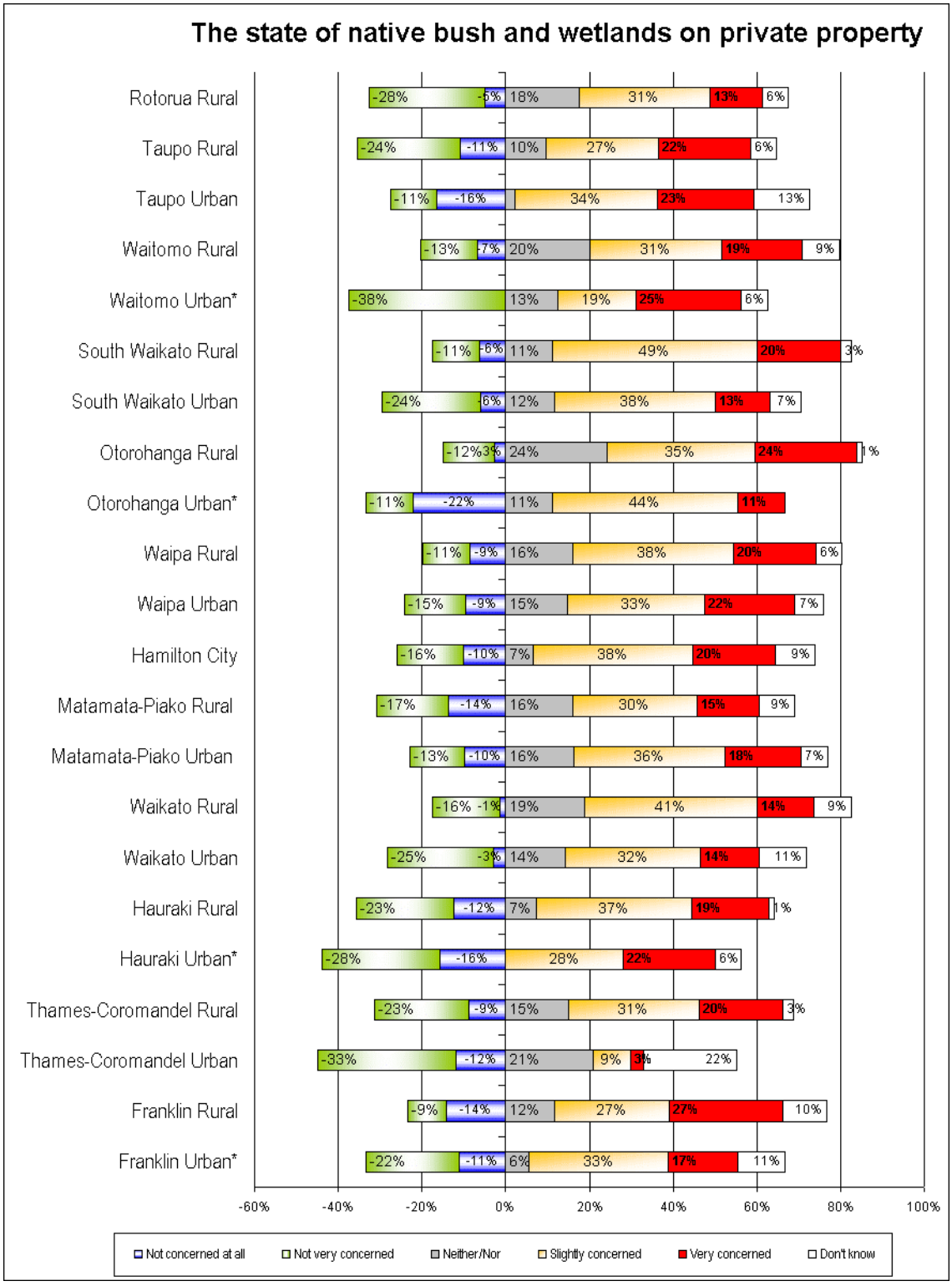
When these results were analysed demographically no significant differences were found.

4.4.2.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion that were concerned about the state of native bush and wetlands on private property did not vary significantly.

Those significantly more likely than the average regional resident to be unconcerned about the state of native bush and wetlands on private property were in:

- Thames-Coromandel Urban (95% confidence level)

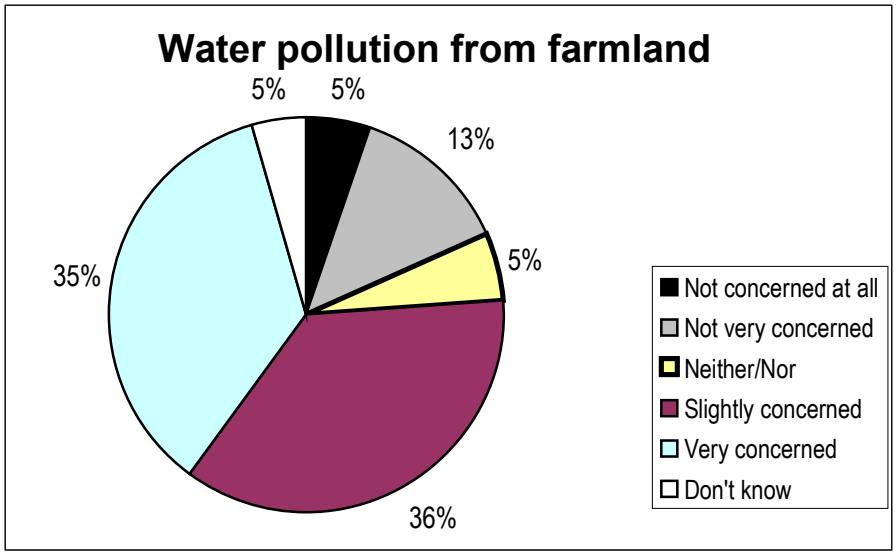


4.4.3 Water Pollution From Farmland

4.4.3.1 Overview Of Results

Over one-third (35%) of participants were very concerned about water pollution from farmland. Similar proportions (36%) were slightly concerned.

Five percent (5%) were neither concerned nor unconcerned, while thirteen percent (13%) were not very concerned and a small proportion (5%) were not concerned. Five percent (5%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

4.4.3.2 Results By Demographic Characteristics

When these results were analysed demographically the proportion to be concerned about water pollution from farmland did not vary significantly.

Those significantly more likely than the average regional resident to be unconcerned about water pollution from farmland were:

- In Rural (95% confidence level)
- In farming occupations (95% confidence level)
- Refused to give ethnicity (95% confidence level)

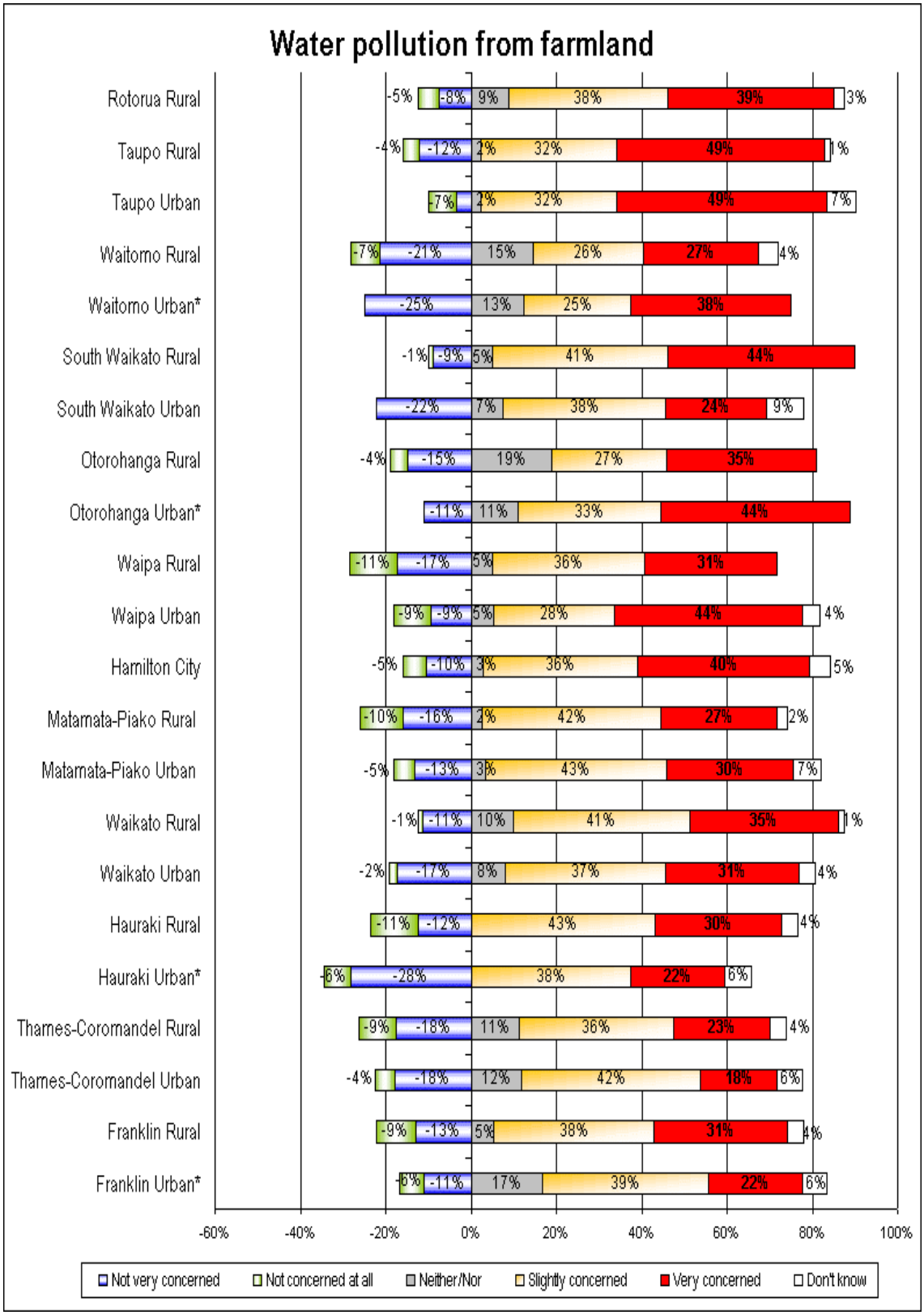
4.4.3.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to be concerned about water pollution from farmland were in:

- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about water pollution from farmland were in:

- Thames-Coromandel Urban (95% confidence level)
- Hauraki Urban (90% confidence level)

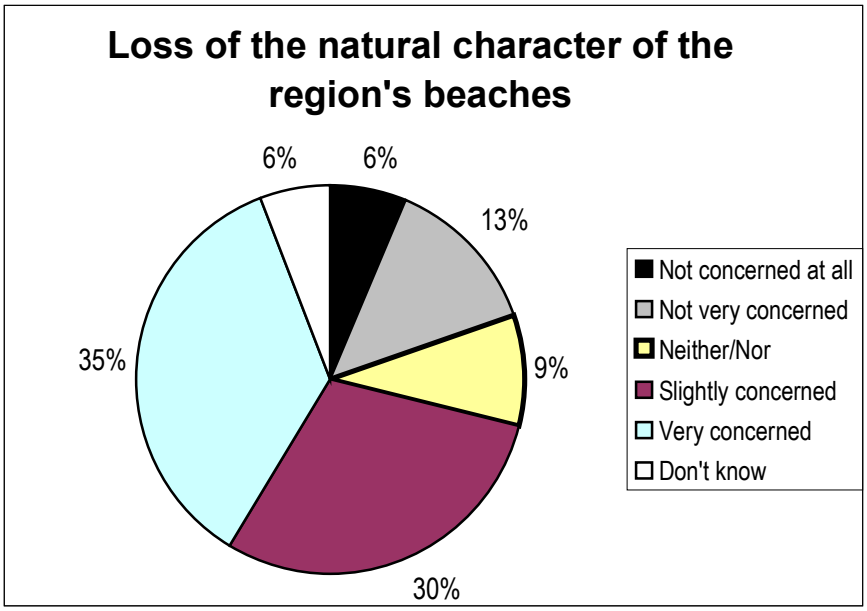


4.4.4 Loss Of The Natural Character Of The Region's Beaches Through Development

4.4.4.1 Overview Of Results

One-third (35%) of participants were very concerned about loss of the natural character of the regions beaches through development. A further thirty percent (30%) were slightly concerned.

Nine percent (9%) were neither concerned nor unconcerned, while thirteen percent (13%) were not very concerned and six percent (6%) were not concerned at all. Six percent (6%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

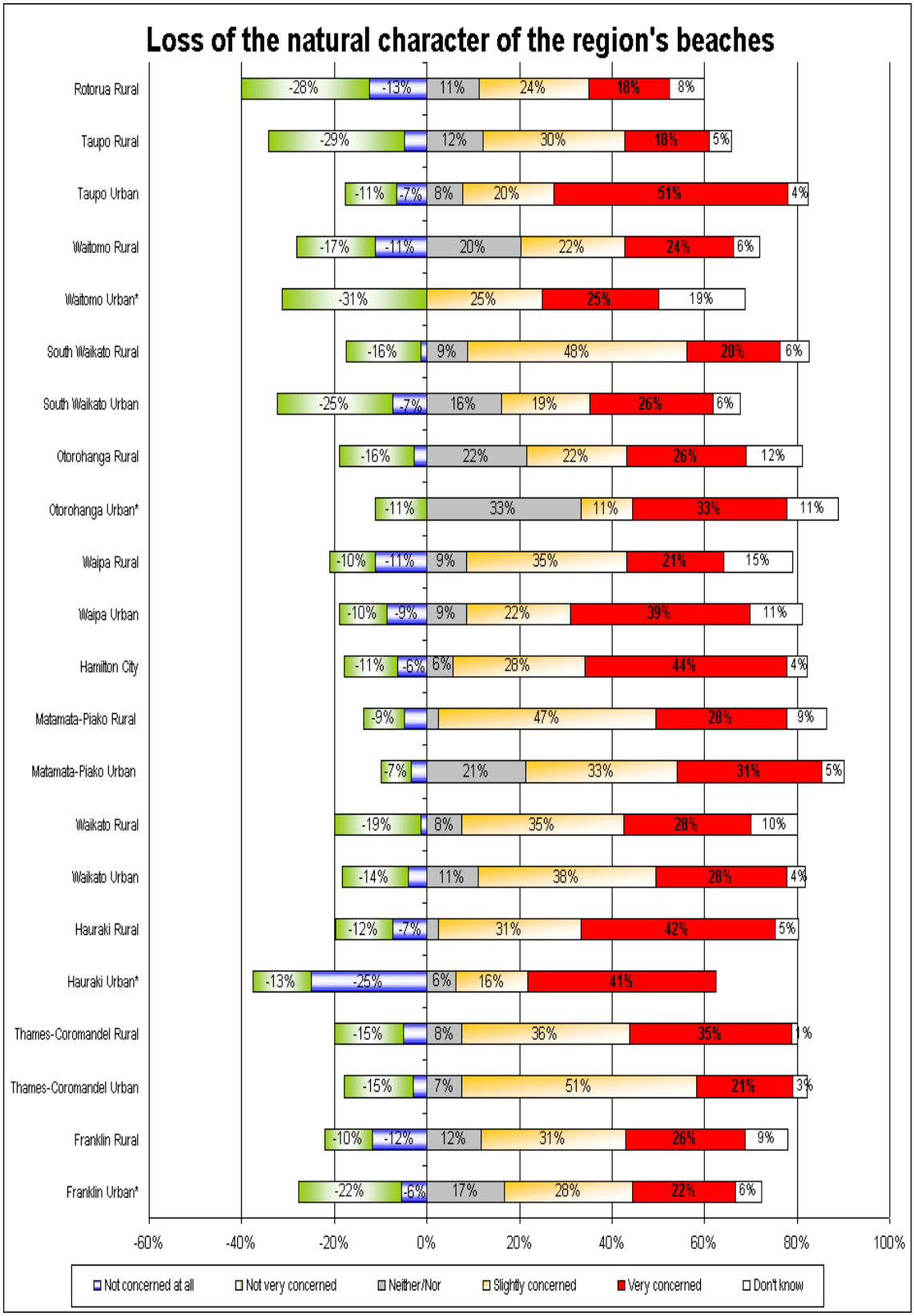
4.4.4.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to be concerned about loss of the natural character of the regions beaches through development were:

- Aged 20-39 (95% confidence level)
- Female (95% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about loss of the natural character of the regions beaches through development were:

- Aged 60+ (95% confidence level)
- Male (95% confidence level)
- Primary school educated (95% confidence level)
- In farming occupations (95% confidence level)



4.4.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to be concerned about loss of the natural character of the region's beaches through development were in:

- Hamilton Urban (95% confidence level)

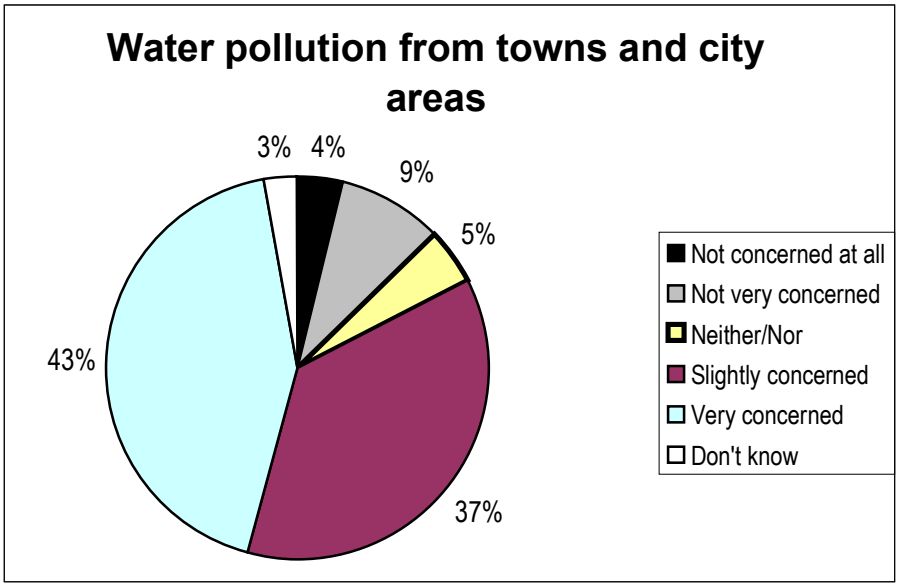
Those significantly more likely than the average regional resident to be unconcerned about loss of the natural character of the region's beaches through development were in:

- South Waikato Urban (95% confidence level)

4.4.5 Water Pollution From Towns And City Areas

4.4.5.1 Overview Of Results

Forty-three percent (43%) of participants were very concerned about water pollution from towns and city areas. A further thirty-seven percent (37%) were slightly concerned. Five percent (5%) were neither concerned nor unconcerned, while nine percent (9%) were not very concerned and four percent (4%) were not concerned at all. Three percent (3%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

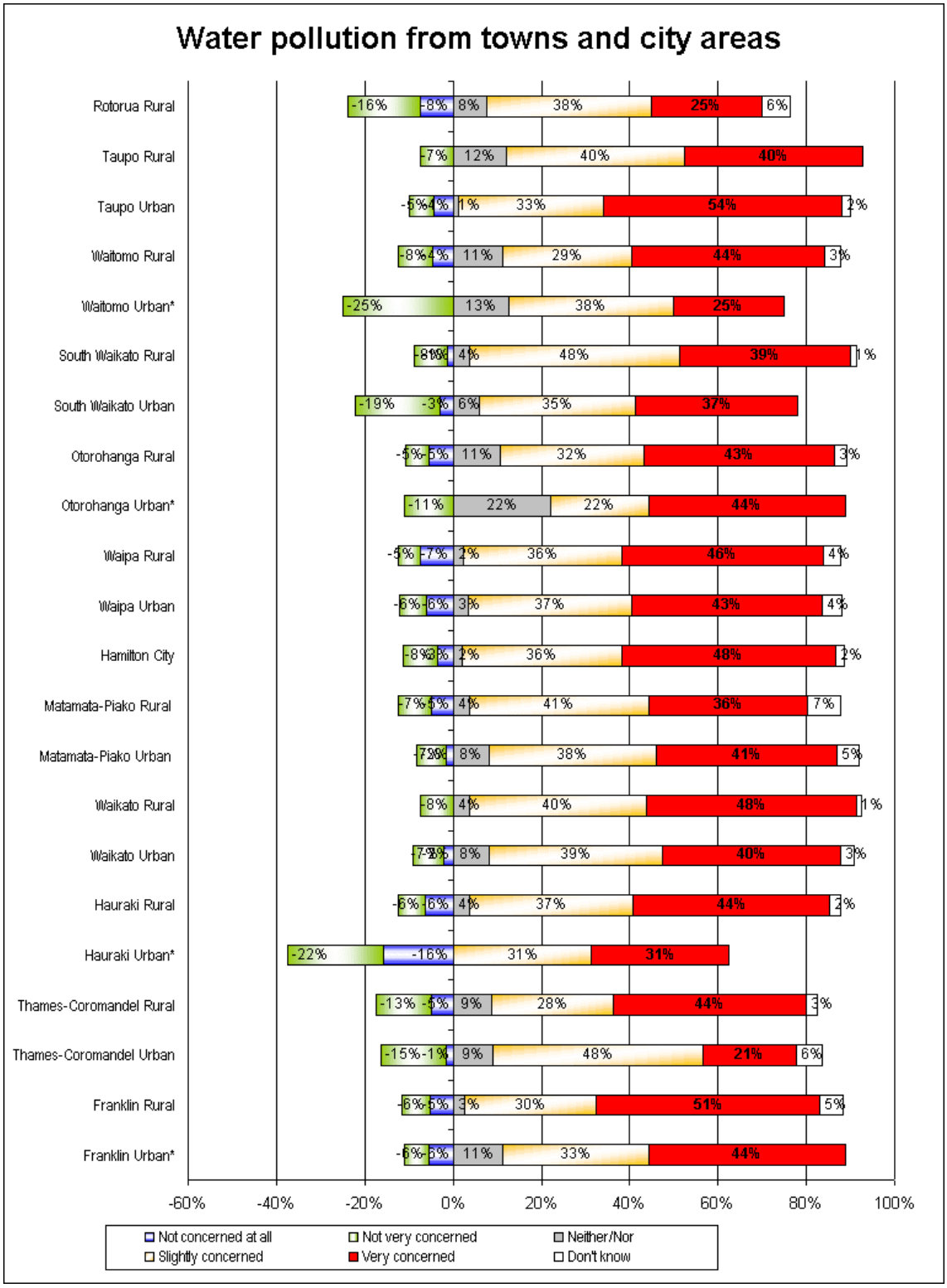
4.4.5.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to be concerned about water pollution from towns and city areas were:

- Aged 20-39 (95% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about water pollution from towns and city areas were:

- Aged 50+ (95% confidence level)



4.4.5.3 Results By Area

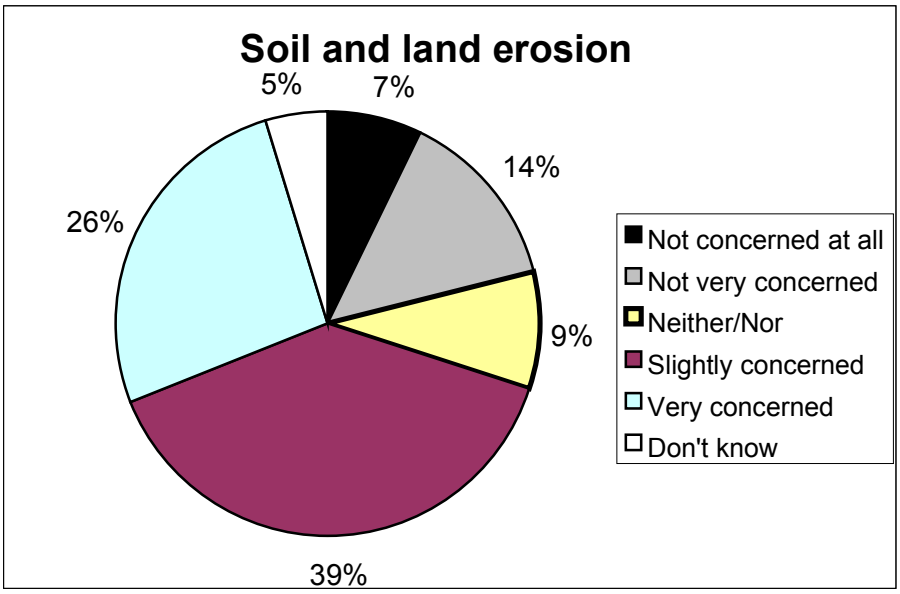
When these results were analysed by urban and rural areas for each local authority, the proportion to be concerned about water pollution from towns and city areas did not vary significantly. Those significantly more likely than the average regional resident to be unconcerned about water pollution from towns and city areas were in:

- Thames-Coromandel Urban (95% confidence level)
- Hauraki Urban (95% confidence level)

4.4.6 Soil And Land Erosion

4.4.6.1 Overview Of Results

One-quarter (26%) of participants were very concerned soil and land erosion. A further two-fifths (39%) were slightly concerned. Nine percent (9%) were neither concerned nor unconcerned, while fourteen percent (14%) were not very concerned and seven percent (7%) were not concerned at all. Five percent (5%) were unsure.



**Graph shows percentage of weighted total*

4.4.6.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to be concerned about soil and land erosion were:

- Female (90% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about soil and land erosion were:

- Aged 18-19 (95% confidence level)
- Male (90% confidence level)

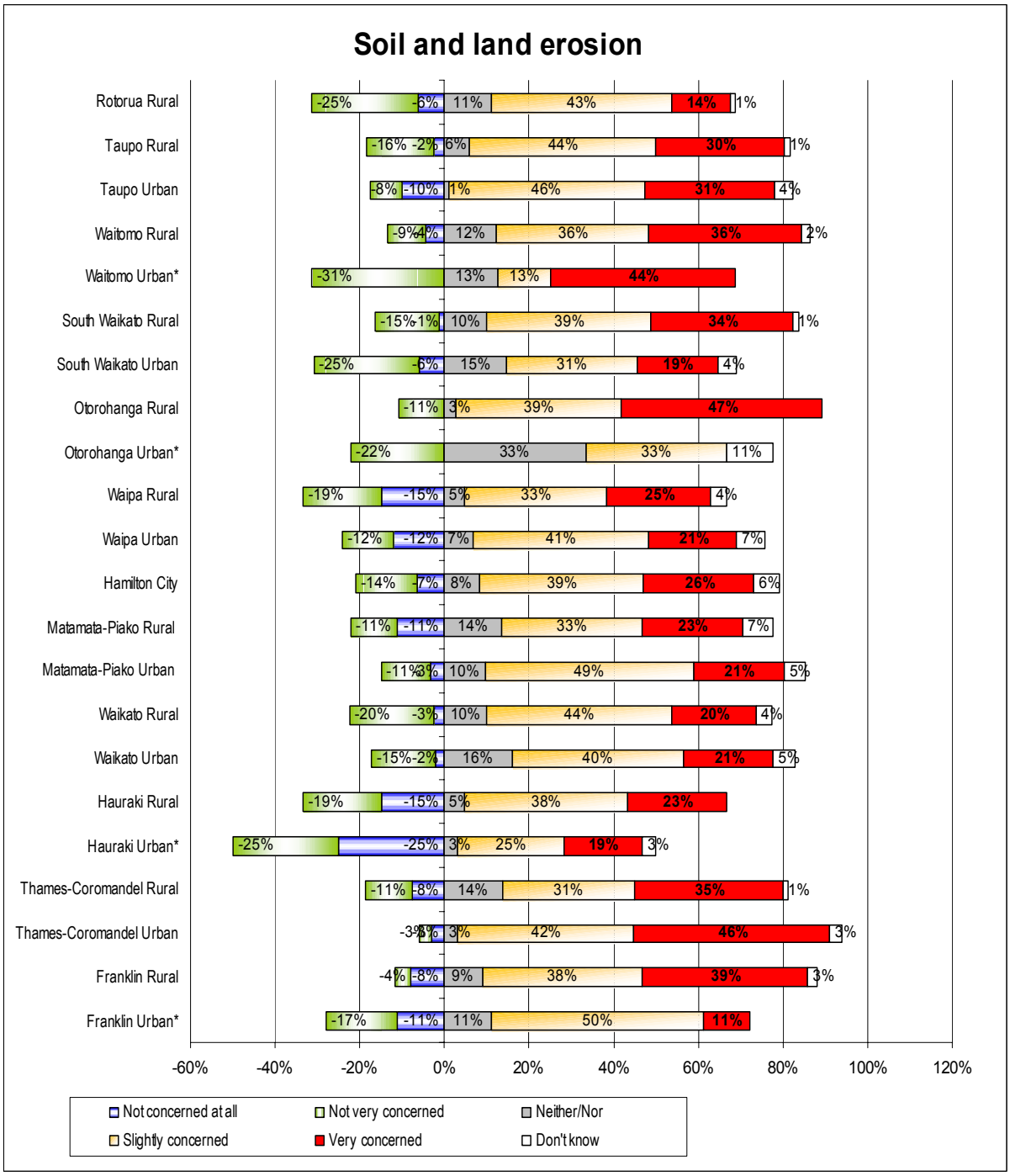
4.4.6.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to be concerned about soil and land erosion were in:

- Thames-Coromandel Urban (95% confidence level)
- Otorohanga Rural (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about soil and land erosion were in:

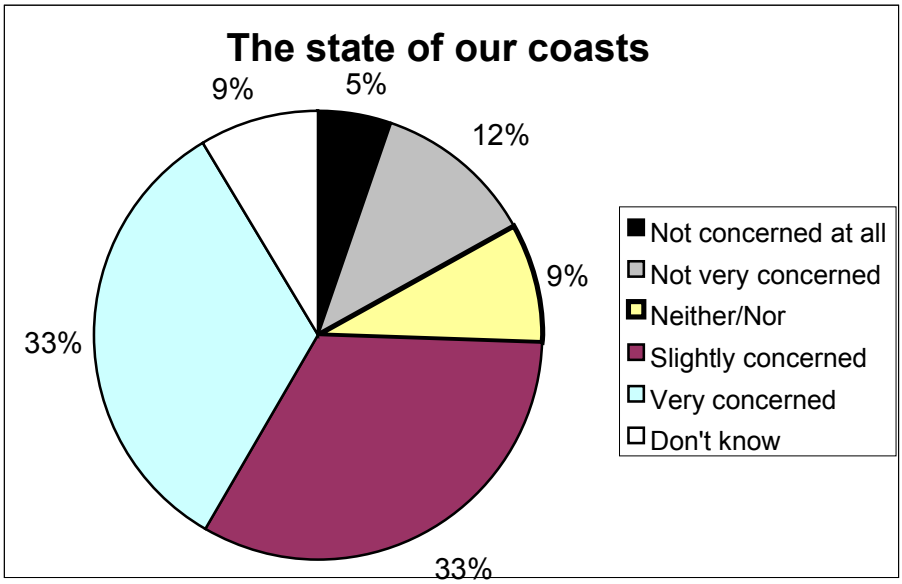
- Hauraki Urban (95% confidence level)
- Otorohanga Urban (95% confidence level)
- South Waikato Urban (95% confidence level)



4.4.7 State Of Our Coasts

4.4.7.1 Overview Of Results

One-third (33%) of participants were very concerned about the state of our coasts. The same number (33%) were slightly concerned. Nine percent (9%) were neither concerned nor unconcerned, while similar proportions (12%) were not very concerned and five percent (5%) were not concerned at all. Nine percent (9%) were unsure.



**Graph shows percentage of weighted total*

4.4.7.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to be concerned about the state of our coasts were:

- Aged 30-39 (90% confidence level)
- Female (90% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about the state of our coasts were:

- Aged 60+ (95% confidence level)
- Male (90% confidence level)
- Primary school educated (90% confidence level)

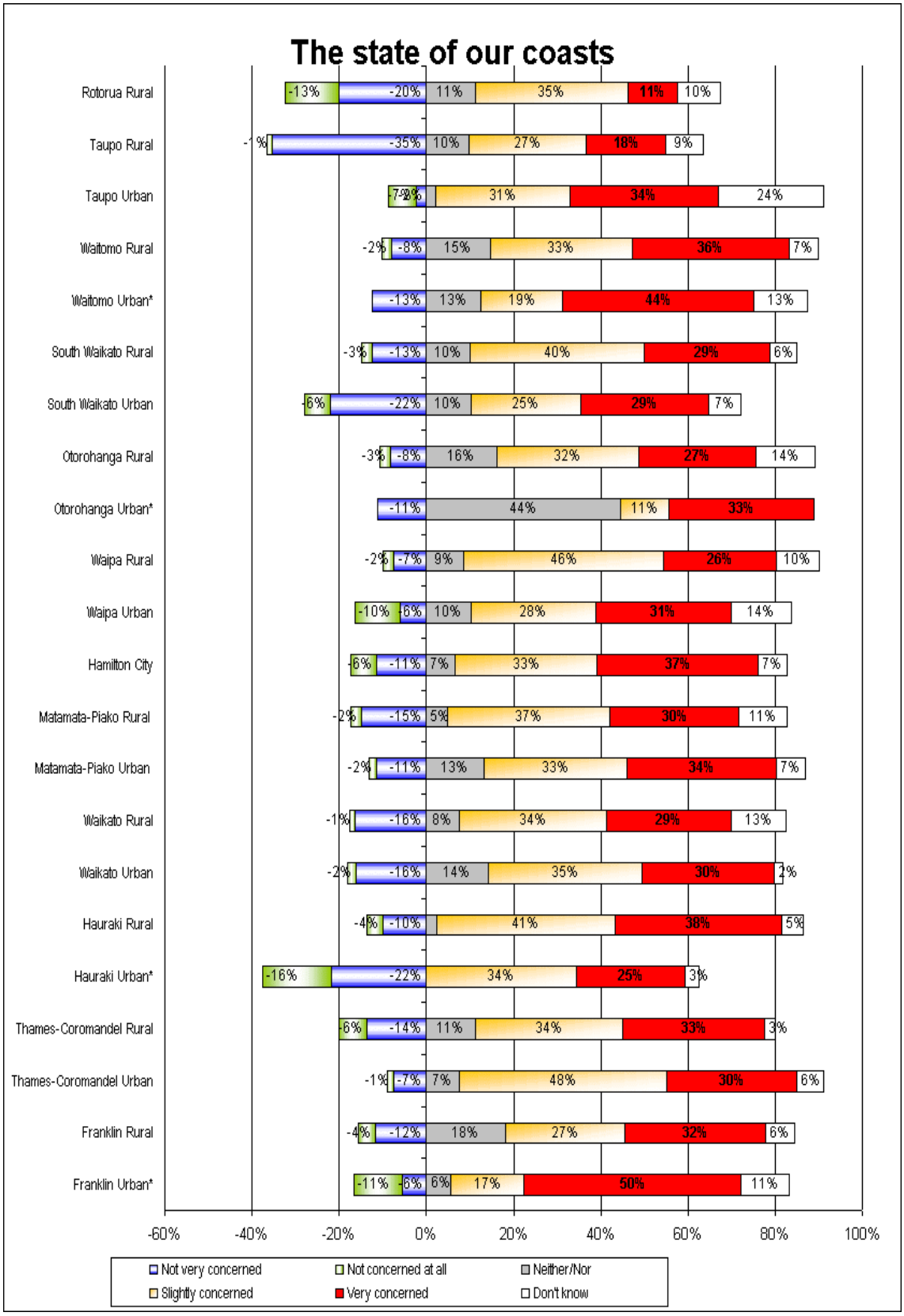
4.4.7.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to be concerned about the state of our coasts were in:

- Taupo Urban (90% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about the state of our coasts were in:

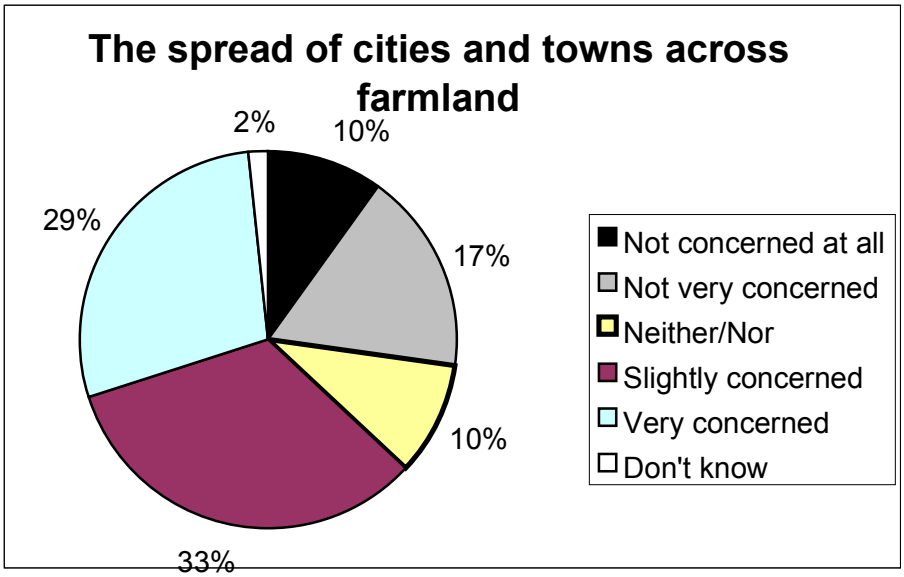
- Hauraki Urban (95% confidence level)
- Taupo Rural (95% confidence level)
- Rotorua Rural (95% confidence level)



4.4.8 Spread Of Cities And Towns Across Farmland

4.4.8.1 Overview Of Results

Twenty-nine percent (29%) of participants were very concerned about the spread of cities and towns across farmland. One-third (33%) were slightly concerned. One-tenth (10%) were neither concerned nor unconcerned, while seventeen percent (17%) were not very concerned and one-tenth (10%) were not concerned at all. Two percent (2%) were unsure.



**Graph shows percentage of weighted total*

4.4.8.2 Results By Demographic Characteristics

When these results were analysed demographically there were no significant differences in the proportion who were unconcerned. Those significantly more likely than the average regional resident to be concerned about the spread of cities and towns across farmland were:

- Aged 60+ (90% confidence level)
- Rural (95% confidence level)
- In farming occupations (90% confidence level)

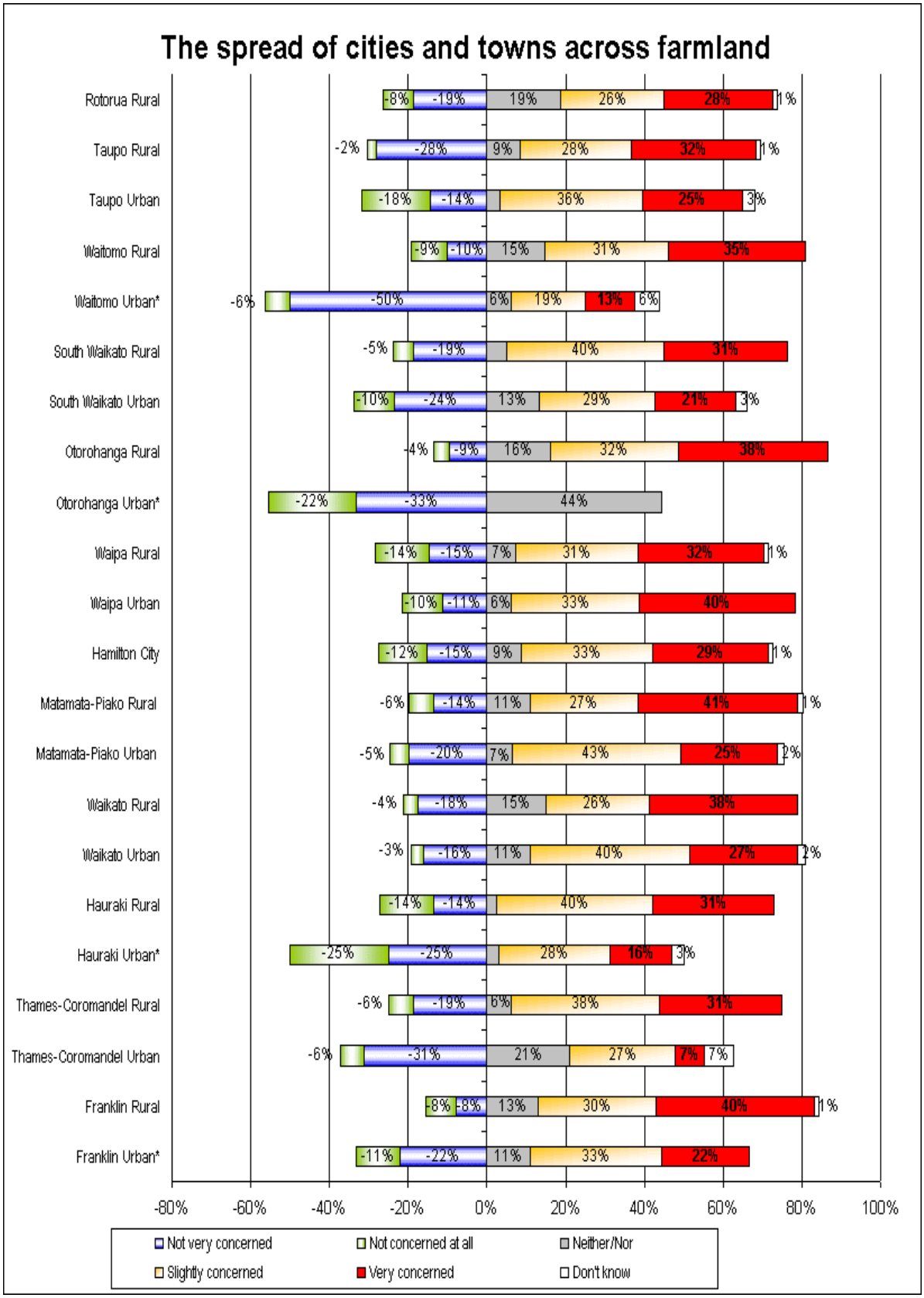
4.4.8.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to be concerned about the spread of cities and towns across farmland were in:

- Waipa Urban (95% confidence level)

Those significantly more likely than the average regional resident to be unconcerned about the spread of cities and towns across farmland were in:

- Thames-Coromandel Urban (95% confidence level)
- Hauraki Urban (95% confidence level)
- Otorohanga Urban (95% confidence level)
- Waitomo Urban (95% confidence level)



5 Air Quality

One of Environment Waikato's functions is to maintain air quality within the region. In some ways, this is more difficult to measure than other core issues. People's perceptions of what air quality problems exist in the region and the source of those air problems (e.g. car emissions) assist in understanding the scale of the region's air

quality problems and if there are specific concentrations of concern within the region.

5.1 Are There Activities Damaging Air Quality

5.1.1.1 Overview Of Results

Almost half (46%) of participants said there were activities damaging air quality. Half (51%) said there were not, and three percent (3%) did not know. When these results were analysed demographically no significant differences were found.

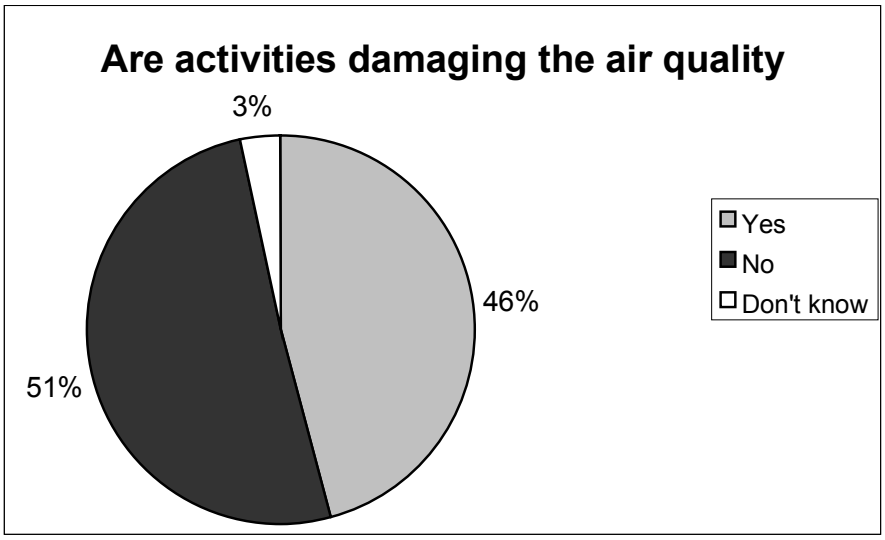
5.1.1.2 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say there were activities damaging air quality were in:

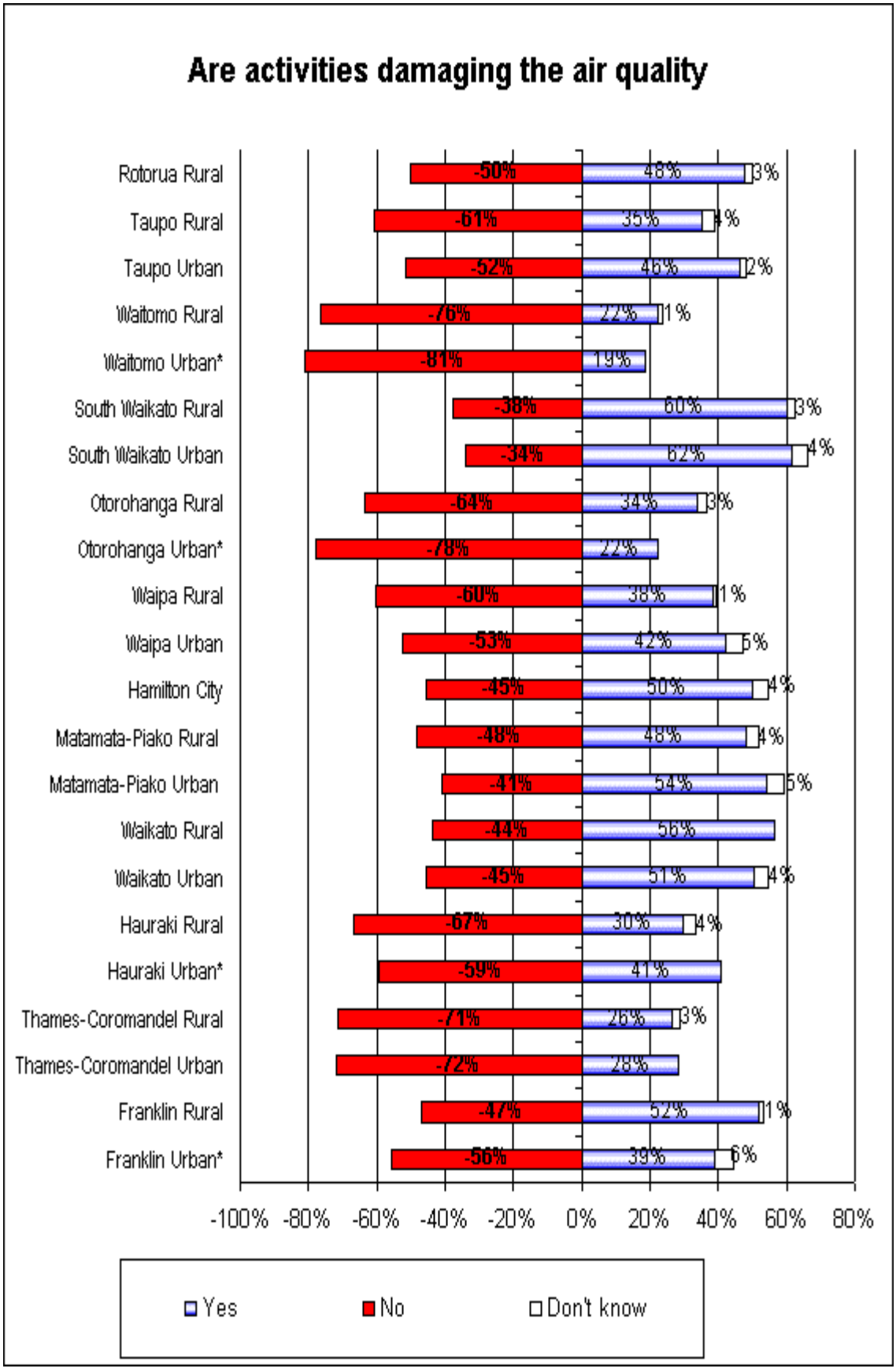
- South Waikato Urban (95% confidence level)

Those significantly more likely than the average regional resident to say there were not activities damaging air quality were in:

- Thames-Coromandel Urban (95% confidence level)
- Thames-Coromandel Rural (95% confidence level)
- Waitomo Urban (95% confidence level)
- Hauraki Rural (90% confidence level)
- Waitomo Rural (90% confidence level)



**Graph shows percentage of weighted total*


Are activities damaging the air quality
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-50%
48%
3%
-61%
35%
4%
-52%
46%
2%
-76%
22%
1%
-81%
19%
-38%
60%
3%
-34%
62%
4%
-64%
34%
3%
-78%
22%
-60%
38%
1%
-53%
42%
5%
-45%
50%
4%
-48%
48%
4%
-41%
54%
5%
-44%
56%
-45%
51%
4%
-67%
30%
4%
-59%
41%
-71%
26%
3%
-72%
28%
-47%
52%
1%
-56%
39%
6%
-100% -80% -60% -40% -20% 0% 20% 40% 60% 80%
Yes
No
Don't know

5.2 Activities Perceived To Be Damaging Air Quality

When those who said there were activities damaging the air quality in the region were asked to describe these activities the most popular responses were vehicle emissions (47%), industrial emissions (38%) and sprays or other chemicals (17%). Other popular responses were domestic fires (6%), pollen (6%), burn-offs (5%) and backyard fires at houses (4%).

A wide range of other responses were offered. Each was mentioned by less than three percent (3%) of those who said there were air quality problems in the region.

Only respondents who considered there were activities damaging the air quality in the region were asked to name the activities. They were encouraged to name all the causes of damage therefore the total responses add up to more than 100%.

Activities perceived to be damaging Air Quality	
Vehicle emissions	47%
Industrial emissions	38%
Sprays / chemicals	17%
Domestic fires	6%
Pollen	6%
Burn offs	5%
Backyard fires at houses	4%
Other dust	2%
Indoor farming	2%
Smells	2%
Methane (animal emissions, landfill)	2%
Dust on the road	1%
Kinleith	1%
Noise	1%
Infrastructure	1%
Ozone / CFC's	1%
Smoking	1%
Other non-air quality	1%
Trees – cutting down, lack of	0%
Unsealed yards	0%
Road burning (e.g. Tar)	0%
Other	1%
Don't know	2%

Geographic analysis of the most common air damaging activities reported showed that vehicle emissions were most commonly raised by respondents from the Hamilton Urban area (71%). Industrial emissions were most commonly raised by those from the South Waikato (urban 62%, rural 58%), Taupo urban (52%) and Otorohanga urban (50%) areas. Sprays or chemicals were most commonly mentioned by respondents from Taupo urban (48%), Franklin rural (40%) and Waipa rural (39%) areas.

6 Environmental Knowledge

6.1 Perceived Impacts

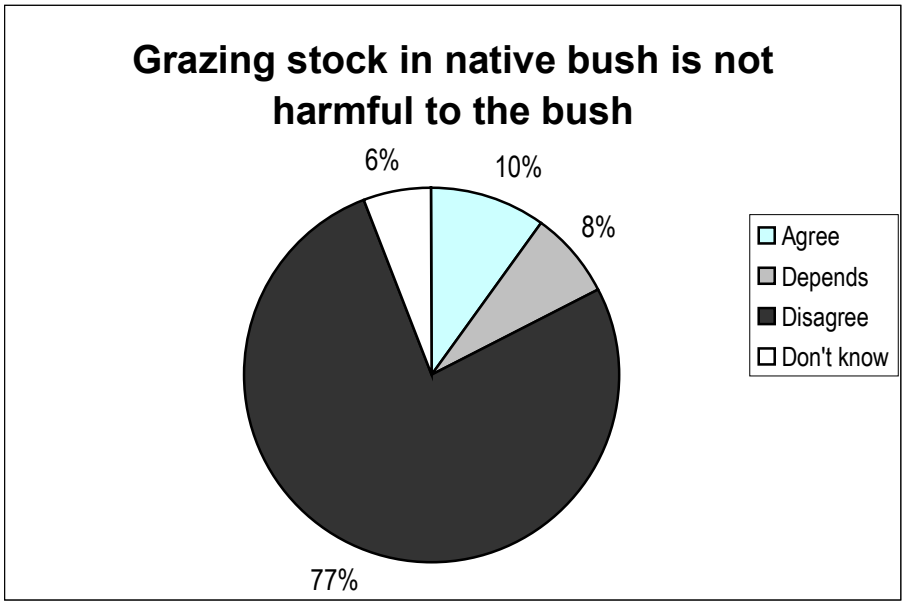
The questions in this section are a range of knowledge questions based around current environmental issues, and are used to gauge the level of general environmental knowledge. By identifying gaps in knowledge, Environment Waikato

is able to tailor environmental education programmes for the different communities within the region.

6.1.1 Grazing Stock In Native Bush Is Not Harmful To The Bush

6.1.1.1 Overview Of Results

One-tenth (10%) of participants agreed that grazing stock in native bush is not harmful to the bush. Almost as many (8%) said it depends. Over three-quarters (77%) disagreed with the statement and six percent (6%) were unsure.



**Graph shows percentage of weighted total*

6.1.1.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that grazing stock in native bush is not harmful to the bush were:

- Aged 60+ (95% confidence level)

Those significantly more likely than the average regional resident to disagree that grazing stock in native bush is not harmful to the bush were:

- Aged 40-49 (95% confidence level)
- Aged 30-39 (90% confidence level)

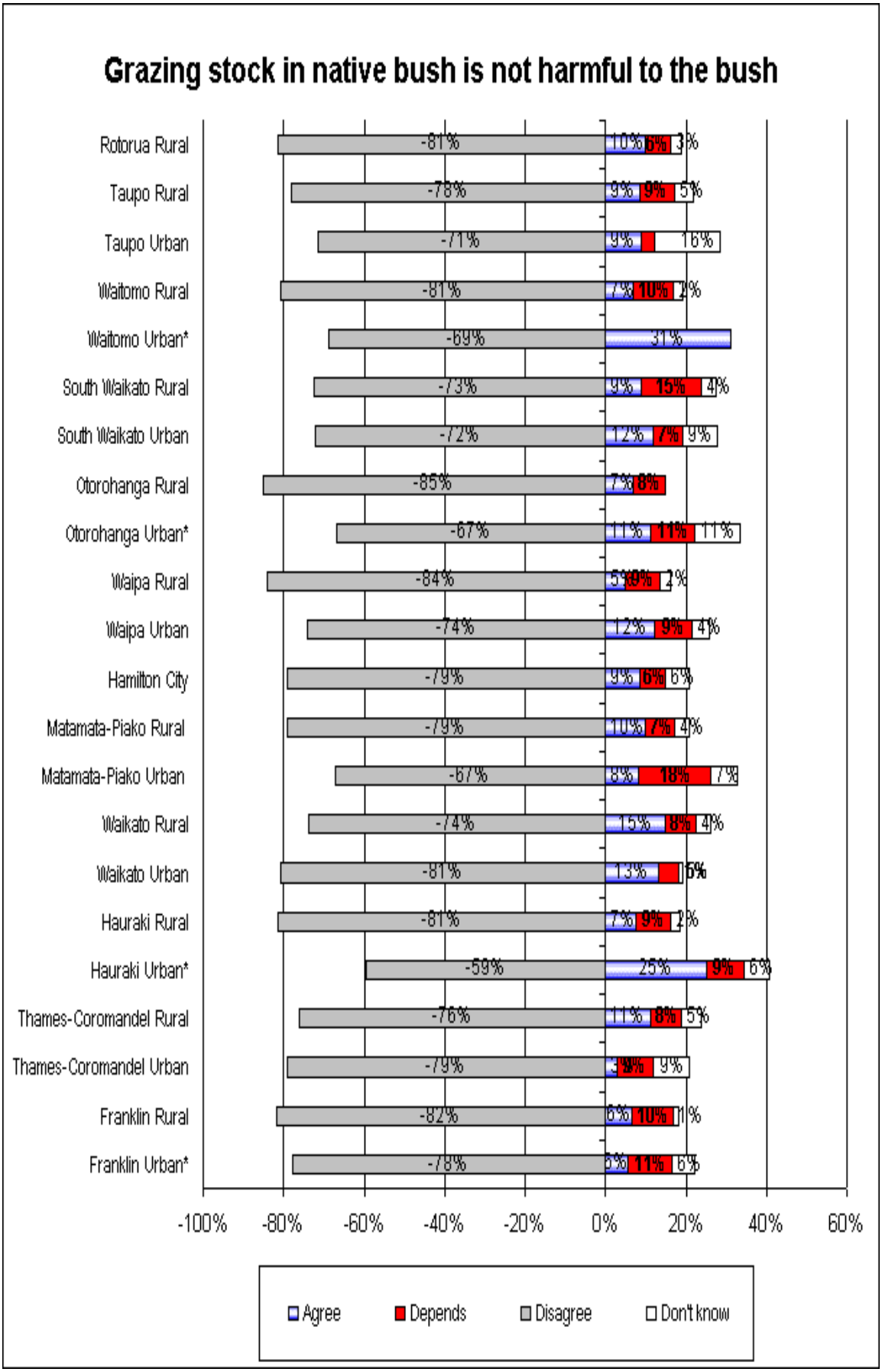
6.1.1.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that grazing stock in native bush is not harmful to the bush were in:

- Hauraki Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that grazing stock in native bush is not harmful to the bush were in:

- Thames-Coromandel Urban (95% confidence level)

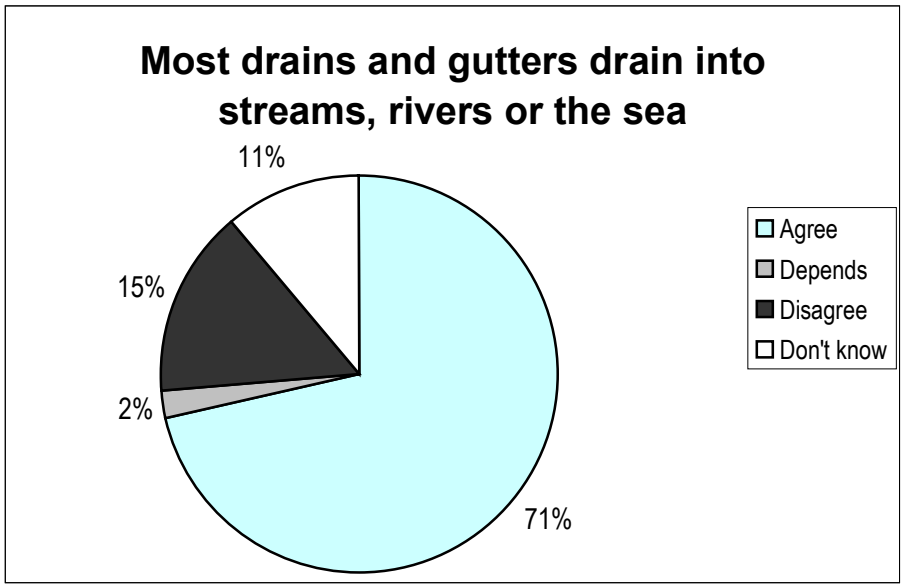

Grazing stock in native bush is not harmful to the bush
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-100%
-80%
-60%
-40%
-20%
0%
20%
40%
60%
Agree
Depends
Disagree
Don't know

6.1.2 Most Stormwater Drains/Road Gutters Drain Directly Into Streams, Rivers Or The Sea

6.1.2.1 Overview Of Results

Almost three-quarters (71%) of participants agreed that most stormwater drains and road gutters drain directly into streams, rivers or the sea. Two percent (2%) said it depends.

Fifteen percent (15%) disagreed with the statement and eleven percent (11%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

6.1.2.2 Comparison To 1998 Study

The 2000 results were virtually unchanged when compared to the 1998 results. One percent fewer (-1%) said it "depends", while one percent more (+1%) said they did not know.

Most stormwater drains and road gutters drain directly into streams, rivers or the sea	1998	2000	Change
Agree	71%	71%	0%
Depends	3%	2%	-1%
Disagree	15%	15%	0%
Don't know	12%	11%	-1%
Total	101%	100%	

Percentage change may not appear to equal 0 due to rounding
May not equal 100% due to rounding

6.1.2.3 Results By Demographic Characteristics

When these results were analysed demographically the proportion who agreed did not vary significantly.

Those significantly more likely than the average regional resident to disagree that most stormwater drains and road gutters drain directly into streams, rivers or the sea were:

- Aged 20-29 (95% confidence level)

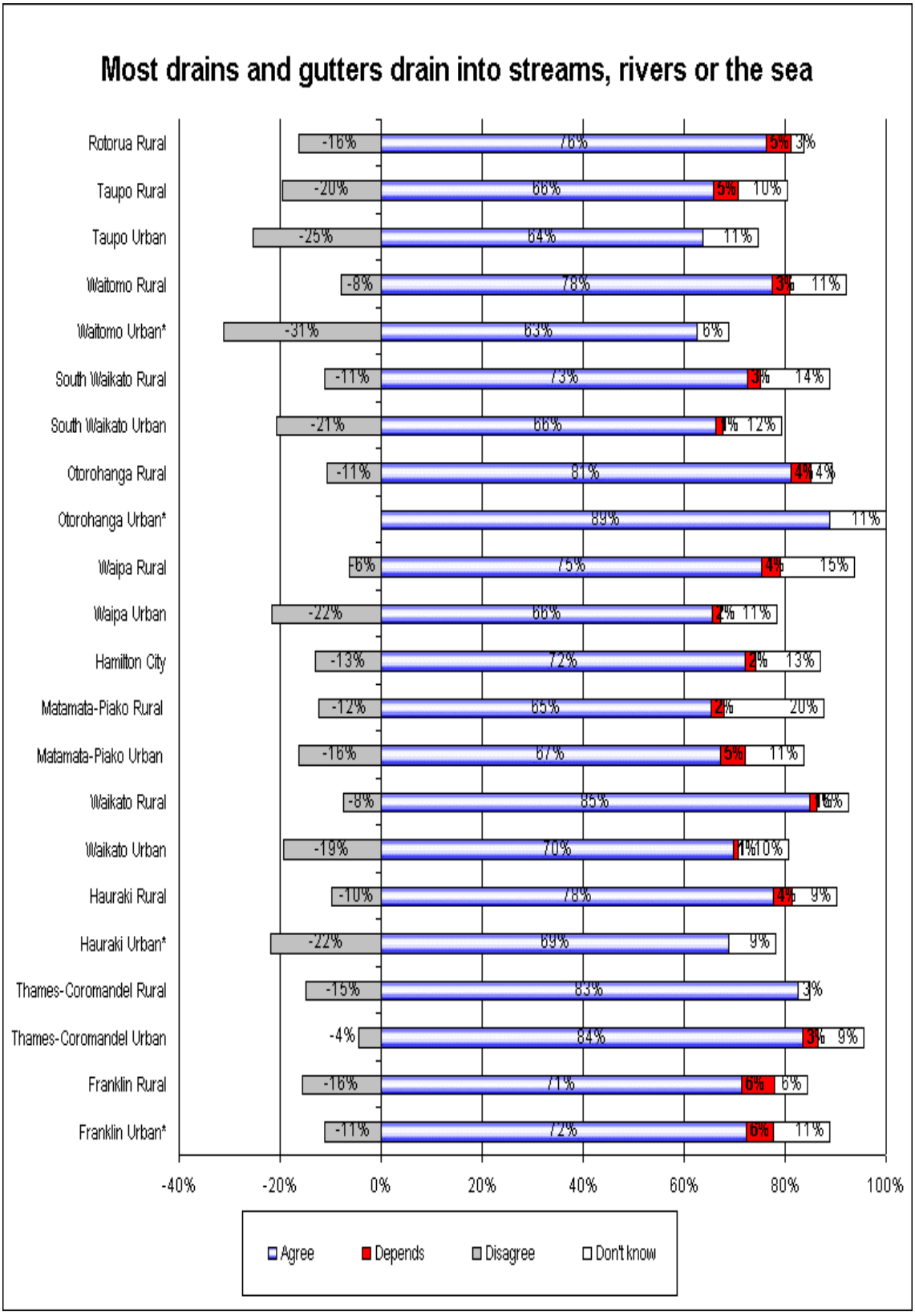
6.1.2.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that most stormwater drains and road gutters drain directly into streams, rivers or the sea were in:

- Taupo Urban (90% confidence level).

Those significantly more likely than the average regional resident to disagree that most stormwater drains and road gutters drain directly into streams, rivers or the sea were in:

- Thames-Coromandel Urban (95% confidence level)
- Waikato Rural (95% confidence level)

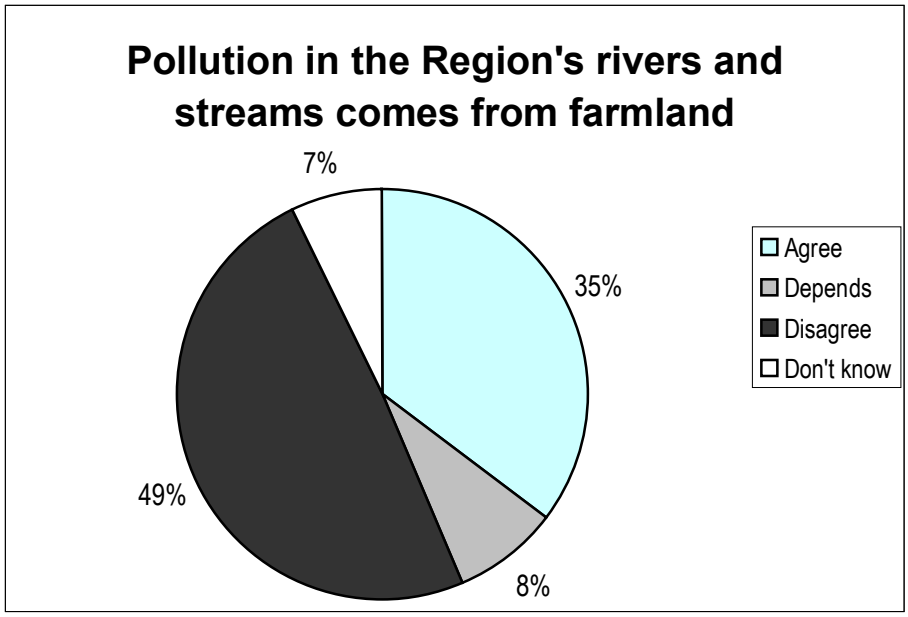


6.1.3 Pollution In The Region's Rivers And Streams Comes Mainly From Farmland

6.1.3.1 Overview Of Results

Half (49%) of participants disagreed that pollution in the Region's rivers and streams comes mainly from farmland. Eight percent (8%) said it depends.

One-third (35%) agreed with the statement and seven percent (7%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

6.1.3.2 Results by Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that pollution in the Region's rivers and streams comes mainly from farmland were:

- Aged 60+ (95% confidence level)
- In unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that pollution in the Region's rivers and streams comes mainly from farmland were:

- Aged under 40 years (95% confidence level)
- In farming occupations (95% confidence level)

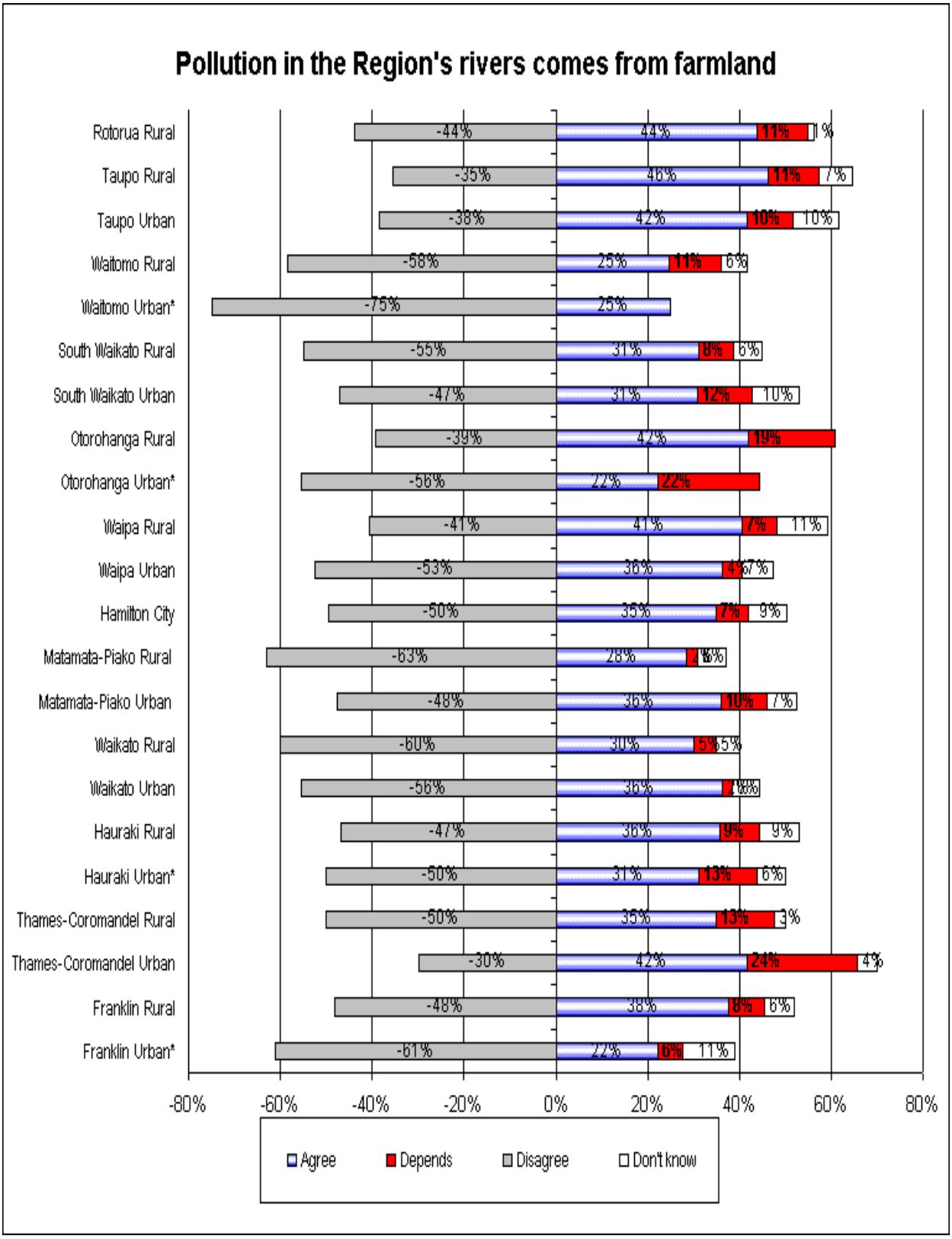
6.1.3.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that pollution in the Region's rivers and streams comes mainly from farmland were in:

- Waitomo Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that pollution in the Region's rivers and streams comes mainly from farmland were in:

- Thames-Coromandel Urban (95% confidence level)

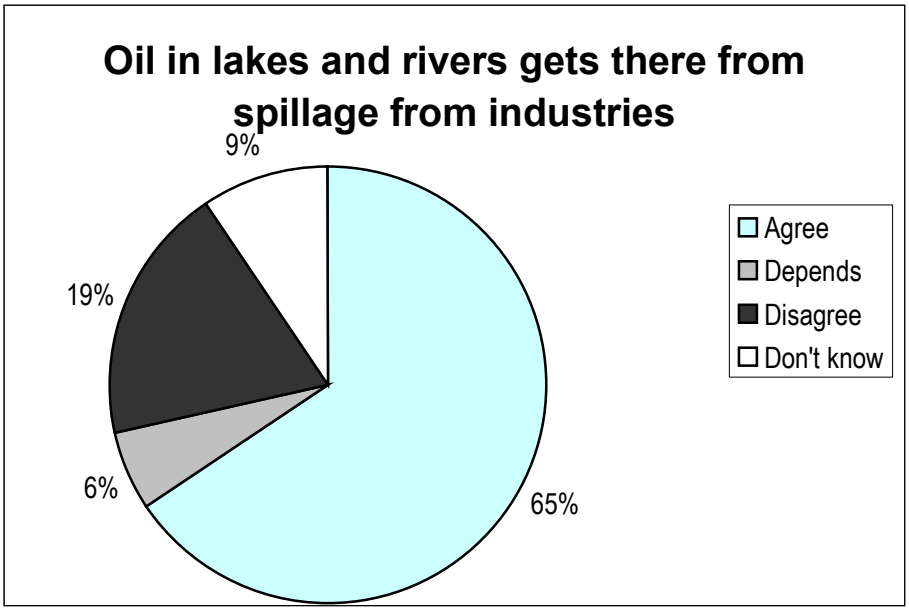


6.1.4 Most Of The Oil In Our Waterways Comes From Spillage From Industries

6.1.4.1 Overview Of Results

Two-thirds (65%) of participants agreed that most of the oil in our lakes, rivers and harbours gets there from spillage from industries. Six percent (6%) said it depends.

One-fifth (19%) disagreed with the statement and nine percent (9%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

6.1.4.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that most of the oil in our lakes, rivers and harbours gets there from spillage from industries were:

- Rural (90% confidence level)
- Secondary school educated (90% confidence level)

Those significantly more likely than the average regional resident to disagree that most of the oil in our lakes, rivers and harbours gets there from spillage from industries were:

- Tertiary educated (95% confidence level)

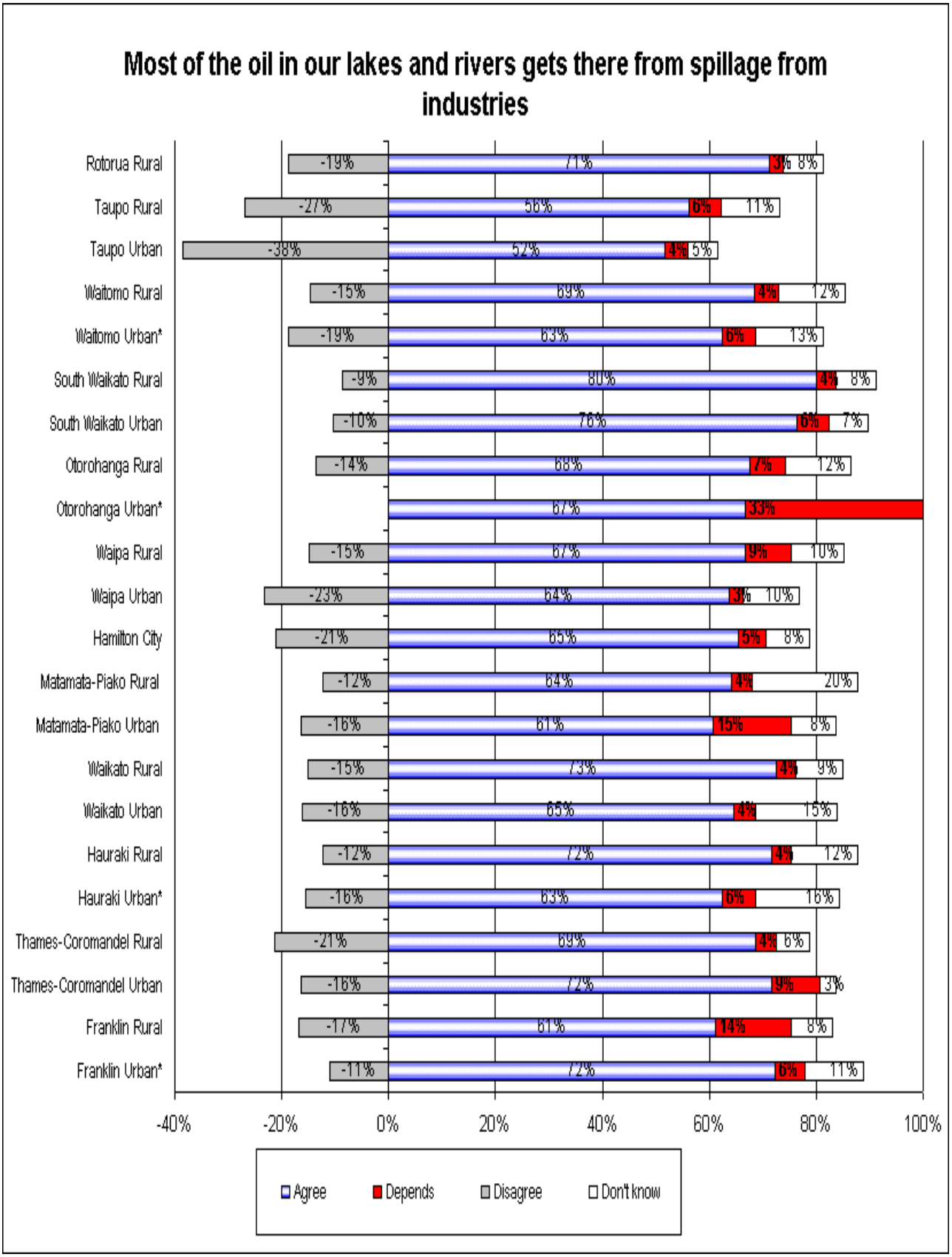
6.1.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that most of the oil in our lakes, rivers and harbours gets there from spillage from industries were in:

- South Waikato Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that most of the oil in our lakes, rivers and harbours gets there from spillage from industries were in:

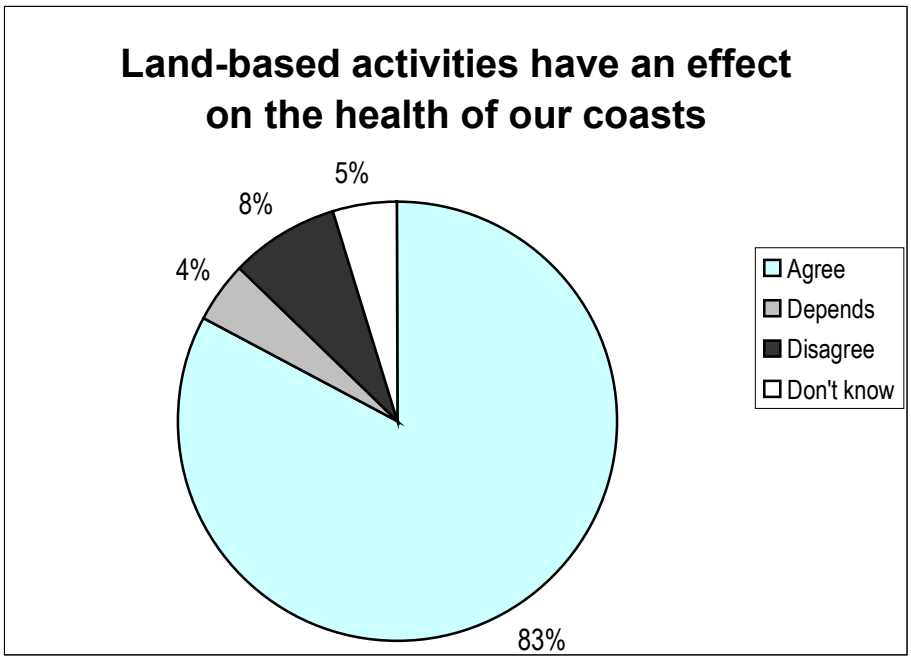
- Taupo Urban (95% confidence level)


Most of the oil in our lakes and rivers gets there from spillage from industries
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-40%
-20%
0%
20%
40%
60%
80%
100%
Agree
Depends
Disagree
Don't know

6.1.5 Land-based Activities Have An Effect On The Health Of Our Coasts And Harbours

6.1.5.1 Overview Of Results

Four-fifths (83%) of participants agreed that land-based activities have an effect on the health of our coasts and harbours. Four percent (4%) said it depends. Eight percent (8%) disagreed with the statement and five percent (5%) were unsure.



**Graph shows percentage of weighted total*

6.1.5.2 Results By Demographic Characteristics

When these results were analysed demographically the proportion who agreed did not vary significantly.

Those significantly more likely than the average regional resident to disagree that land-based activities have an effect on the health of our coasts and harbour were:

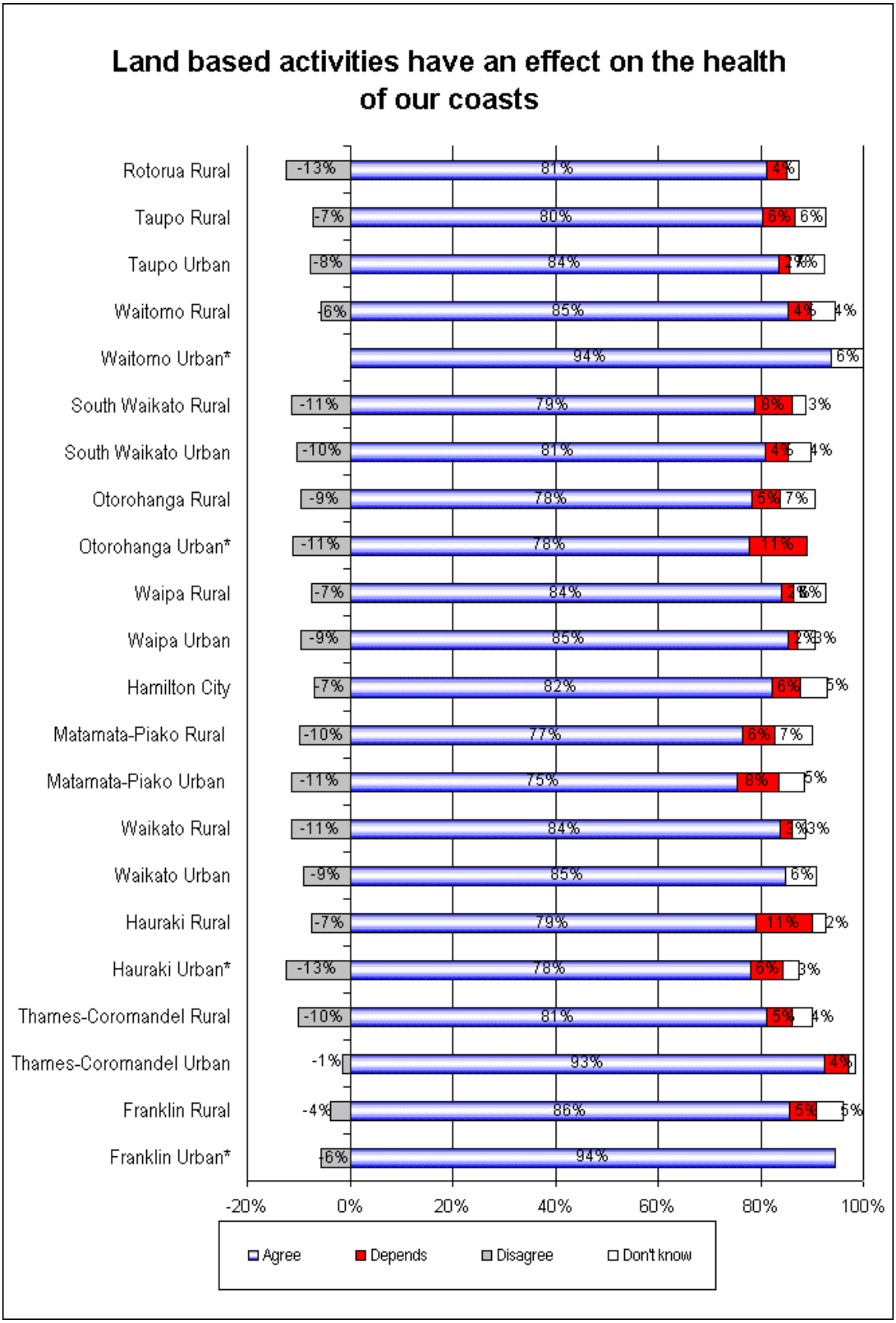
- Aged 60+

6.1.5.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that land-based activities have an effect on the health of our coasts and harbour were in:

- Thames-Coromandel Urban (95% confidence level)

There were no significant differences in the proportions who disagreed.



7 Natural Hazards

7.1 Awareness Of Natural Hazards

Different hazards exist in different parts of the region. By asking people to identify the types of natural hazard that could damage them or their property, it is possible to

monitor whether people have an accurate understanding of the risks in their area. Self-reporting of how prepared people are to cope with natural disasters indicates whether people take the risks seriously. This type of information is useful for targeting public education campaigns by area and by type of hazard.

7.1.1.1 Overview

Natural hazards that could damage you or your property	Total
Earthquakes	35%
Flooding	33%
High winds / Storms / Cyclones	26%
Land erosion/land slips	11%
Volcanic or thermal eruption	10%
Forest or bush fire	6%
Drought	3%
Animal pests	2%
Ozone layer damage	2%
Trees falling	2%
Tsunami	2%
Pollution (air, water, soil, rubbish)	1%
Coastal erosion	1%
Sprays / Chemicals	1%
Plant related (weeds/GE)	1%
Animal (insects, pests, diseases)	1%
Rising sea levels	1%
Other	1%
Tornado	0%
Mining	0%
Industrial pollution	0%
Roadways	0%
Tomos	0%
Rain, hail, snow	0%
Other non-natural	0%
Lighting	0%
Global warming/weather	0%
Fire	0%
None/don't know	19%

Multiple answers were allowed so percentages will not add to 100%
Percentages less than .5% may appear as 0%

Participants were asked what natural hazards they knew of that could damage them or their property.

Earthquakes were the most frequently mentioned natural hazard with one-third (35%) of participants considering earthquakes to be potentially damaging to them or their property. Flooding was the next most frequently mentioned natural hazard with a further one-third (33%) of participants considering flooding to be potentially damaging to them or their property.

One-quarter (26%) of participants named high winds, storms and cyclones. Eleven percent (11%) named land erosion and land slips and a further one-tenth (10%) named volcanic or thermal eruption.

Nineteen percent (19%) considered that there are no natural hazards that would be potentially damaging to them or their property.

Natural disasters		Earthquakes	Flooding	Wind/Storm/ Cyclone	Coastal Erosion
District	Frk Urb*	39%	28%	33%	6%
	Frk Rur	16%	39%	30%	5%
	TC Urb	24%	36%	25%	10%
	TC Rur	13%	36%	21%	5%
	Hau Urb*	31%	36%	19%	0%
	Hau Rur	26%	36%	23%	1%
	Wai Urb	30%	36%	28%	3%
	Wai Rur	36%	31%	34%	1%
	Mt/P Urb	48%	36%	38%	2%
	Mt/P Rur	36%	35%	33%	0%
	Ham Urb	39%	31%	29%	0%
	Wpa Urb	38%	31%	43%	1%
	Wpa Rur	32%	33%	28%	0%
	Ota Urb*	11%	22%	0%	0%
	Ota Rur	18%	38%	19%	0%
	SthW Urb	59%	25%	22%	0%
	SthW Rur	29%	15%	24%	0%
	Wto Urb*	25%	0%	13%	0%
	Wto Rur	13%	34%	11%	0%
	Tpo Urb	56%	22%	18%	0%
	Tpo Rur	45%	24%	10%	0%
	Rta Rur	60%	20%	25%	1%

Percentages do not add to 100% as multiple answers were allowed

The frequency that earthquakes, flooding, wind related hazards and coastal erosion were included was analysed by district. The table shows that:

- Earthquakes were most frequently mentioned by respondents from Rotorua Rural (60%), South Waikato Urban (59%), Taupo Urban (56%), Matamata-Piako Urban (48%), and Taupo Rural (45%) participants.
- Flooding was most frequently mentioned by respondents from Franklin Rural (39%) and Otorohanga rural (38%) participants.
- Wind-related hazards were most often mentioned by Waipa Urban (43%) and Matamata-Piako Urban (38%) participants.
- Mention of coastal erosion was mostly confined to participants from Thames-Coromandel (urban 10%, rural 5%) and Franklin (urban 6%, rural 5%) districts.

7.1.1.2 Comparison To 1998 Study

The 2000 results were markedly different from those reported in the 1998 study. This may be related to the type of natural disaster being reported in the news media at the time of interviewing, and therefore "top of mind" for participants.

When compared to the 1998 study there was an increase in the proportion that included earthquakes (+24%), flooding (+11%) and wind-related problems (+10%) in their responses.

There was a decrease in the proportion who said they could not answer the question (-24%).

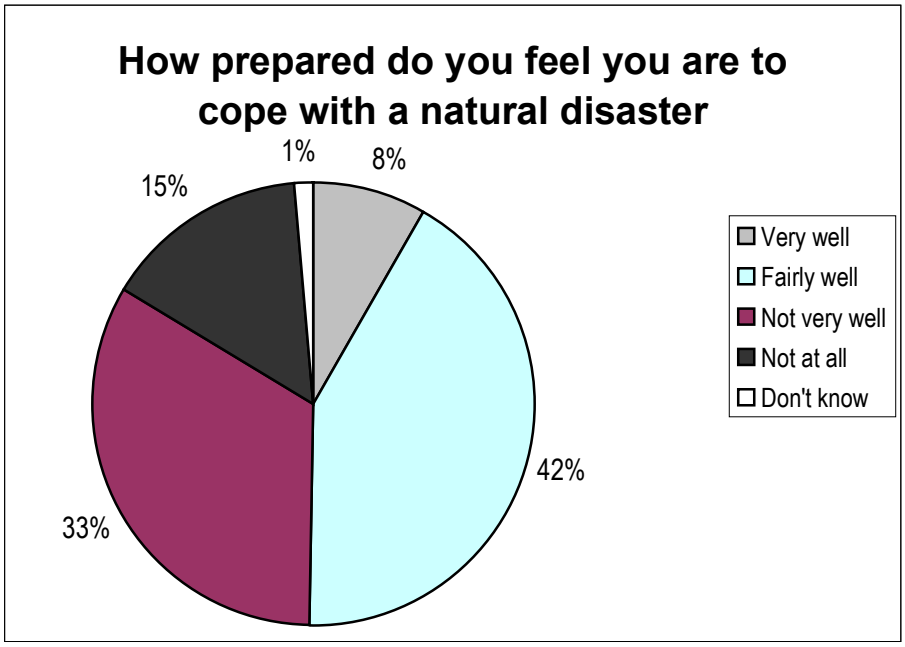
Natural hazards that could damage you or your property	1998	2000	Change
Earthquakes	11%	35%	24%
Flooding	22%	33%	11%
High winds / Storms / Cyclones	16%	26%	10%
Land erosion/land slips	10%	11%	1%
Volcanic or thermal eruption	8%	10%	2%
None/don't know	43%	19%	-24%

Percentage change may not appear to equal 0 due to rounding

7.2 Preparation For Natural Disaster

7.2.1.1 Overview Of Results

Participants were asked how prepared they considered themselves to be to cope with a natural disaster. Half (50%) of the participants considered themselves well prepared for a natural disaster. Half (48%) considered themselves not well prepared and one percent (1%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

7.2.1.2 Comparison To 1998 Study

When compared to the 1998 results only small changes were evident. Fewer participants considered themselves well prepared for a natural disaster (-1%) and fewer were unsure (-1%). There was a small increase in the proportion who considered themselves not well prepared for a natural disaster (+1%).

It should be noted that in the 1998 survey only those who were able to name a hazard were asked their level of preparation. In the 2000 survey all participants were asked to do so.

How prepared for a natural disaster	1998	2000	Change	Change
Very well	10%	8%	-2%	1%
Fairly well	41%	42%	1%	
Not very well	27%	33%	6%	1%
Not at all	20%	15%	-5%	
Don't know	2%	1%	-1%	-1%
Total	100%	100%		

Percentage change may not appear to equal 0 due to rounding

7.2.1.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to consider themselves well prepared for a natural disaster were:

- Aged 50-59 (95% confidence level)

Those significantly more likely than the average regional resident to consider themselves not well prepared for a natural disaster were:

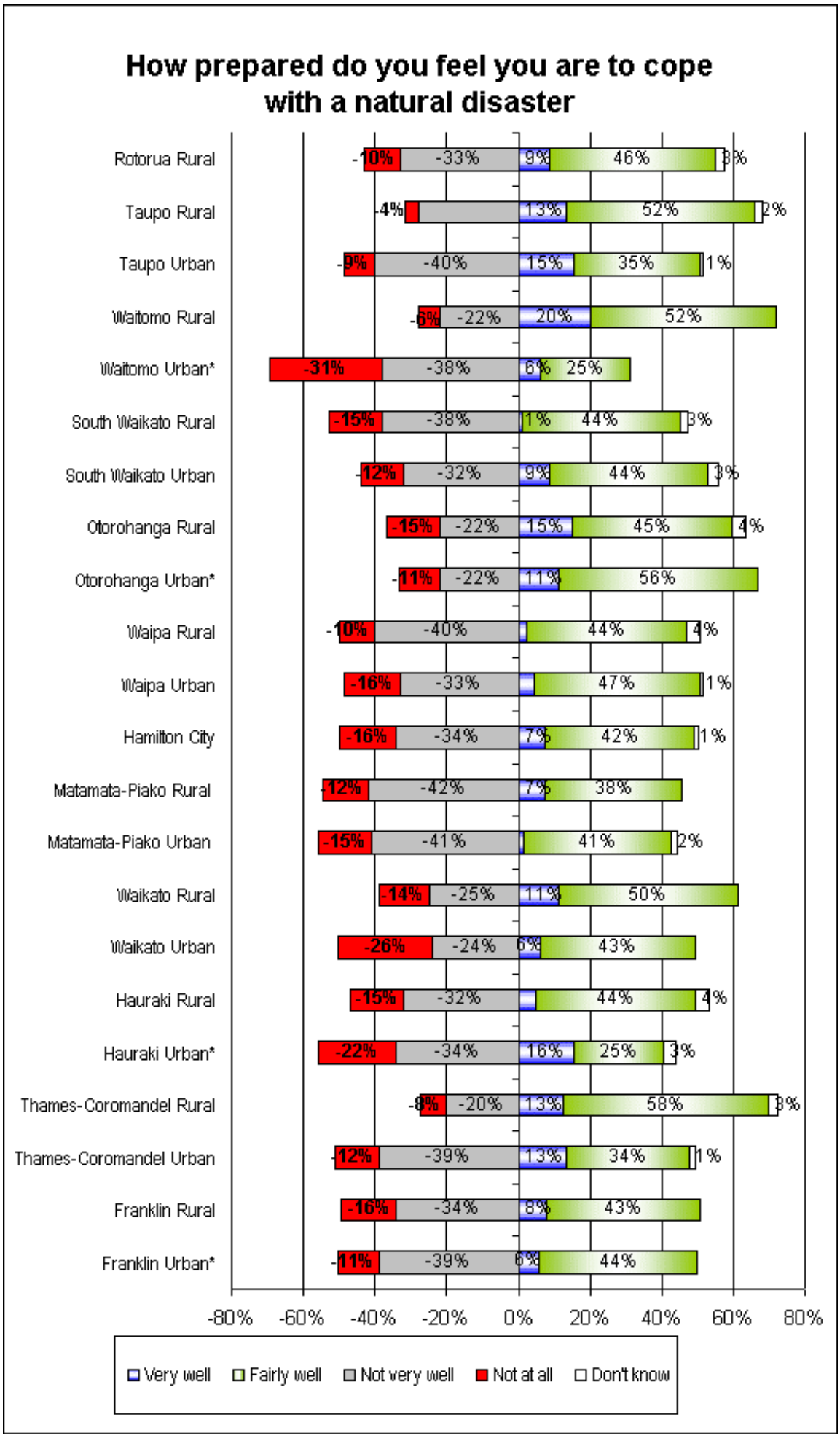
- Aged 18-29

7.2.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to consider themselves well prepared for a natural disaster were in:

- Waitomo Rural (95% confidence level)
- Refused to give ethnicity (95% confidence level)

There were no significant differences in the proportions that considered themselves not well prepared.


How prepared do you feel you are to cope with a natural disaster
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-80% -60% -40% -20% 0% 20% 40% 60% 80%
Very well
Fairly well
Not very well
Not at all
Don't know

8 Attitudes Towards The Environment

8.1 New Environmental Paradigm

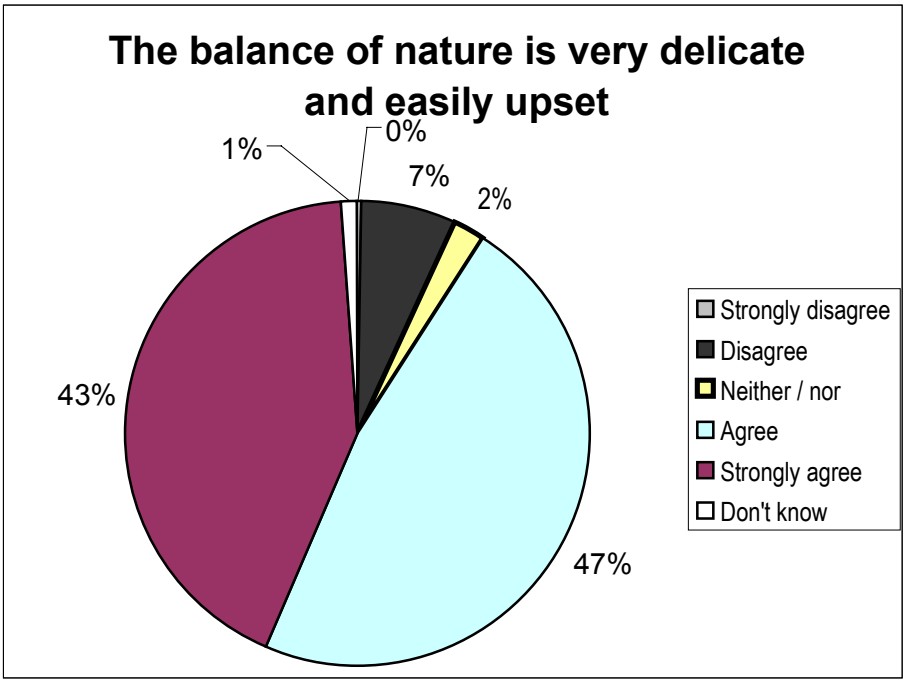
The six-question scale adopted for this survey is an adaptation of a twelve-point scale commonly used overseas. The scale measures people's attitudes towards the environment where at one end of a continuum people see humans as subject to ecological laws and at the other end, humans see themselves as above and in control of ecological laws. The following questions combine to give a general measure of the community's shift to pro-environmental values.

8.1.1 Balance Of Nature Is Very Delicate And Easily Upset

8.1.1.1 Overview Of Results

Two-fifths (43%) of participants strongly agreed that the balance of nature is very delicate and easily upset. Almost half (47%) agreed.

Two percent (2%) neither agreed nor disagreed and seven percent (7%) disagreed with the statement. One percent (1%) were unsure.



**Graph shows percentage of weighted total*

8.1.1.2 Comparison to 1998 Study

The 2000 results were virtually unchanged when compared to the 1998 results. One percent more (+1%) agreed, one percent more (+1%) disagreed, and two percent fewer (-2%) said they neither agreed nor disagreed.

The balance of nature is very delicate and easily upset	1998	2000	Change
Disagree	6%	7%	1%
Neither / nor	4%	2%	-2%
Agree	89%	90%	1%
Don't know	1%	1%	0%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

8.1.1.3 Results By Demographic Characteristics

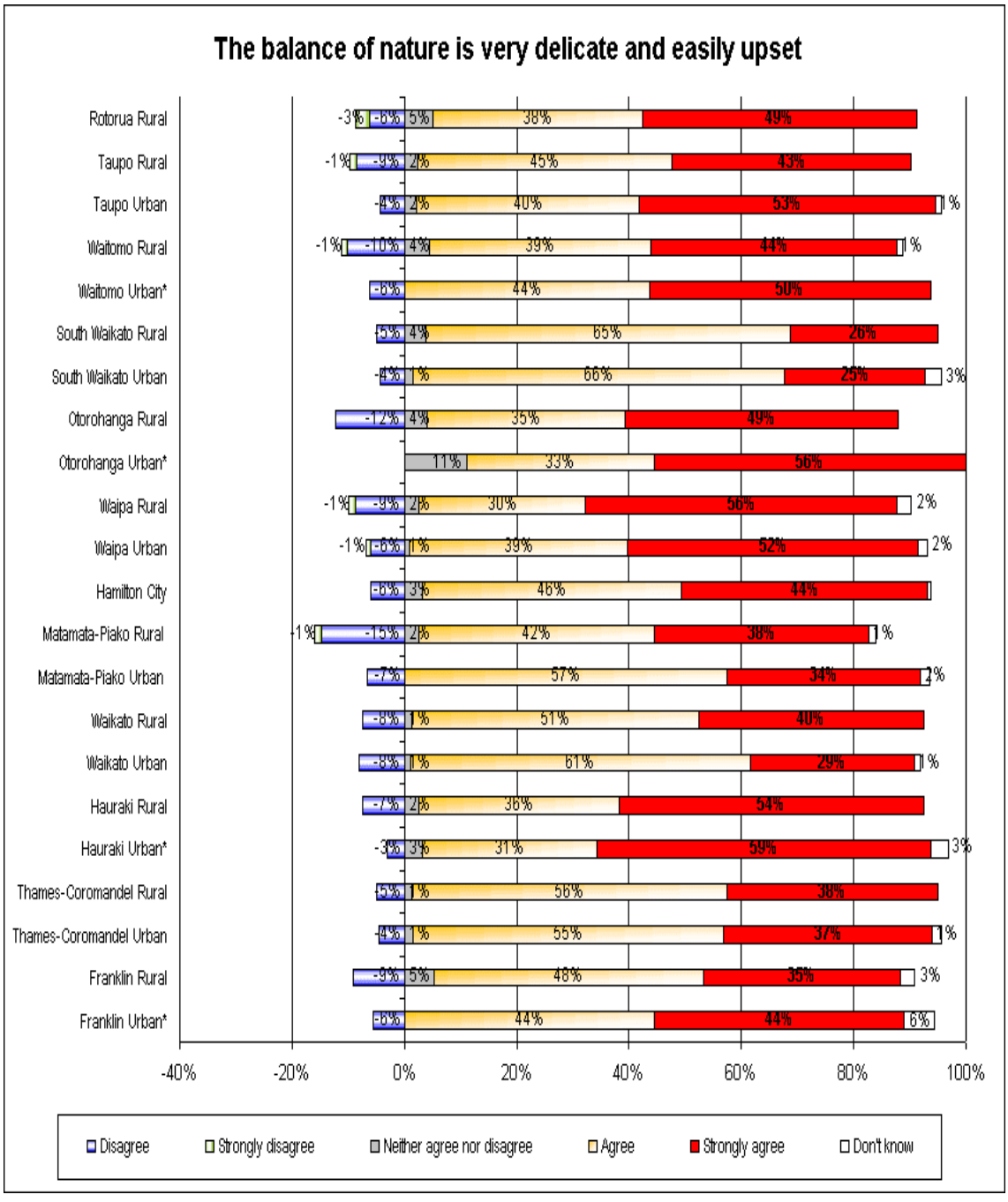
When these results were analysed demographically no significant differences were found.

8.1.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that the balance of nature is very delicate and easily upset were in:

- Hauraki Urban (95% confidence level)
- Taupo Urban (90% confidence level)

There were no significant difference in the proportion who disagreed.

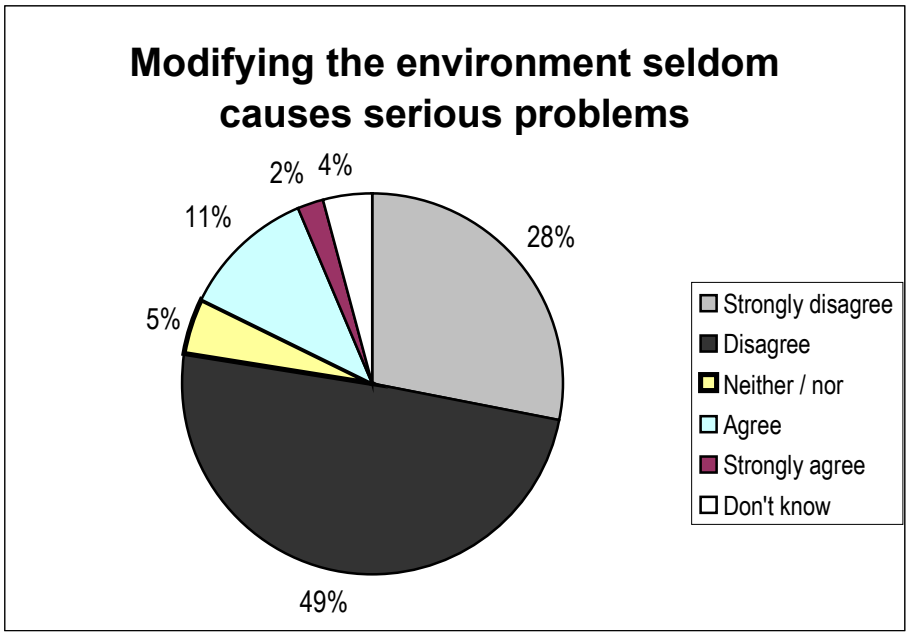


8.1.2 Modifying The Environment For Human Use Seldom Causes Serious Problems

8.1.2.1 Overview Of Results

Two percent (2%) of participants strongly agreed that modifying the environment for human use seldom causes serious problems. Eleven percent (11%) agreed. Five percent (5%) neither agreed nor disagreed.

Half (49%) disagreed and twenty-eight percent (28%) strongly disagreed that modifying the environment for human use seldom causes serious problems. Four percent (4%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

8.1.2.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that modifying the environment for human use seldom causes serious problems were:

- Aged 20-29 (95% confidence level)

Those significantly more likely than the average regional resident to disagree that modifying the environment for human use seldom causes serious problems were:

- Aged 30-49 (95% confidence level)
- Tertiary educated (95% confidence level)

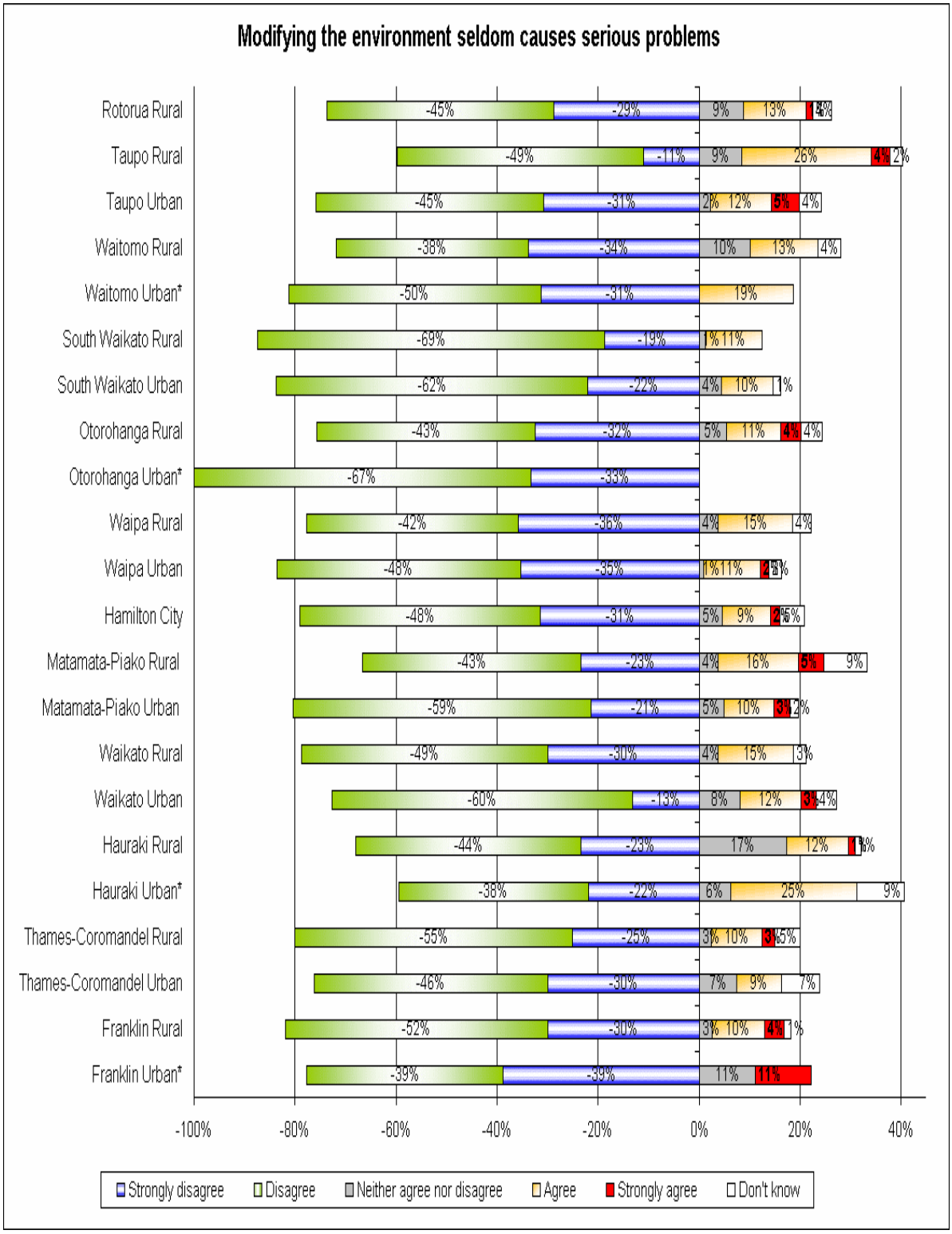
8.1.2.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that modifying the environment for human use seldom causes serious problems were in:

- Waikato Urban (95% confidence level)
- Taupo Rural (95% confidence level)

Those significantly more likely than the average regional resident to disagree that modifying the environment for human use seldom causes serious problems were in:

- Otorohanga Urban (95% confidence level)

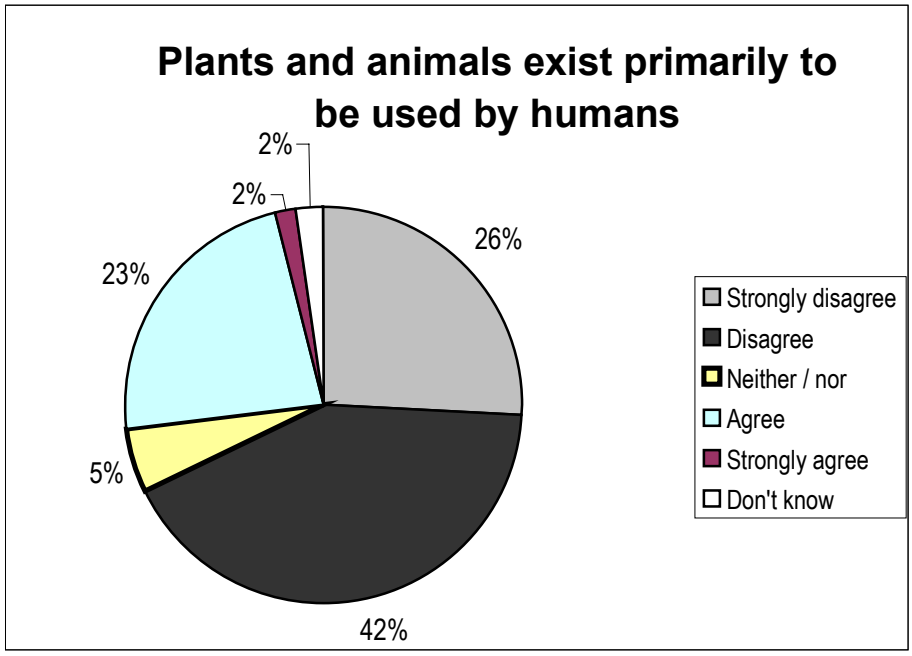


8.1.3 Plants And Animals Exist Primarily To Be Used By Humans

8.1.3.1 Overview Of Results

Two percent (2%) of participants strongly agreed that plants and animals exist primarily to be used by humans. Almost one quarter (23%) agreed. Five percent (5%) neither agreed nor disagreed.

Two-fifths (42%) disagreed and one-quarter (26%) strongly disagreed that plants and animals exist primarily to be used by humans. Two percent (2%) were unsure.



**Graph shows percentage of weighted total*

8.1.3.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that plants and animals exist primarily to be used by humans were:

- Aged 60+ (95% confidence level)
- Male (95% confidence level)
- Rural (90% confidence level)
- Earning under $30,000 (90% confidence level)
- Primary or Secondary school educated (95% confidence level)
- In farming and unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that plants and animals exist primarily to be used by humans were:

- Aged 40-49 (95% confidence level)
- Female (95% confidence level)
- Earning $60,000 and over (90% confidence level)
- Tertiary educated (95% confidence level)
- In non-farming occupations (95% confidence level)

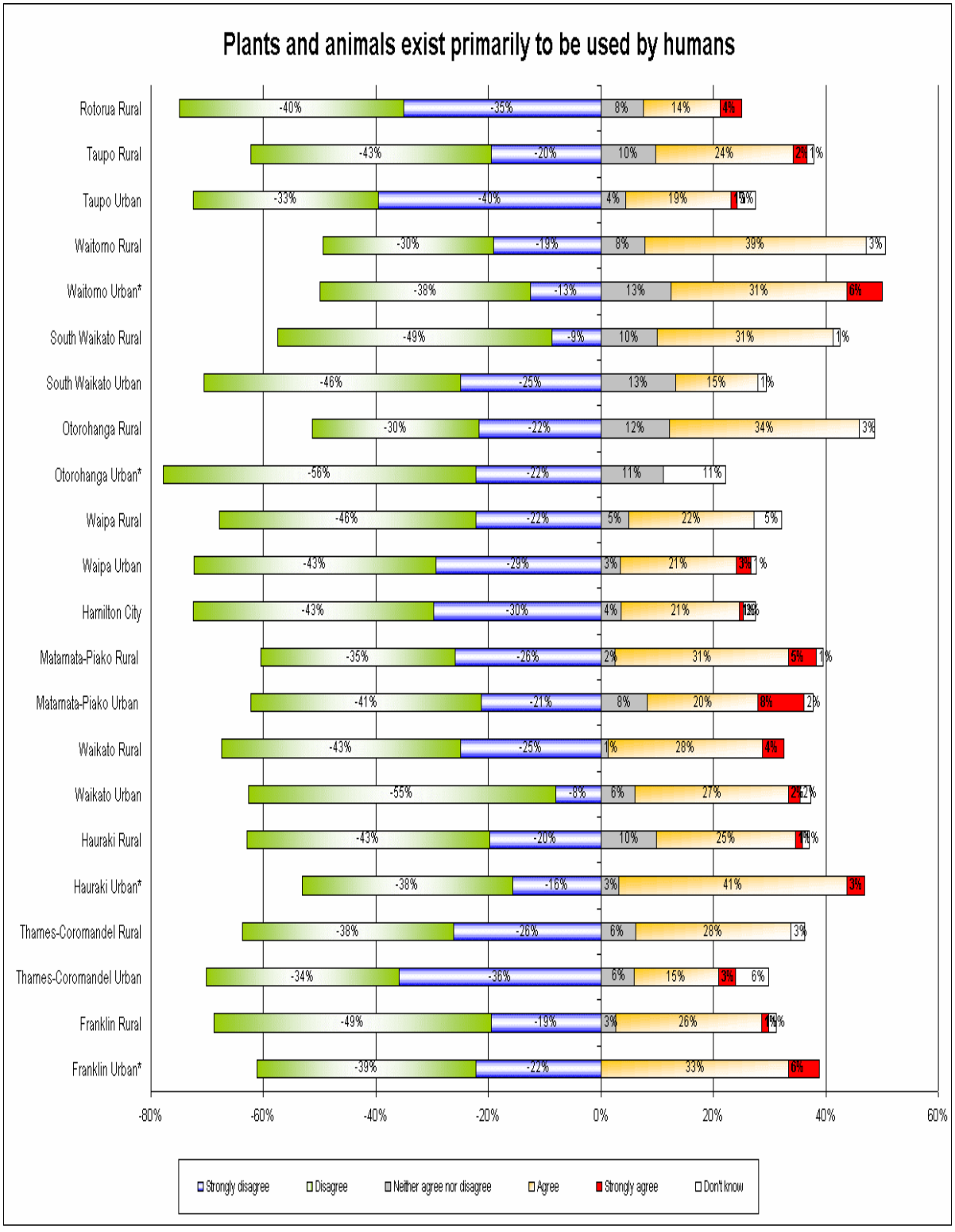
8.1.3.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that plants and animals exist primarily to be used by humans were in:

- Hauraki Urban (95% confidence level)
- Waikato Urban (95% confidence level)
- Waitomo Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that plants and animals exist primarily to be used by humans were in:

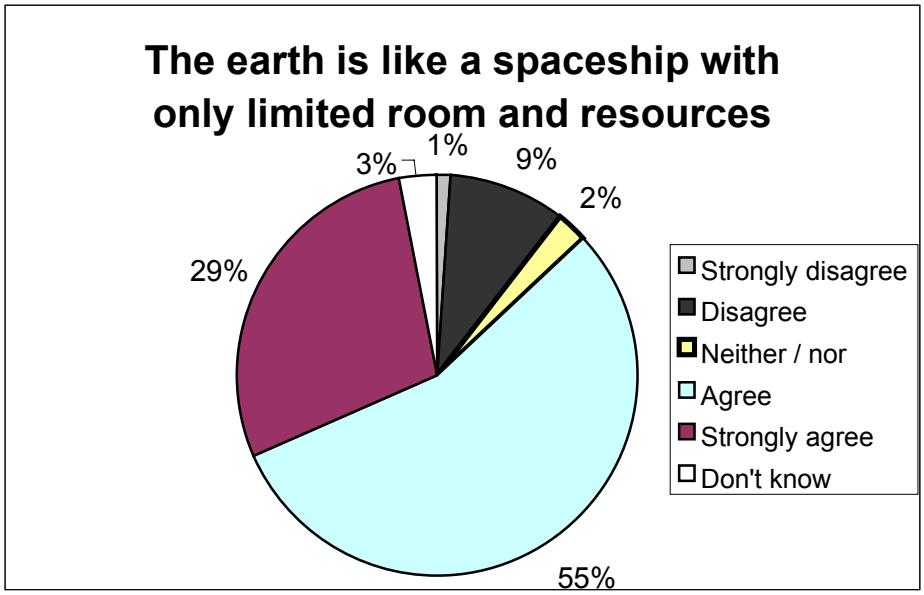
- Otorohanga Urban (95% confidence level)
- Taupo Urban (95% confidence level)



8.1.4 Earth Is Like A Spaceship With Only Limited Room And Resources

8.1.4.1 Overview Of Results

Twenty-nine percent (29%) of participants strongly agreed that earth is like a spaceship with only limited room and resources. Over half (55%) agreed. Two percent (2%) neither agreed nor disagreed. Nine percent (9%) disagreed and one percent (1%) strongly disagreed that earth is like a spaceship with only limited room and resources. Three percent (3%) were unsure.



*Graph shows percentage of weighted total

8.1.4.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that Earth is like a spaceship with only limited room and resources were:

- Tertiary educated (90% confidence level)

Those significantly more likely than the average regional resident to disagree that Earth is like a spaceship with only limited room and resources were:

- Aged 18-19 (95% confidence level)

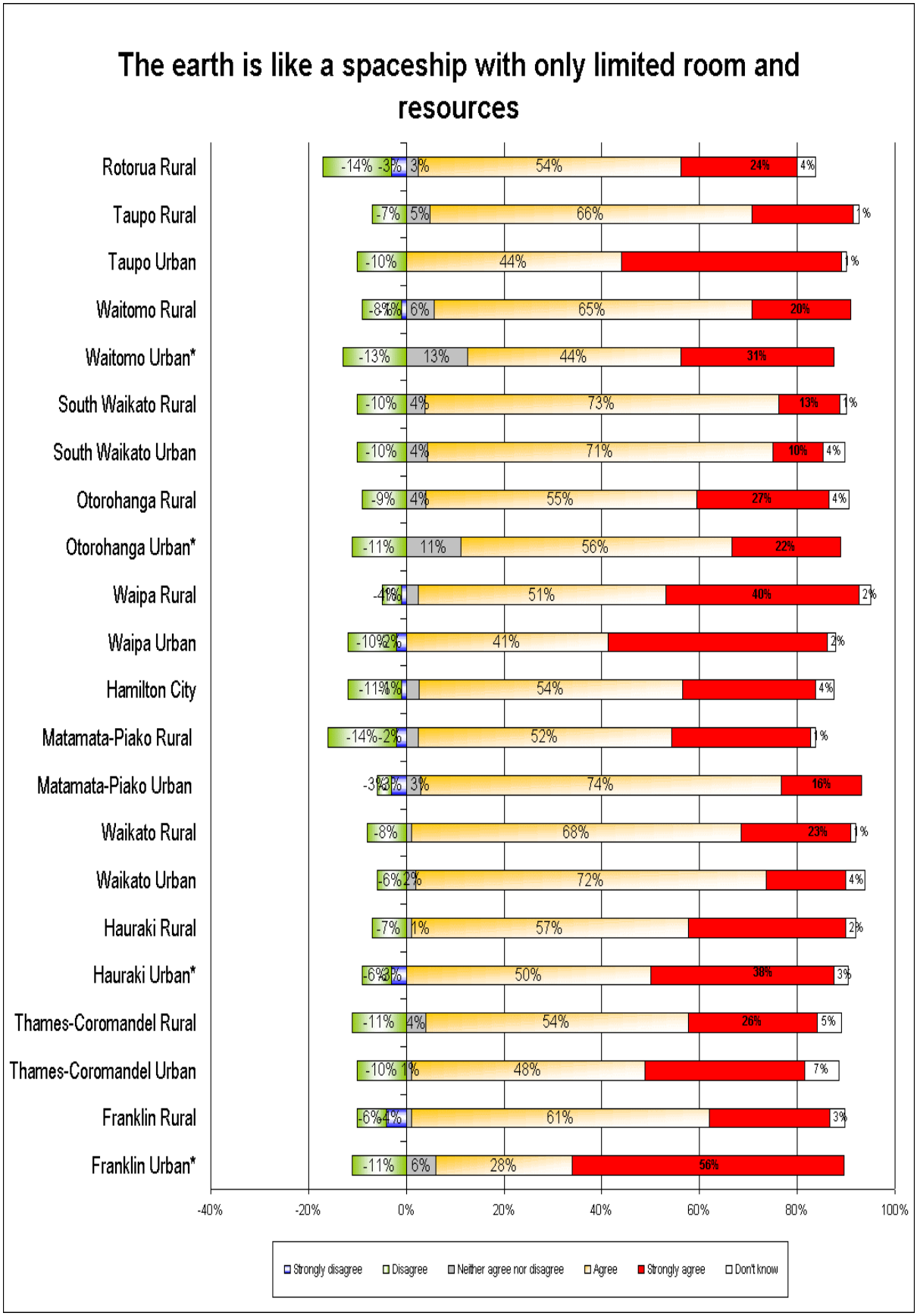
8.1.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that Earth is like a spaceship with only limited room and resources were in:

- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that earth is like a spaceship with only limited room and resources were in:

- South Waikato Urban (90% confidence level)

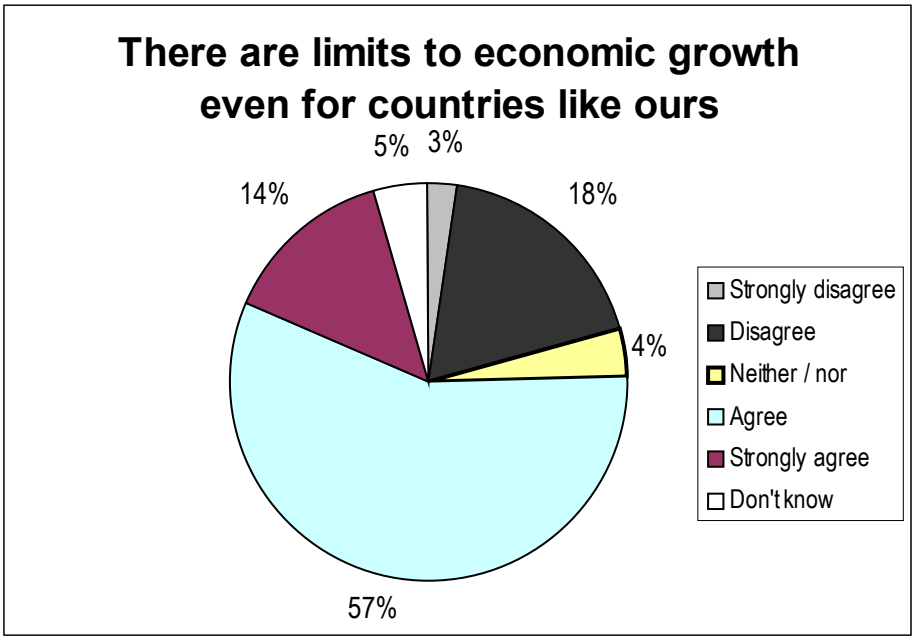

The earth is like a spaceship with only limited room and resources
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-40%
-20%
0%
20%
40%
60%
80%
100%
Strongly disagree
Disagree
Neither agree nor disagree
Agree
Strongly agree
Don't know

8.1.5 There Are Limits To Economic Growth Even For Developed Countries Like Ours

8.1.5.1 Overview Of Results

Fourteen percent (14%) of participants strongly agreed that there are limits to economic growth even for developed countries like ours. The majority (57%) agreed. Four percent (4%) neither agreed nor disagreed.

One-fifth (18%) disagreed and three percent (3%) strongly disagreed that there are limits to economic growth even for developed countries like ours. Five percent (5%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

8.1.5.2 Results By Demographic Characteristics

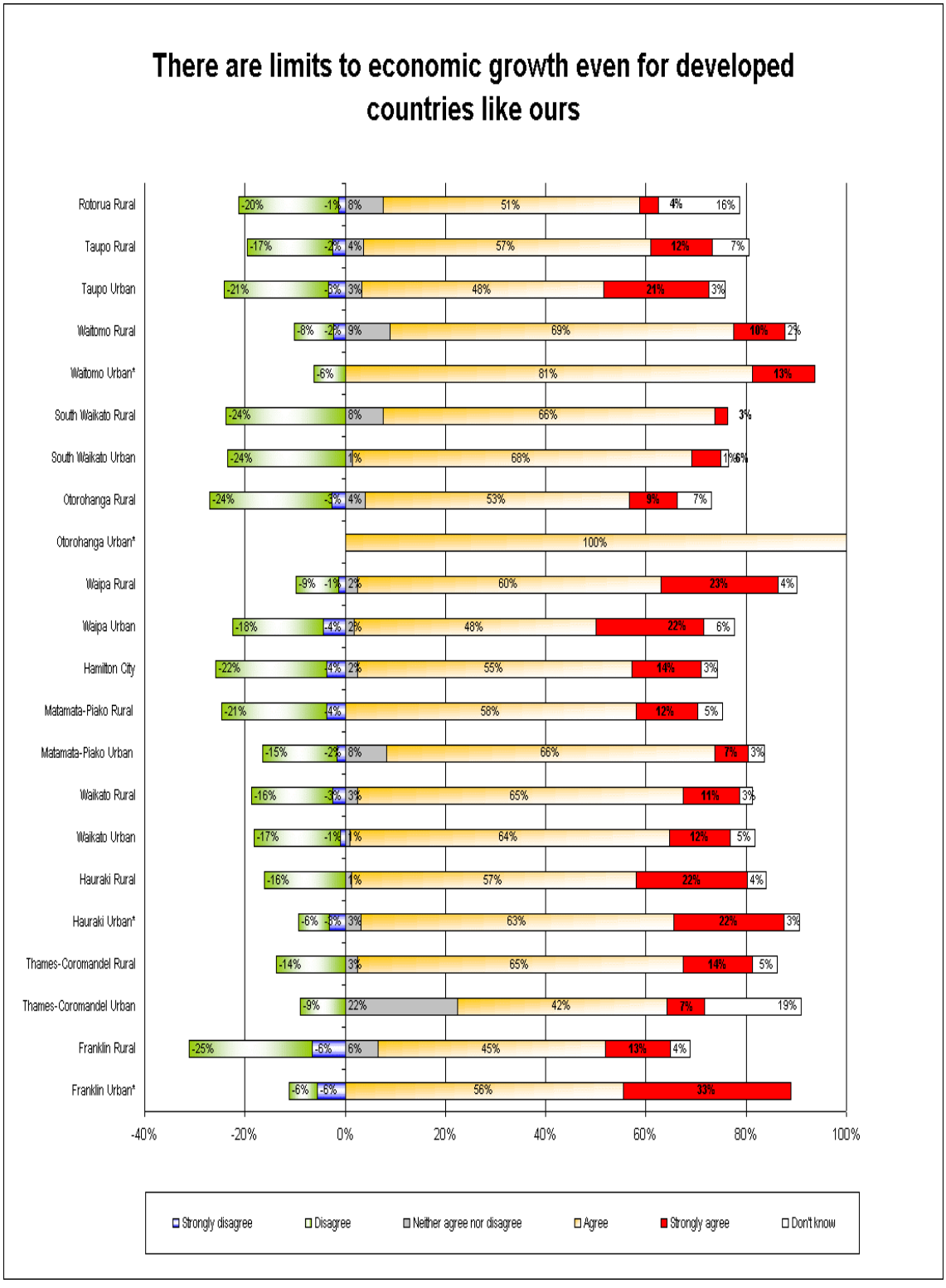
When these results were analysed demographically no significant difference was found.

8.1.5.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that there are limits to economic growth even for developed countries like ours were in:

- Hauraki Urban (95% confidence level)
- Waipa Rural (95% confidence level)
- Waitomo Urban (95% confidence level)
- Franklin Urban (90% confidence level)

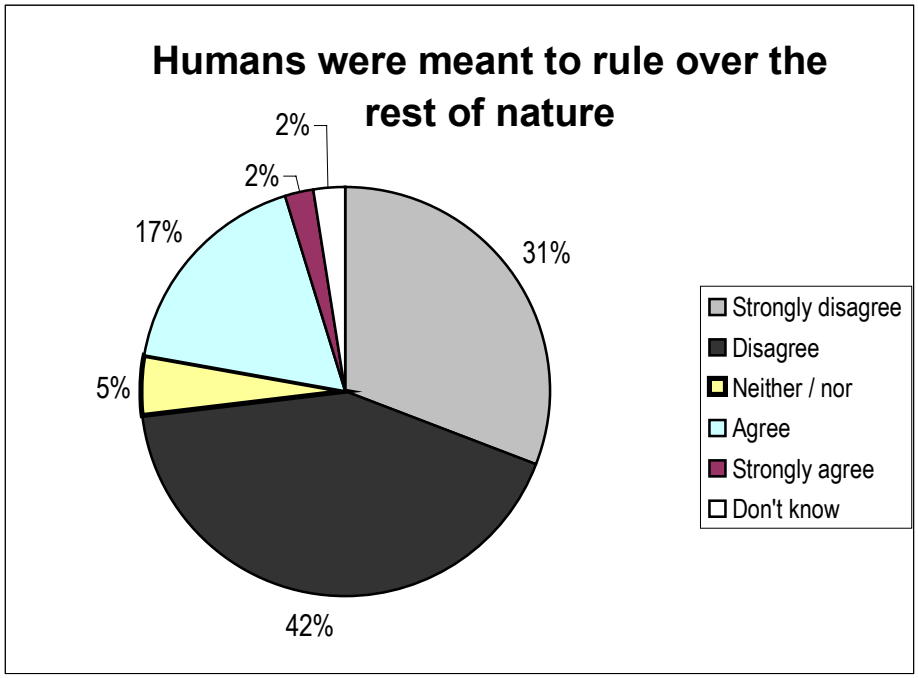
There were no significant differences in the proportion who disagreed.



8.1.6 Humans Were Meant To Rule Over The Rest Of Nature

8.1.6.1 Overview Of Results

Two percent (2%) of participants strongly agreed that humans were meant to rule over the rest of nature. Almost one-fifth (17%) agreed. Five percent (5%) neither agreed nor disagreed. Two-fifths (42%) disagreed and one-third (31%) strongly disagreed that humans were meant to rule over the rest of nature. Two percent (2%) were unsure.



**Graph shows percentage of weighted total*

8.1.6.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that humans were meant to rule over the rest of nature were:

- Aged 60+ (95% confidence level)
- Male (90% confidence level)
- Primary school educated (95% confidence level)

Those significantly more likely than the average regional resident to disagree that that humans were meant to rule over the rest of nature were:

- Female (90% confidence level)

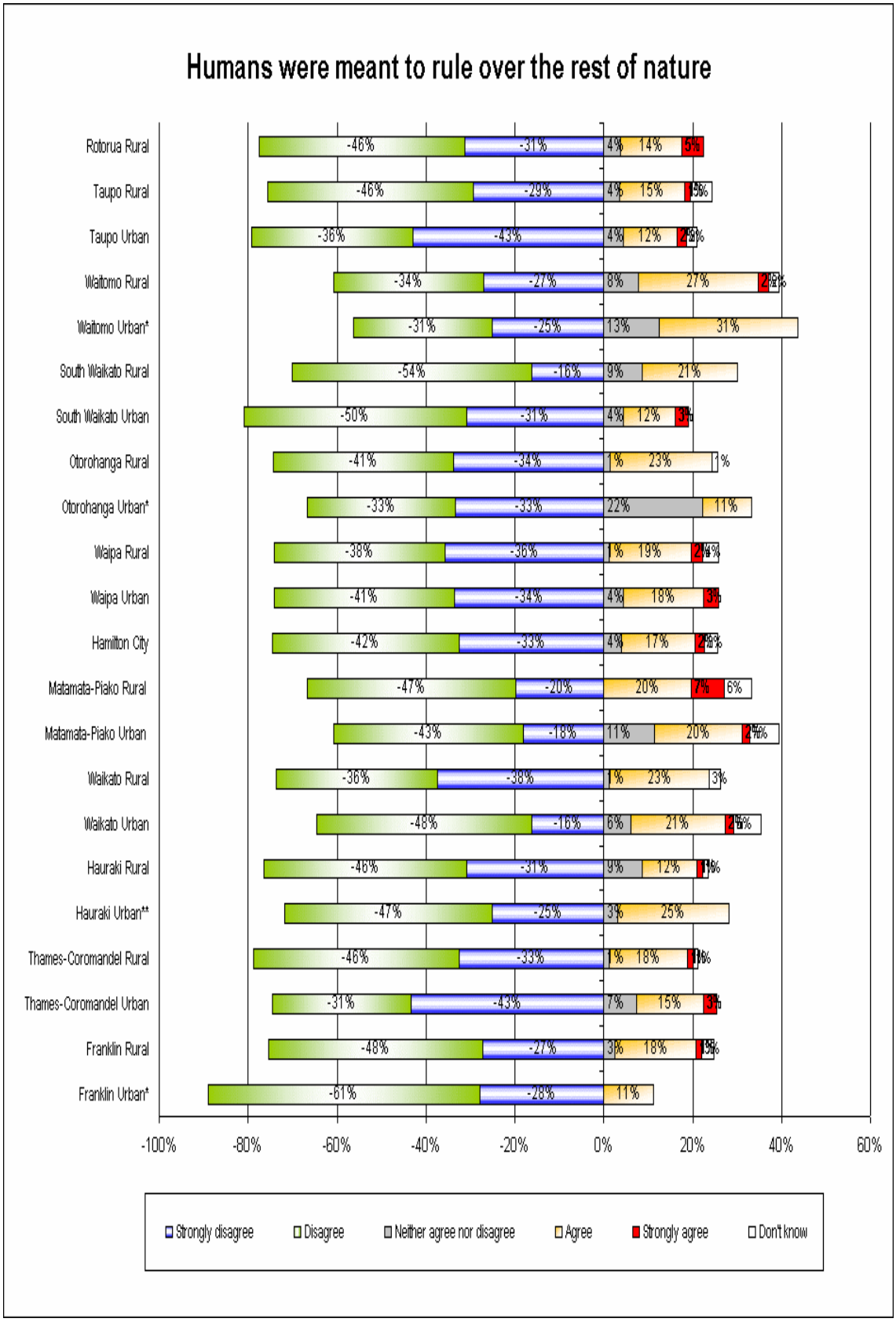
8.1.6.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that humans were meant to rule over the rest of nature were in:

- Waikato Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that that humans were meant to rule over the rest of nature were in:

- Taupo Urban (90% confidence level)



8.1.7 New Environmental Paradigm Scale

8.1.7.1 Overview Of Results

The overall New Environmental Paradigm (NEP) score was calculated by totalling the scores for all questions in this section. Environmentally negative questions were re-coded to be compatible with the positive questions and non-responses were treated as environmentally neutral.

The maximum achievable individual score was 30. The scores achieved ranged from 9 to 30, with the mean score being 23.26, and the median and mode being 24.

The participants were divided into three similarly sized groups for the purpose of in-depth analysis. Those with NEP scores below 22 form the low NEP group, those with scores from 22 to 24 form the medium NEP group and those with scores of 25 and over form the high NEP score.

8.1.7.2 Results By Demographic Characteristics

When these results were analysed demographically the following groups had mean scores that were significantly higher (95% Confidence level) than the mean:

- Those aged 30-49 years
- Females
- Those with tertiary education
- Those in non-farming occupations

The following groups had mean scores that were significantly lower (95% Confidence level) than the mean:

- Those aged 60+
- Males
- Those with primary school education
- Those in farming occupations and those not in paid employment

8.1.7.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the following areas had mean scores that were significantly higher (95% Confidence Level) than the mean for the region:

- Waipa Urban
- Otorohanga Urban
- Taupo Urban

The following areas had mean scores that were significantly lower (95% Confidence Level) than the mean for the region:

- Waikato Urban
- Matamata-Piako Rural

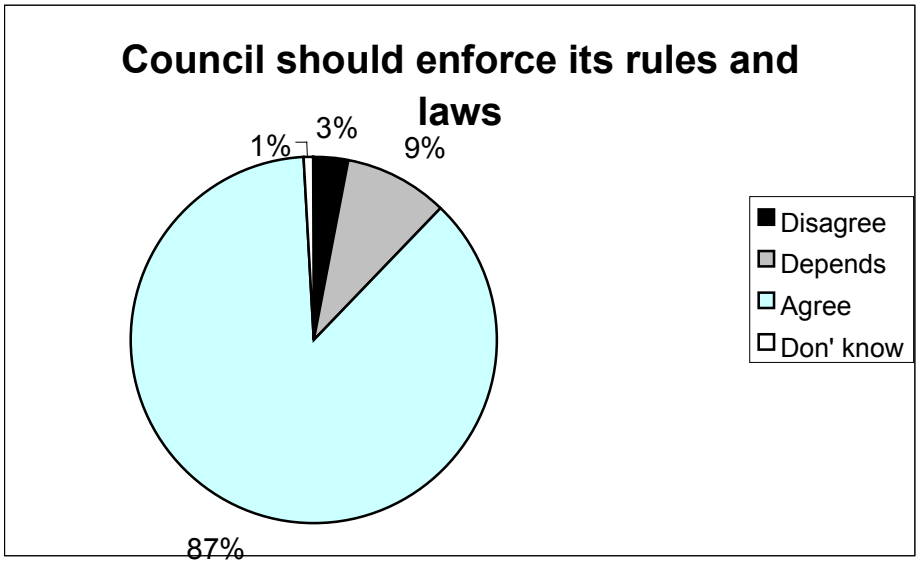
8.2 Balancing Environmental And Economic Interests

Combinations of these questions are used to measure people's attitudes towards balancing the needs for economic development with environmental protection. Such information can indicate the extent to which a community desires environmental tradeoffs for the sake of economic development and vice versa.

8.2.1 Council Should Enforce Rules For The Environment

8.2.1.1 Overview Of Results

Most (87%) participants agreed that Council should enforce its rules and laws to make sure that the environment is well looked after and nine percent (9%) said it depends. Three percent (3%) disagreed and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

8.2.1.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that Council should enforce its rules and laws to make sure that the environment is well looked after were:

- Aged 20-29 (95% confidence level)

Those significantly more likely than the average regional resident to disagree that Council should enforce its rules and laws to make sure that the environment is well looked after were:

- Rural (95% confidence level)
- Earning $60,000 and over (95% confidence level)
- In farming occupations (95% confidence level)

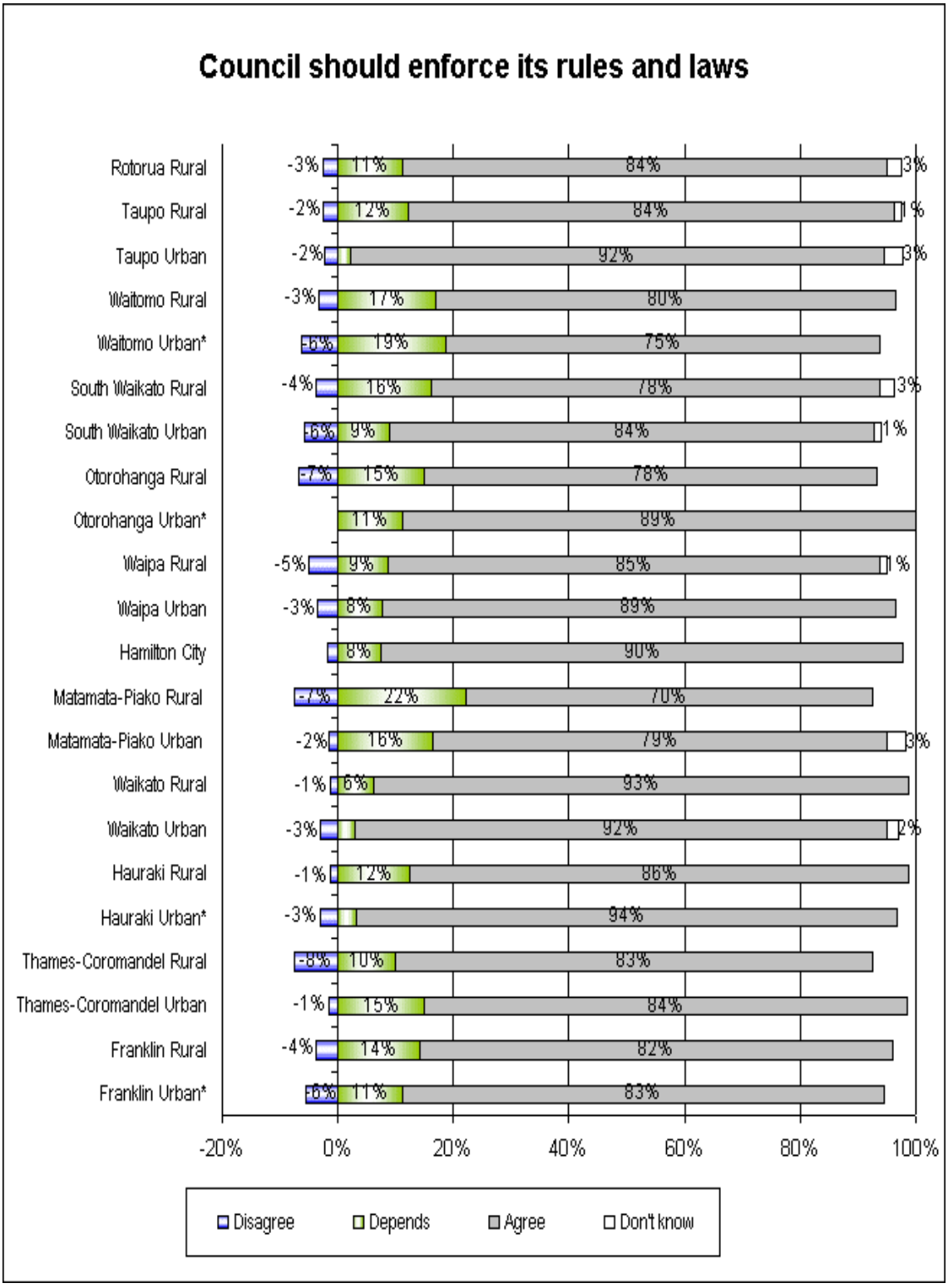
8.2.1.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that Council should enforce its rules and laws to make sure that the environment is well looked after were in:

- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that Council should enforce its rules and laws to make sure that the environment is well looked after were in:

- Matamata-Piako Rural (95% confidence level)

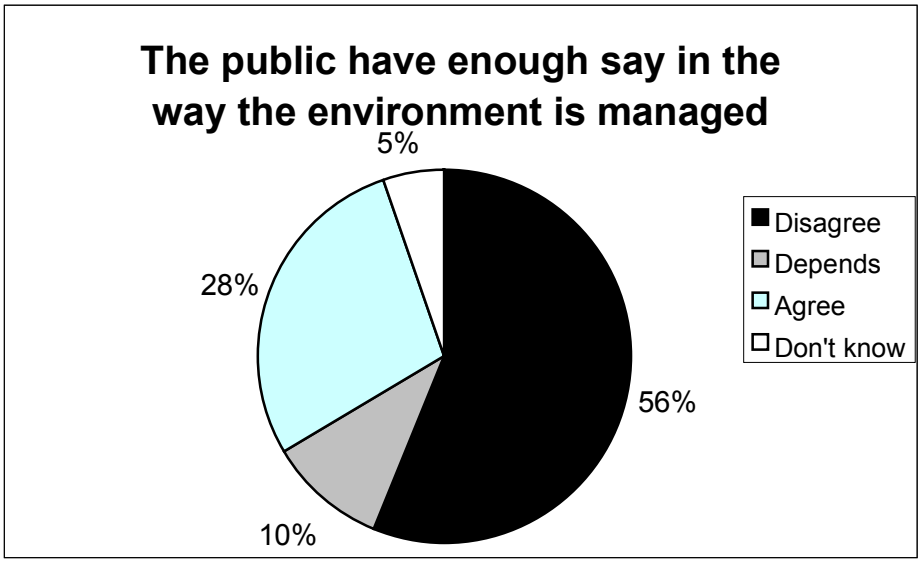


8.2.2 Public Have Enough Say In The Way The Environment Is Managed

8.2.2.1 Overview Of Results

Over half (56%) of the participants disagreed that the public have enough say in the way the environment is managed and one-tenth (10%) said it depends.

Twenty-eight percent (28%) of participants agreed that the public have enough say in the way the environment is managed and five percent (5%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

8.2.2.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the proportion that disagreed that the public have enough say in the way the environment is managed (+9%) and a small increase in the proportion who said they were unsure (+2%).

There was a decline in the proportion that agreed that the public have enough say in the way the environment is managed (-9%) and a decrease in the proportion who said it depends (-2%).

The public have enough say in the way the environment is managed	1998	2000	Change
Disagree	47%	56%	9%
Depends	12%	10%	-2%
Agree	37%	28%	-9%
Don't know	3%	5%	2%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

8.2.2.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that the public have enough say in the way the environment is managed were:

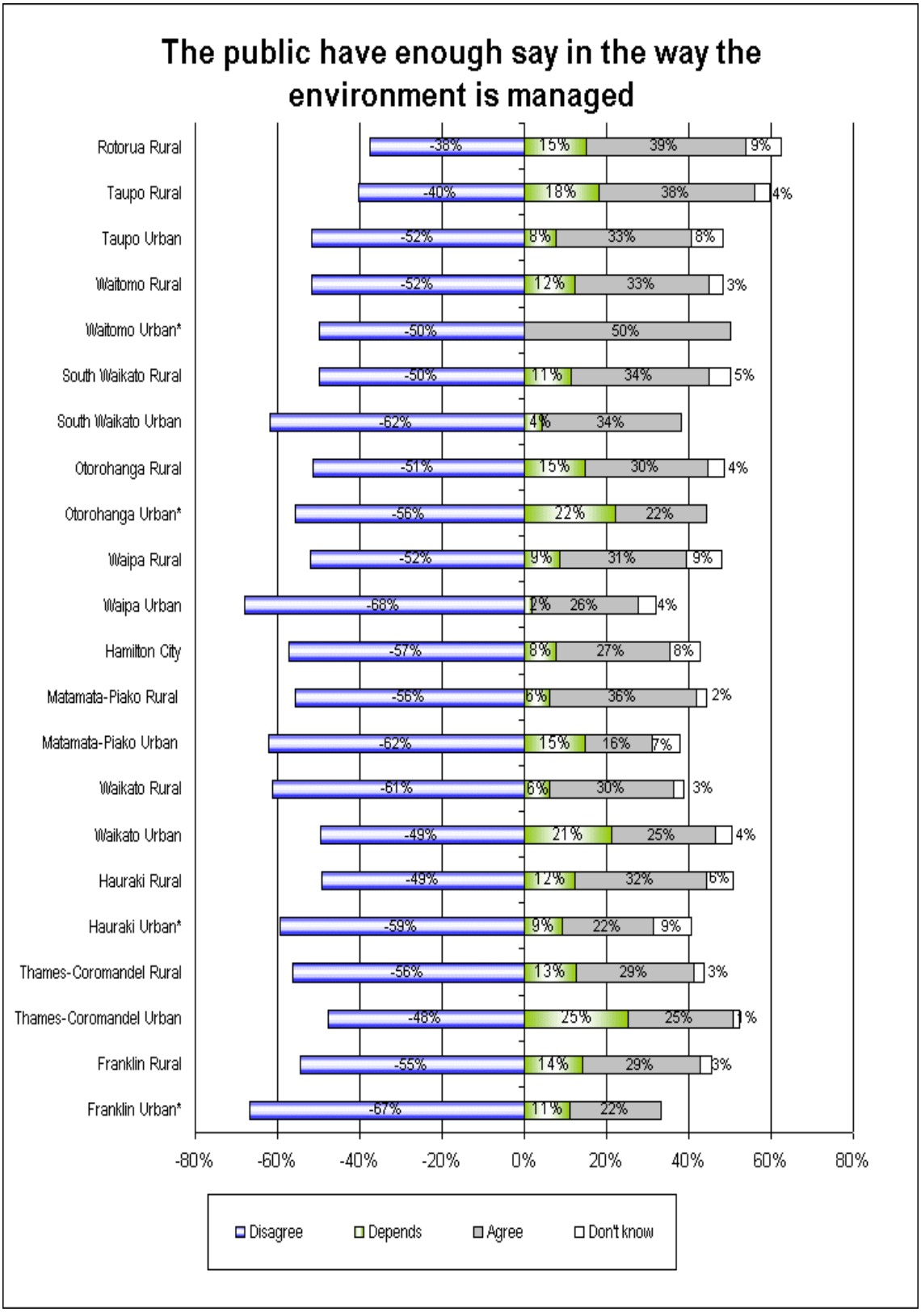
- In farming occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that the public have enough say in the way the environment is managed were:

- Aged 20-29 (95% confidence level)

8.2.2.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, no significant differences were found.

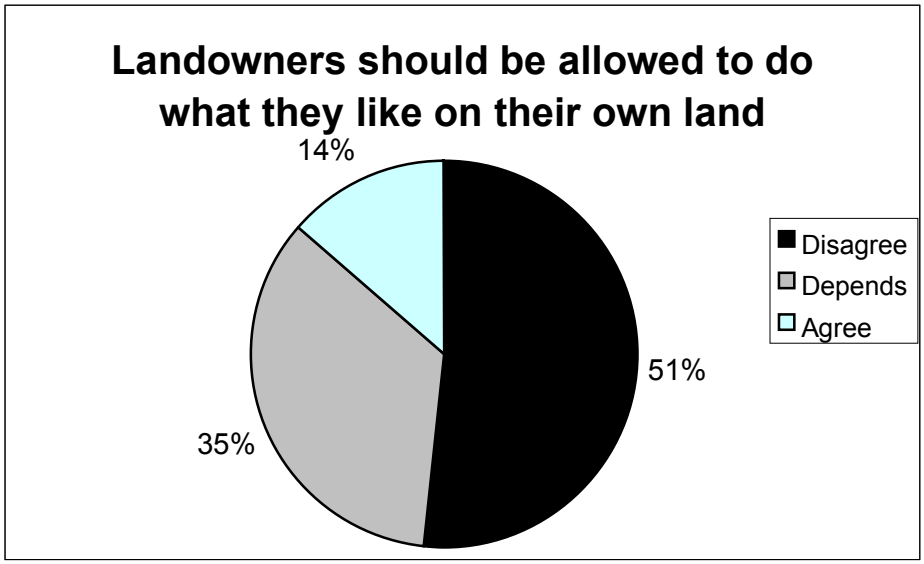


8.2.3 Landowners Should Be Allowed To Do What They Like On Their Own Land

8.2.3.1 Overview Of Results

Half (51%) of the participants disagreed that landowners should be allowed to do what they like on their own land and one-third (35%) said it depends.

Fourteen percent (14%) agreed that landowners should be allowed to do what they like on their own land.



**Graph shows percentage of weighted total*

8.2.3.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the proportion who disagreed that landowners should be allowed to do what they like on their own land (+3%) and an increase in the proportion who said it depends (+4%).

There was a decline in the proportion that agreed that landowners should be allowed to do what they like on their own land (-7%).

Landowners should be allowed to do what they like on their own land	1998	2000	Change
Disagree	48%	51%	3%
Neither agree or disagree	31%	35%	4%
Agree	21%	14%	-7%
Don't know	0%	0%	0%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

8.2.3.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that landowners should be allowed to do what they like on their own land were:

- Aged 18-19 or 60+ (95% confidence level)
- Earning under $30,000 (95% confidence level)
- Primary or Secondary school educated (95% confidence level)
- In unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that landowners should be allowed to do what they like on their own land were:

- Tertiary educated (95% confidence level)
- In non-farming occupations (95% confidence level)

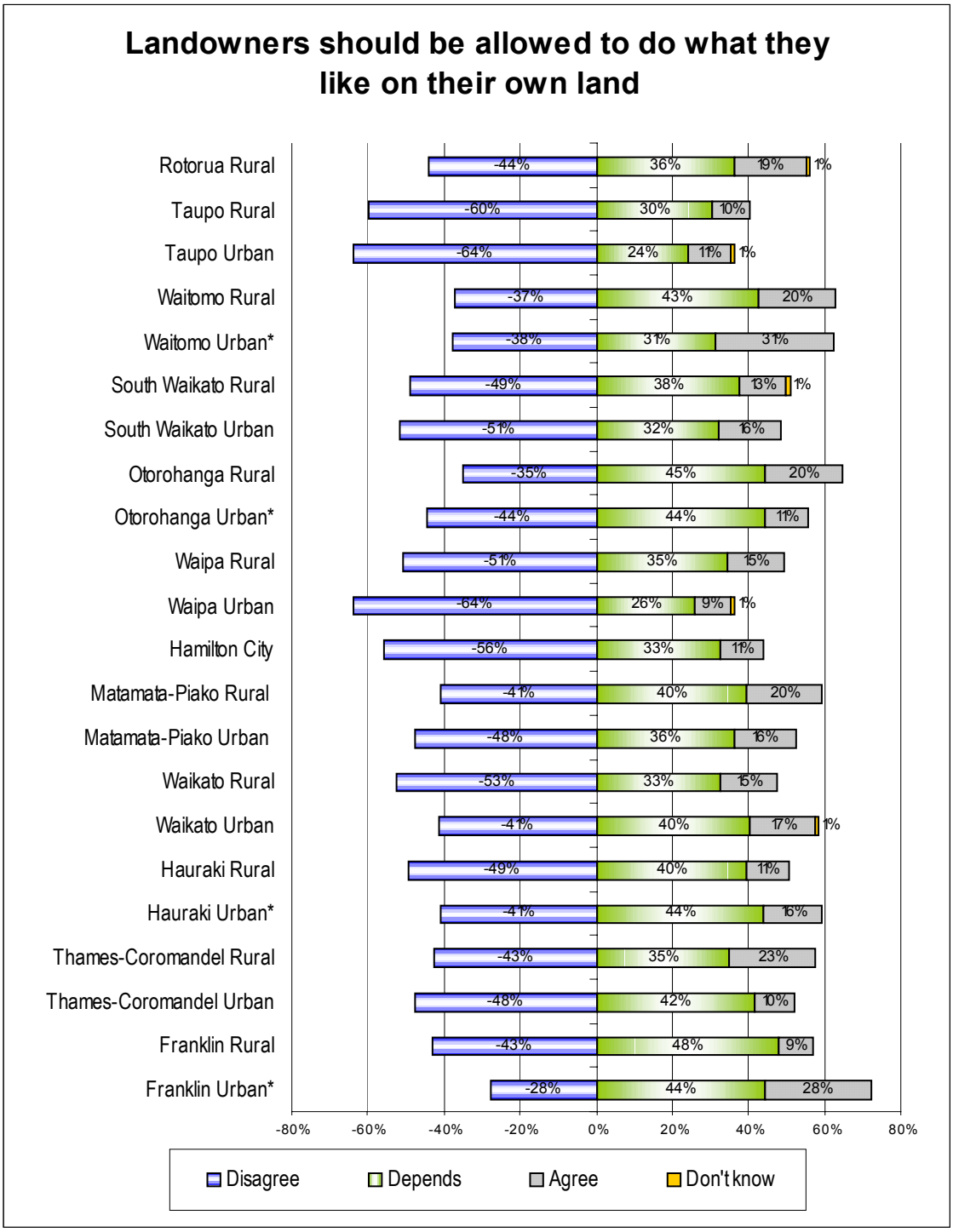
8.2.3.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that landowners should be allowed to do what they like on their own land were in:

- Franklin Urban (95% confidence level)
- Waikato Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that landowners should be allowed to do what they like on their own land were in:

- Waipa Urban (95% confidence level)
- Taupo Urban (95% confidence level)

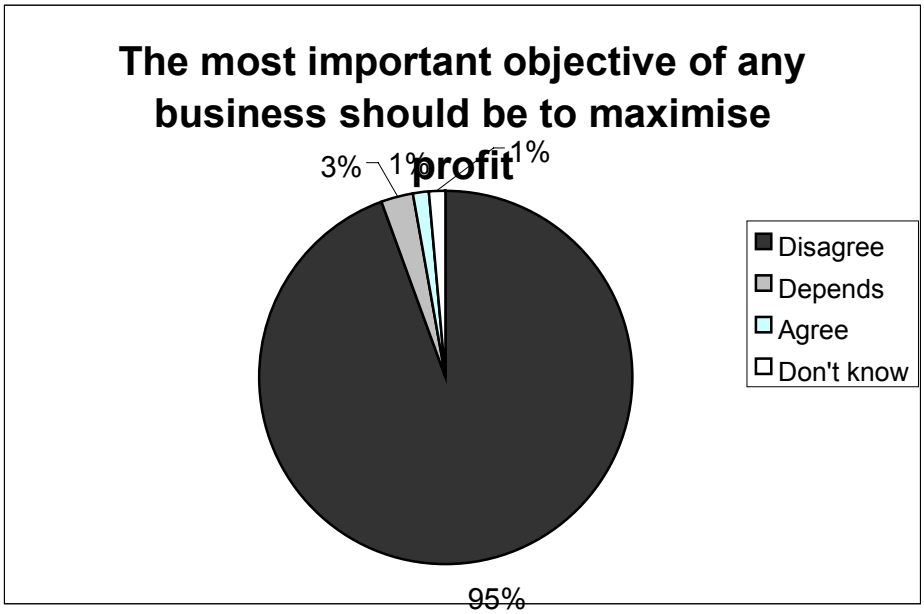


8.2.4 Business Objective: Profit Maximisation At Expense Of Environment

8.2.4.1 Overview Of Results

Most (95%) participants disagreed that the most important objective of any business should be to maximise profit even it that means damaging the environment and three percent (3%) said it depends.

One percent (1%) agreed and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

8.2.4.2 Results By Demographic Characteristics

When these results were analysed demographically no significant differences were found.

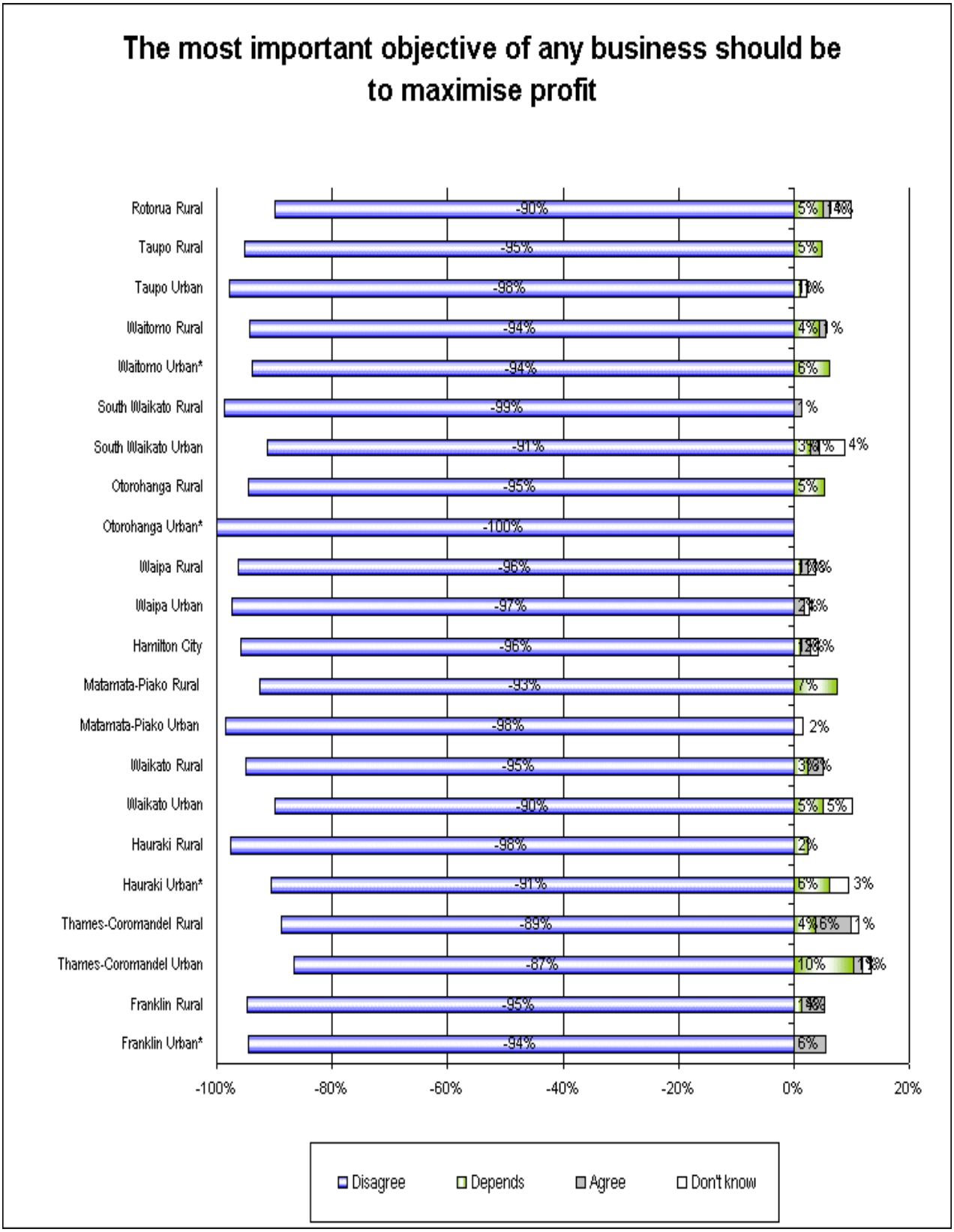
8.2.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say it depends that the most important objective of any business should be to maximise profit even if that means damaging the environment were in:

- Thames-Coromandel Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that the most important objective of any business should be to maximise profit even if that means damaging the environment were in:

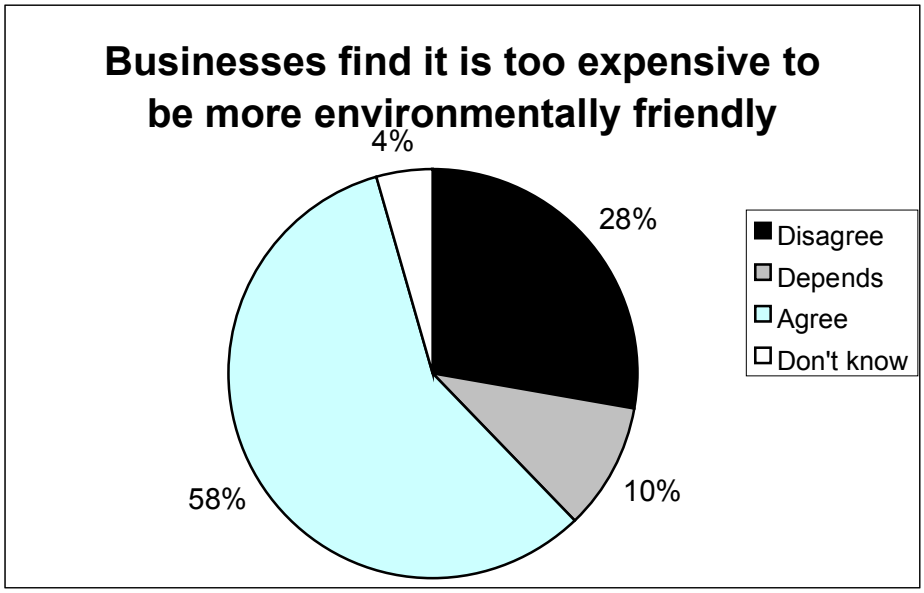
- Taupo Urban (95% confidence level)



8.2.5 Businesses Usually Find It Is Too Expensive To Be More Environmentally Friendly

8.2.5.1 Overview Of Results

Over half (58%) of participants agreed that businesses usually find it is too expensive to be more environmentally friendly and one-tenth (10%) said it depends. Twenty-eight percent (28%) disagreed and four percent (4%) were unsure.



**Graph shows percentage of weighted total*

8.2.5.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the proportion who disagreed that businesses usually find it is too expensive to be more environmentally friendly (+4%).

There was a decline in the proportion that agreed that businesses usually find it is too expensive to be more environmentally friendly (-2%) and a decline in the proportion who were unsure (-1%).

Businesses usually find it is too expensive to be more environmentally friendly	1998	2000	Change
Disagree	24%	28%	4%
Neither / nor	10%	10%	0%
Agree	60%	58%	-2%
Don't know	5%	4%	-1%
Total	99%	100%	

Percentage change may not appear to equal 0 due to rounding

8.2.5.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that businesses usually find it is too expensive to be more environmentally friendly were:

- Aged 18-19 (95% confidence level).

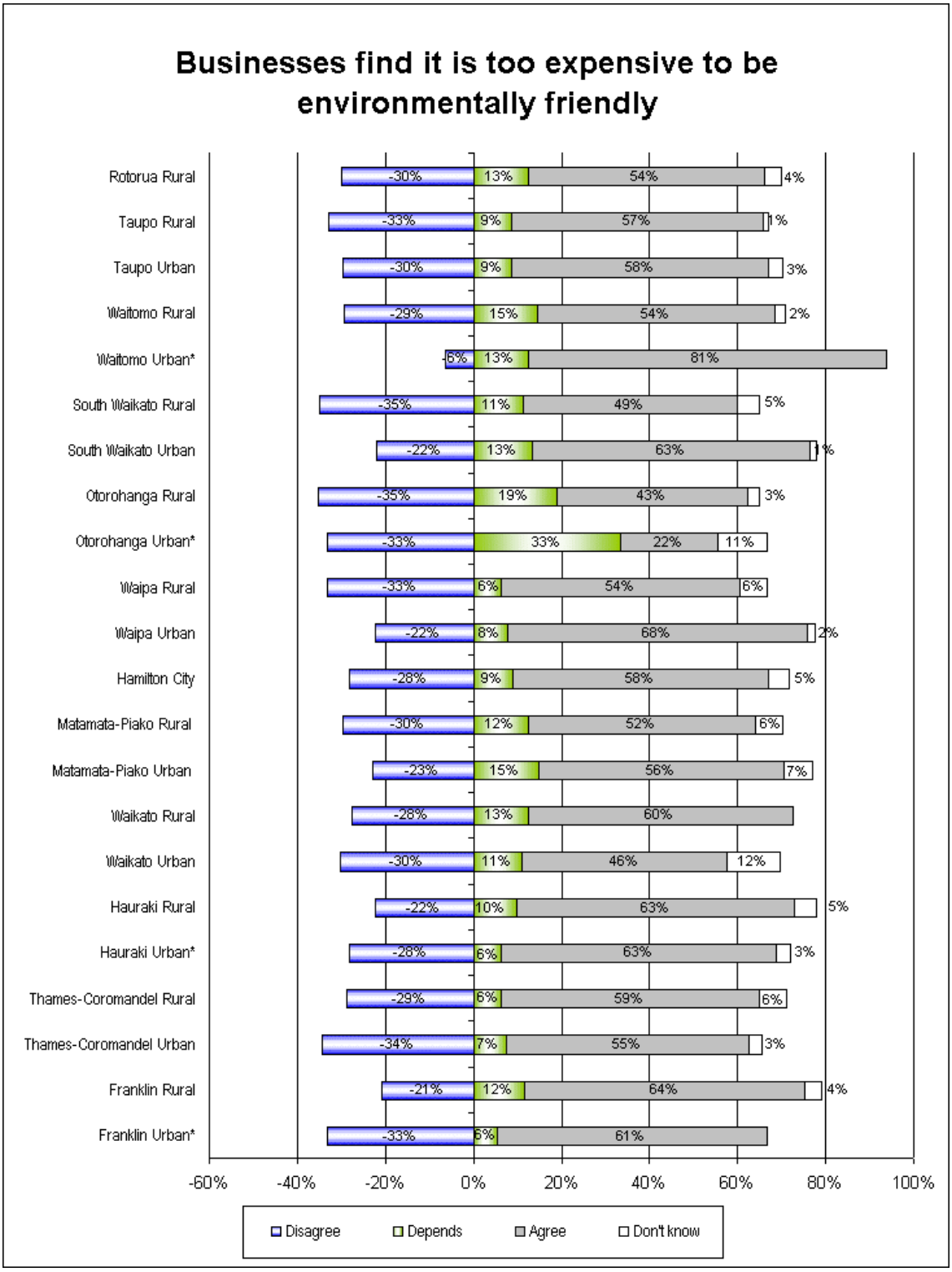
There were no significant differences in the proportion who disagreed.

8.2.5.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that businesses usually find it is too expensive to be more environmentally friendly were in:

- Waitomo Urban (95% confidence level)
- Waipa Urban (90% confidence level)

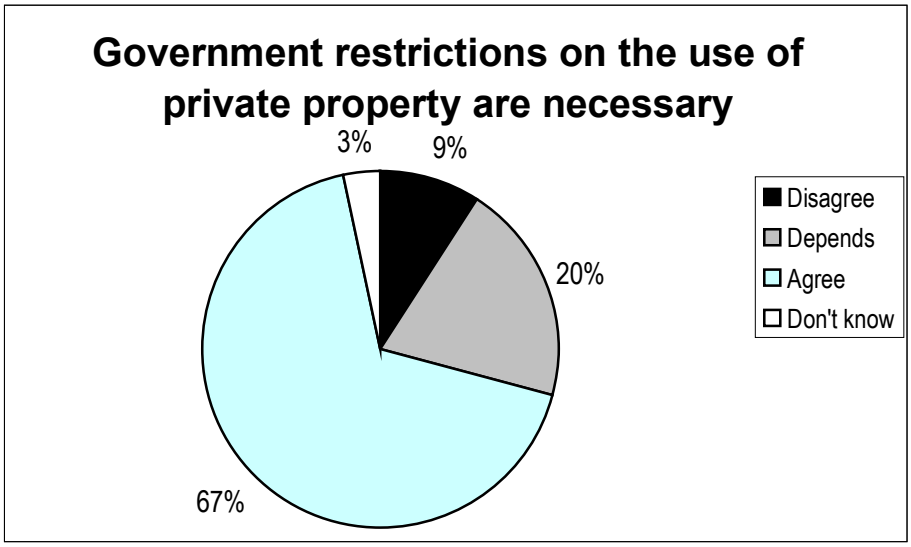
There were no significant differences in the proportion who disagreed.



8.2.6 Government Restrictions On The Use Of Private Property Are Necessary

8.2.6.1 Overview Of Results

Two-thirds (67%) of participants agreed that government restrictions on the use of private property are necessary so that the environment will not be harmed and one-fifth (20%) said it depends. Nine percent (9%) disagreed and three percent (3%) were unsure.



**Graph shows percentage of weighted total*

8.2.6.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that government restrictions on the use of private property are necessary so that the environment will not be harmed were:

- Aged 20-29 (95% confidence level)

Those significantly more likely than the average regional resident to disagree that government restrictions on the use of private property are necessary so that the environment will not be harmed were:

- Rural (95% confidence level)
- In farming occupations (95% confidence level)

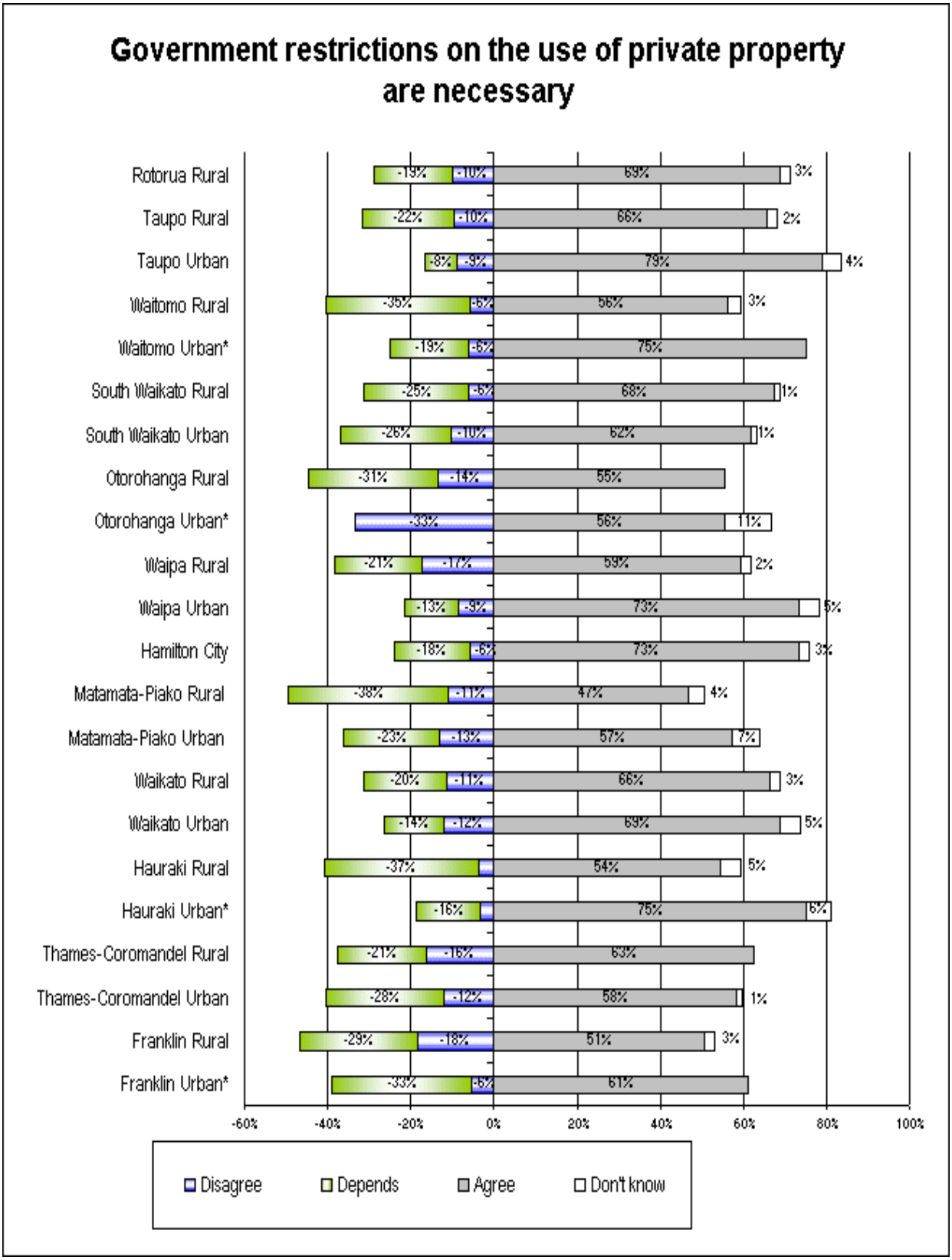
8.2.6.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that government restrictions on the use of private property are necessary so that the environment will not be harmed were in:

- Hauraki Urban (90% confidence level)
- Hamilton Urban (90% confidence level)
- Taupo Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that government restrictions on the use of private property are necessary so that the environment will not be harmed were in:

- Franklin Rural (95% confidence level)
- Matamata-Piako Rural (95% confidence level)

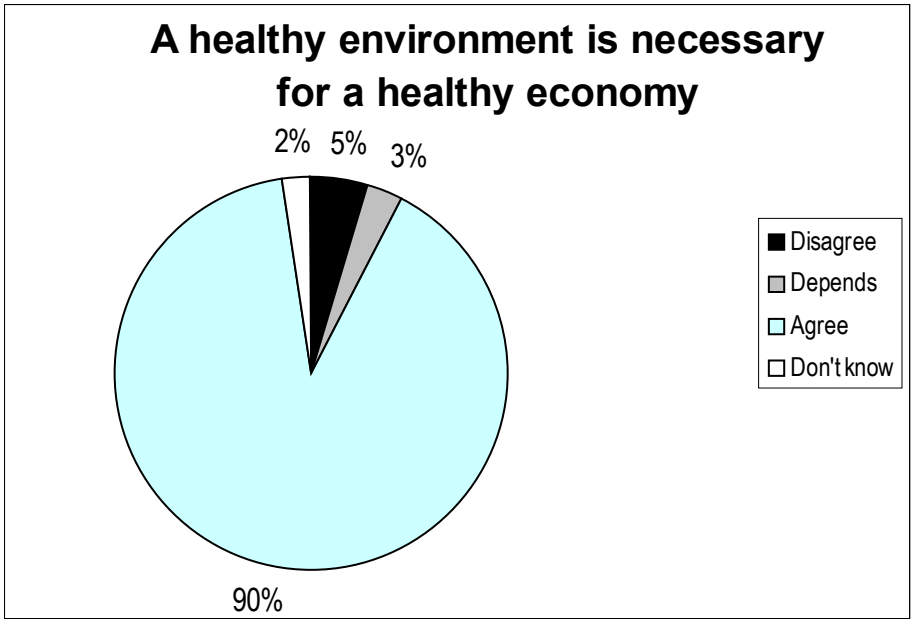


8.2.7 A Healthy Environment Is Necessary For A Healthy Economy

8.2.7.1 Overview Of Results

Most (90%) participants agreed that a healthy environment is necessary for a healthy economy and three percent (3%) said it depends.

Five percent (5%) disagreed and two percent (2%) were unsure.



**Graph shows percentage of weighted total*

8.2.7.2 Results By Demographic Characteristics

When these results were analysed demographically there were no significant differences found.

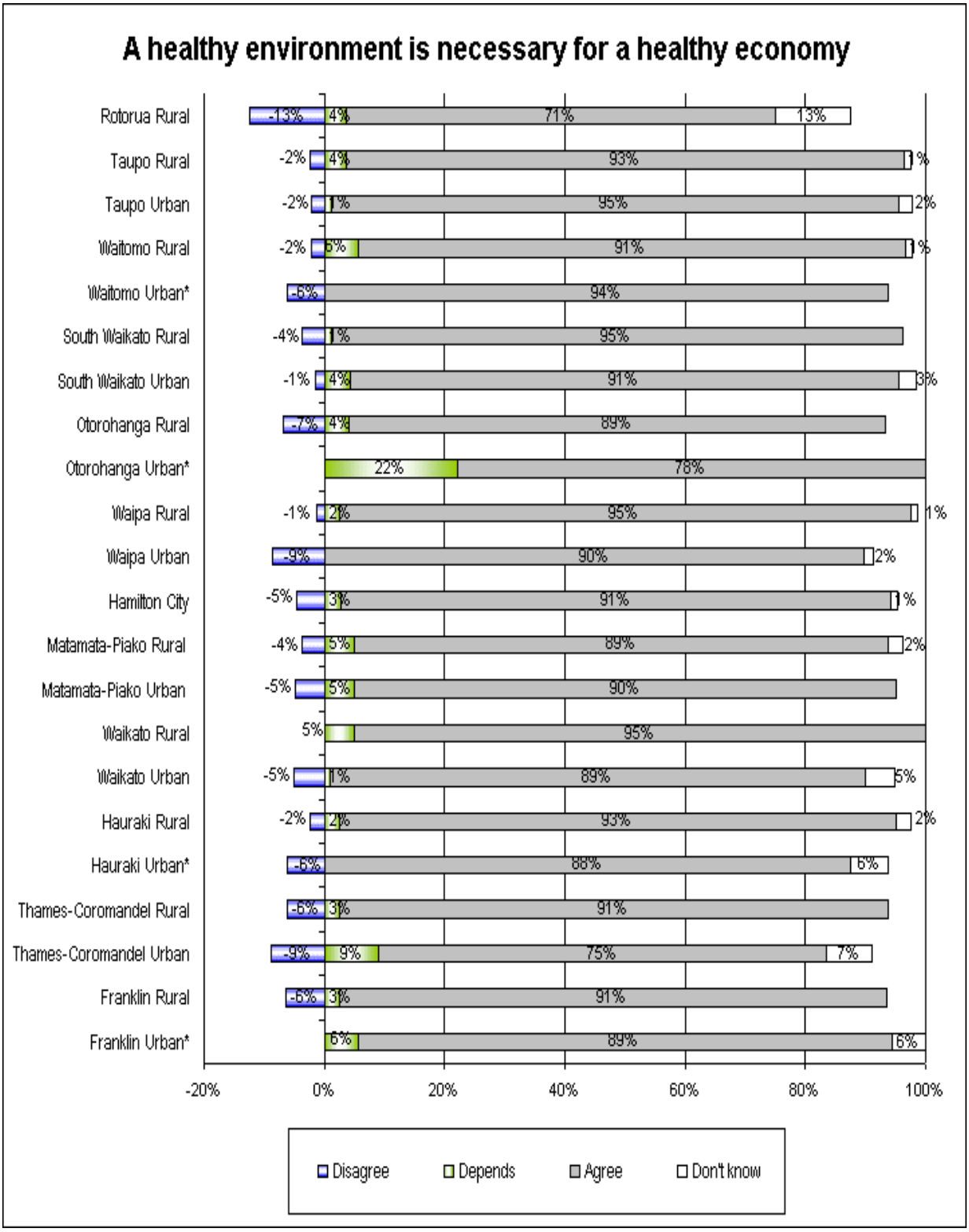
8.2.7.3 Results By Area

When these results were analysed demographically those significantly more likely than the average regional resident to agree that a healthy environment is necessary for a healthy economy were in:

- Waikato Rural (95% confidence level)
- Taupo Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that a healthy environment is necessary for a healthy economy were in:

- Thames-Coromandel Urban (95% confidence level)

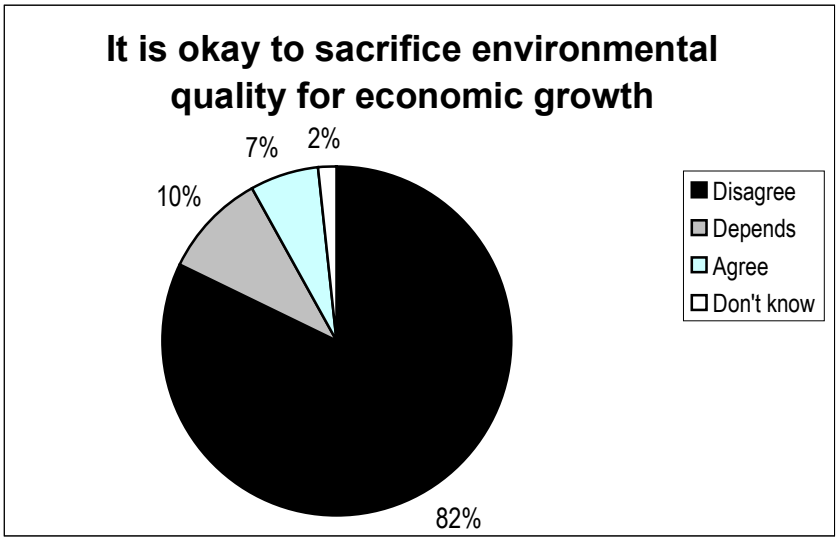


8.2.8 It Is Okay To Sacrifice Environmental Quality For Economic Growth

8.2.8.1 Overview Of Results

Most (82%) participants disagreed that it is okay to sacrifice environmental quality for economic growth and one-tenth (10%) said it depends.

Seven percent (7%) agreed and two percent (2%) were unsure.



**Graph shows percentage of weighted total*

8.2.8.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that it is okay to sacrifice environmental quality for economic growth were:

- Aged 60+ (95% confidence level)
- Earning under $30,000 (90% confidence level)
- Primary school educated (95% confidence level)
- In unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that it is okay to sacrifice environmental quality for economic growth were:

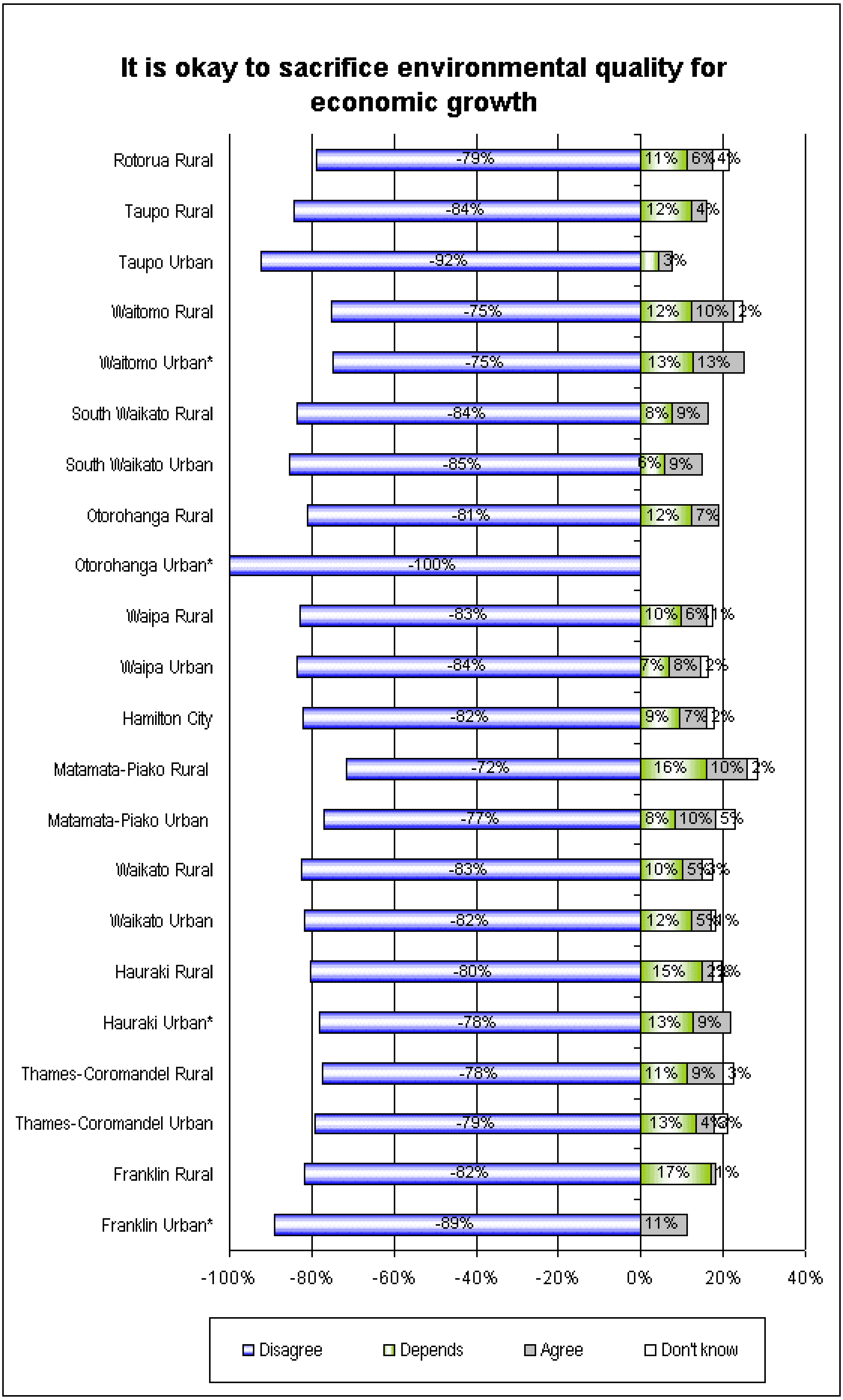
- Aged 30-49 (95% confidence level)
- Tertiary educated (95% confidence level)
- In non-farming occupations (95% confidence level)

8.2.8.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion that agreed did not vary significantly.

Those significantly more likely than the average regional resident to disagree that it is okay to sacrifice environmental quality for economic growth were in:

- Taupo Urban (95% confidence level)



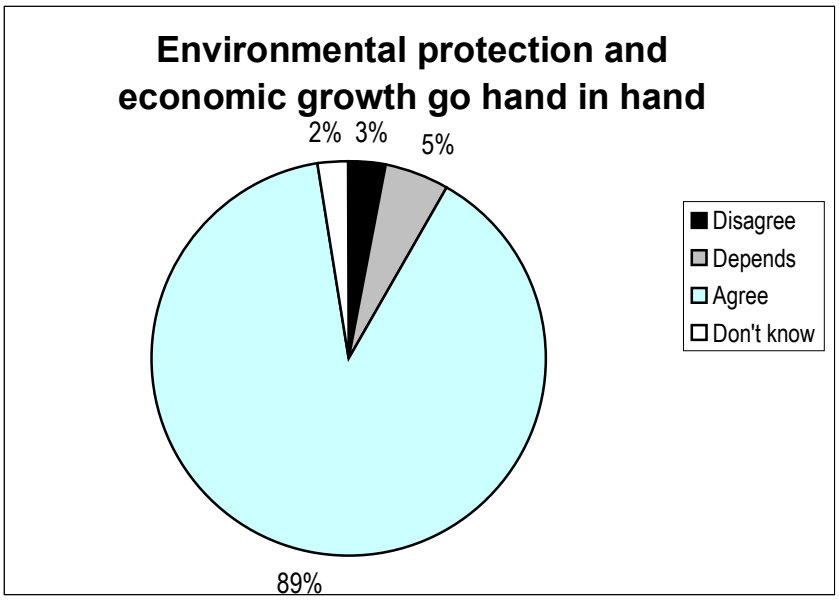
It is okay to sacrifice environmental quality for economic growth
Rotorua Rural
Taupo Rural
Taupo Urban
Waitomo Rural
Waitomo Urban*
South Waikato Rural
South Waikato Urban
Otorohanga Rural
Otorohanga Urban*
Waipa Rural
Waipa Urban
Hamilton City
Matamata-Piako Rural
Matamata-Piako Urban
Waikato Rural
Waikato Urban
Hauraki Rural
Hauraki Urban*
Thames-Coromandel Rural
Thames-Coromandel Urban
Franklin Rural
Franklin Urban*
-79%
11%
6%
4%
-84%
12%
4%
-92%
3%
-75%
12%
10%
2%
-75%
13%
13%
-84%
8%
9%
-85%
6%
9%
-81%
12%
7%
-100%
-83%
10%
6%
1%
-84%
7%
8%
2%
-82%
9%
7%
2%
-72%
16%
10%
2%
-77%
8%
10%
5%
-83%
10%
5%
3%
-82%
12%
5%
1%
-80%
15%
2%
3%
-78%
13%
9%
-78%
11%
9%
3%
-79%
13%
4%
3%
-82%
17%
1%
-89%
11%
-100%
-80%
-60%
-40%
-20%
0%
20%
40%
Disagree
Depends
Agree
Don't know

8.2.9 Environmental Protection And Economic Development Can Go Hand In Hand

8.2.9.1 Overview Of Results

Most (89%) participants agreed that environmental protection and economic development go hand in hand and five percent (5%) said it depends.

Three percent (3%) disagreed and two percent (2%) were unsure.



**Graph shows percentage of weighted total*

8.2.9.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that environmental protection and economic development go hand in hand were:

- Tertiary educated (90% confidence level)

Those significantly more likely than the average regional resident to disagree that environmental protection and economic development go hand in hand were:

- Aged 18-19 (95% confidence level)
- Refused to give ethnicity (95% confidence level)

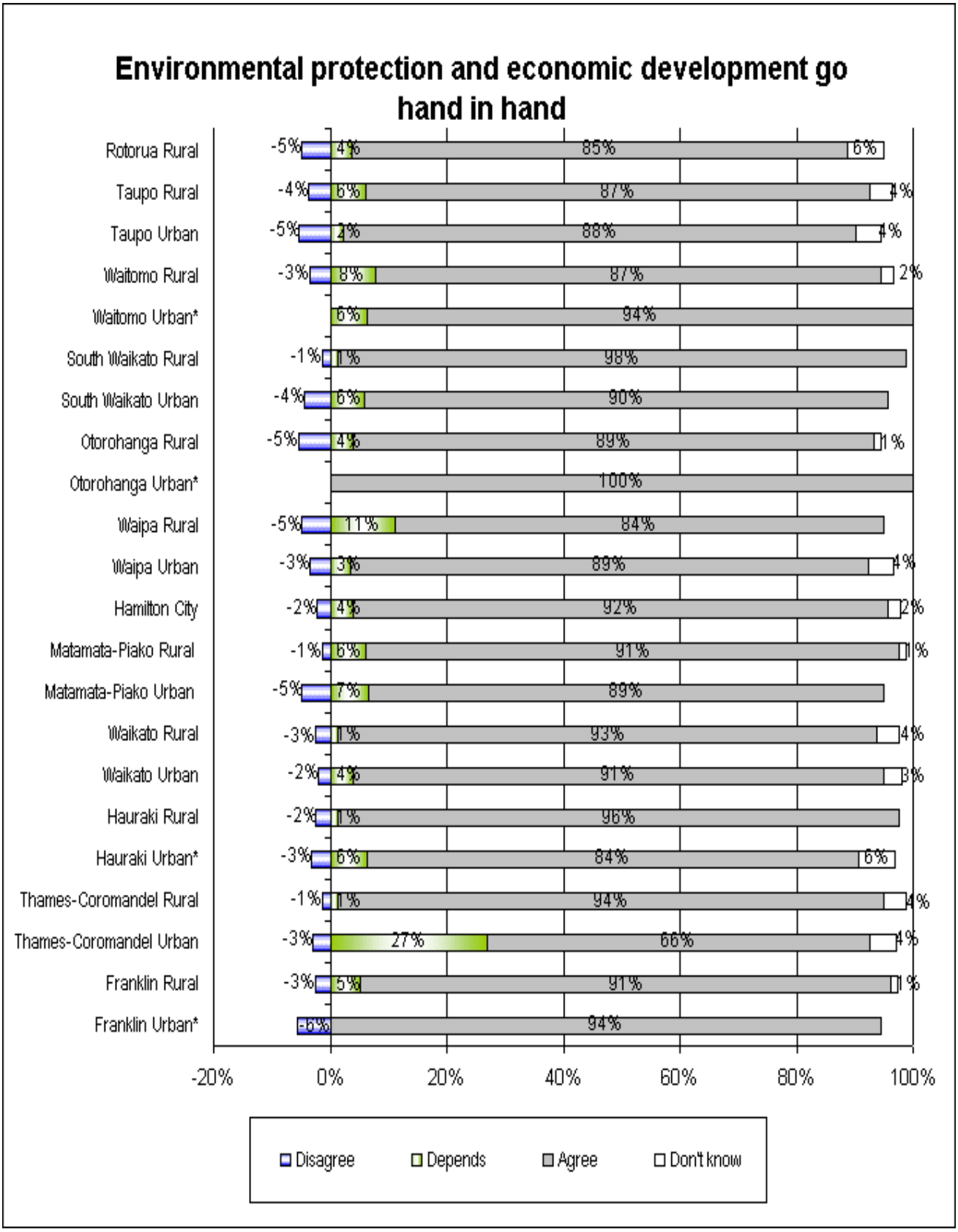
8.2.9.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely to agree that environmental protection and economic growth can go hand in hand were in:

- Otorohanga Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that environmental protection and economic development can go hand in hand were in:

- Thames-Coromandel Urban (95% confidence level)

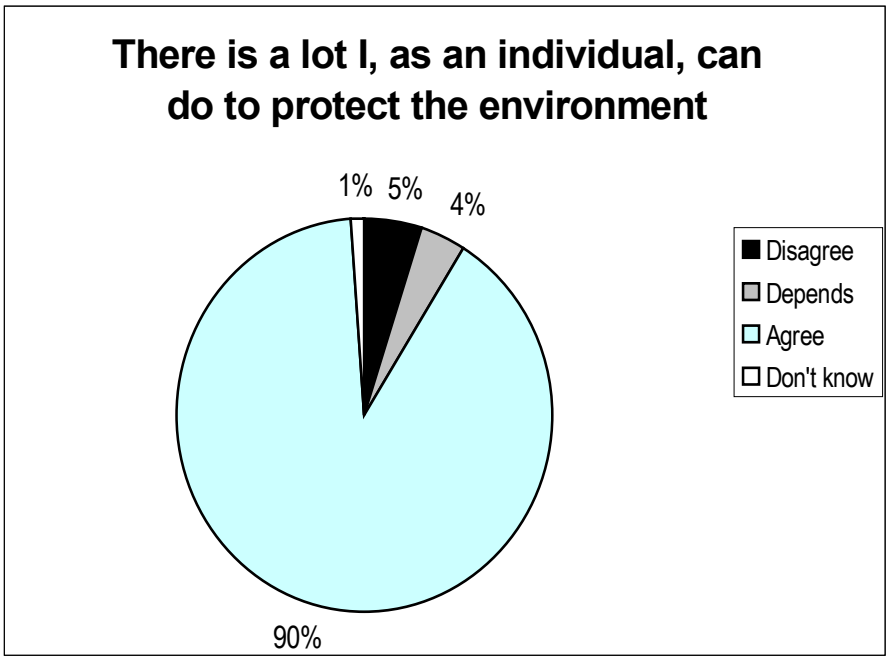


8.2.10 There Is A Lot I, As An Individual, Can Do To Protect The Environment

8.2.10.1 Overview Of Results

Most (90%) participants agreed that there is a lot, they as individuals can do for the environment and four percent (4%) said it depends.

Five percent (5%) disagreed and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

8.2.10.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the proportion who agreed that there is a lot, they as individuals, can do for the environment (+4%).

There was a decline in the proportion who disagreed that there is a lot, they as individuals, can do for the environment (-3%) and a decrease in the proportion that said it depends (-1%).

There is a lot I, as an individual, can do to protect the environment	1998	2000	Change
Disagree	8%	5%	-3%
Depends	5%	4%	-1%
Agree	86%	90%	4%
Don't know	1%	1%	0%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

8.2.10.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that there is a lot, they as individuals, can do for the environment were:

- Earning $60,000 and over (95% confidence level)
- In non-farming occupations (90% confidence level)

Those significantly more likely than the average regional resident to disagree that there is a lot, they as individuals, can do for the environment were:

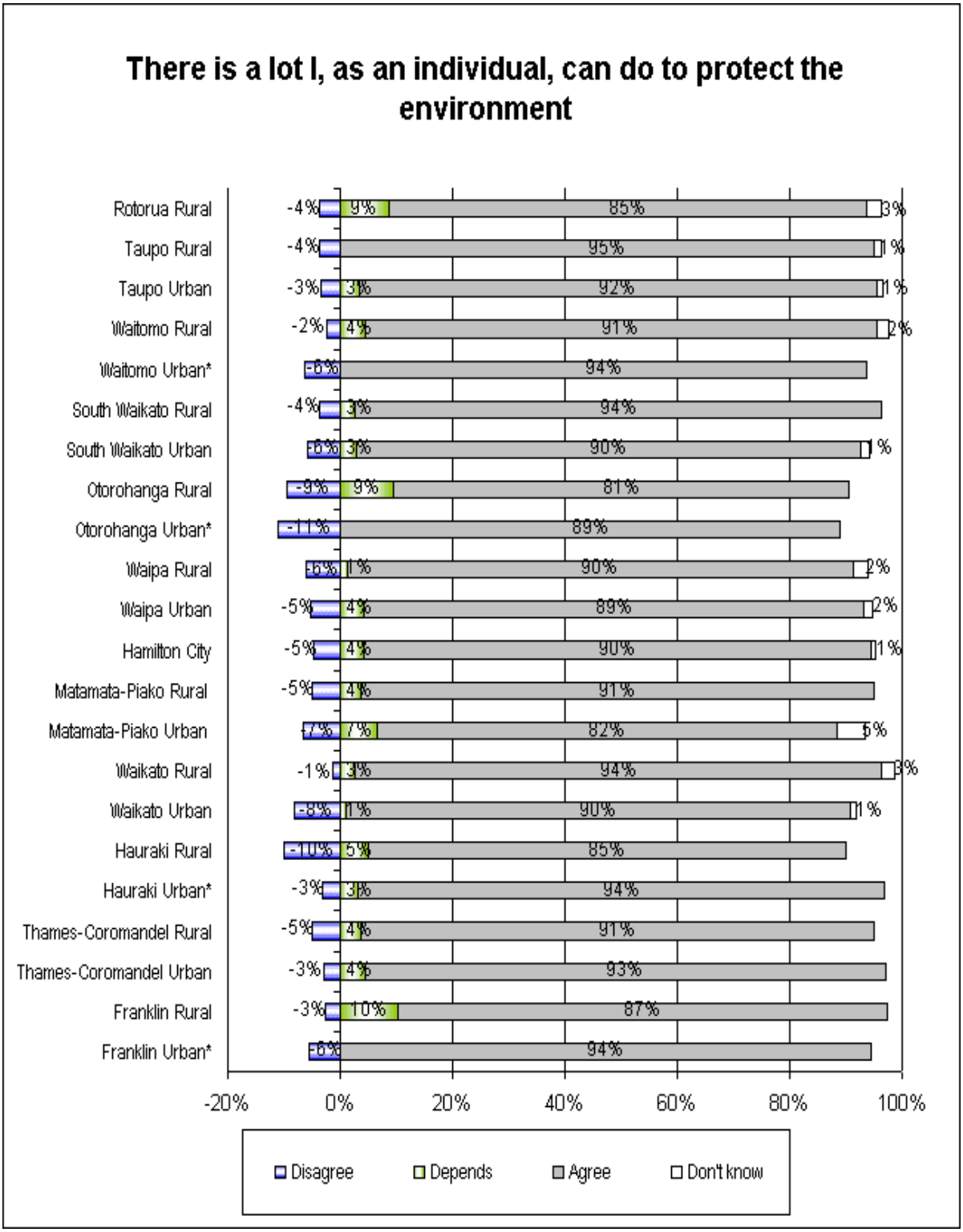
- Aged 60+ (95% confidence level)
- In unpaid occupations (95% confidence level)

8.2.10.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that there is a lot, they as individuals, can do for the environment were in:

- Waikato Rural (90% confidence level)

There were no significant differences in the proportion who disagreed.

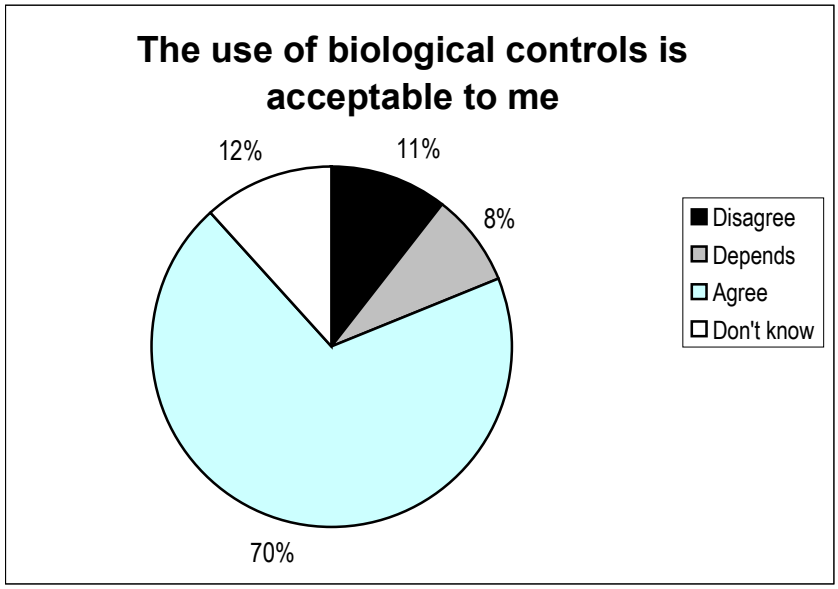


8.2.11 Use Of Biological Controls Is Acceptable To Me

8.2.11.1 Overview Of Results

A large majority (70%) of participants agreed that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable to them and eight percent (8%) said it depends.

Eleven percent (11%) disagreed and twelve percent (12%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

8.2.11.2 Comparison To 1998 Study

When compared to the 1998 results there was an increase in the proportion who agreed that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable (+22%) and an increase in the proportion who were unsure (+8%).

There was a decline in the proportion who disagreed that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable (-17%) and a decline in the proportion who said it depends (-12%).

It should be noted that the question wording was altered from the 1998 study. The 1998 wording was less specific: "The use of biological controls such as special diseases, animals and insects to protect the environment from harmful animals and plants, is generally acceptable to me." The change in terminology may account for the difference in response.

The use of biological controls, such as immuno-contraceptives for possum control, is acceptable to me	1998	2000	Change
Disagree	28%	11%	-17%
Depends	20%	8%	-12%
Agree	48%	70%	22%
Don't know	4%	12%	8%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

8.2.11.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable were:

- Aged 60+ (95% confidence level)
- Aged 50-59 (90% confidence level)

Those significantly more likely than the average regional resident to disagree that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable were:

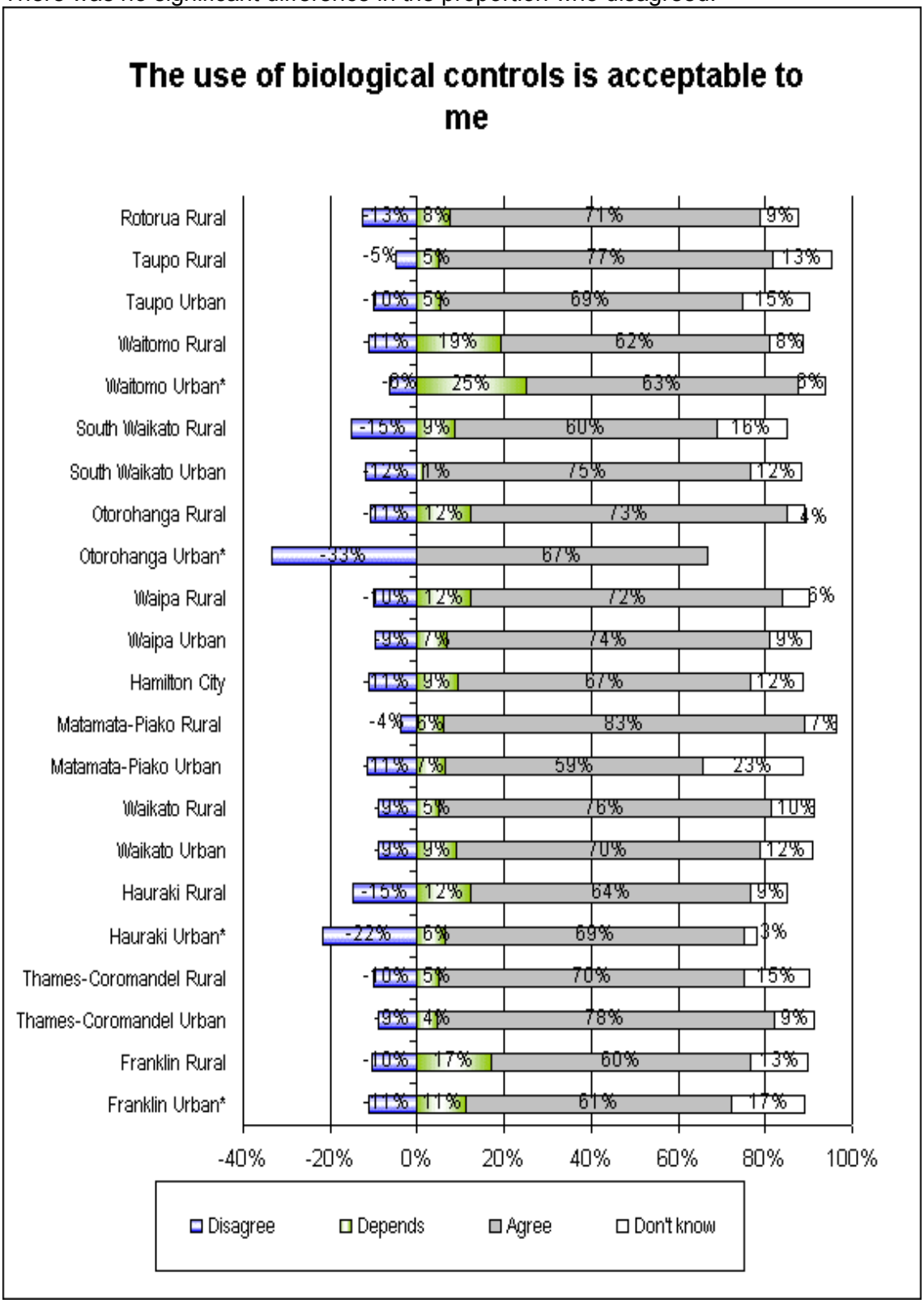
- Aged 20-29 (95% confidence level)
- Maori (95% confidence level)

8.2.11.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that the use of biological controls, such as immuno-contraceptives for possum control, is acceptable were in:

- Matamata-Piako Rural (95% confidence level)

There was no significant difference in the proportion who disagreed.



8.2.12 Balancing Economy With Environment Scale

8.2.12.1 Overview Of Results

The overall Economy versus Environment score was calculated by totalling the scores for 5 indicator questions. These were questions 11c, 11d, 18b, 18c and 18d (see questionnaire Appendix One). Environmentally negative questions were re-coded to be compatible with the positive questions and non-responses were treated as environmentally neutral responses.

The maximum achievable individual score was 15. The scores achieved ranged from 5 to 15, with the mean score being 13.78, the median 14 and mode 15.

The participants were divided into three similarly sized groups for purpose of in-depth analysis. Those with total scores below 14 form the low group, those with scores of 14 form the medium group and those with scores of 15 form the high group.

8.2.12.2 Results By Demographic Characteristics

When these results were analysed demographically the following groups had mean scores that were significantly higher (95% Confidence level) than the mean:

- Those aged 30-49 years
- Those with incomes of $30,000 and over
- Those with tertiary education
- Those in non-farming occupations

The following groups had mean scores that were significantly lower (95% Confidence level) than the mean:

- Those aged 18-19 years and 60+
- Those with incomes of $30,000 or under
- Those with primary or secondary school education
- Those not in paid employment

8.2.12.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, only those from the:

- Hamilton Urban area and
- Taupo Urban

had mean scores that were significantly higher (95% Confidence level) than the overall sample mean. Only those from the

- Thames-Coromandel Urban area

had mean scores that were significantly lower (95% Confidence level) than the overall sample mean.

8.2.13 Index Of Attitudes Towards Environmental Regulations

8.2.13.1 Overview Of Results

The Index of Attitudes Towards Environmental Regulations was calculated by totalling the scores for key indicator questions in this section. These were questions 11a, 11c and 18a. Environmentally negative questions were re-coded to be compatible with the positive questions and non-responses were treated as environmentally neutral responses.

The maximum achievable individual score was 9. The scores achieved ranged from 3 to 9, with the mean being 7.80, the median score being 8 and mode 9.

The participants were divided into three groups for purpose of in-depth analysis. Those with total scores below 8 form the low group, those with scores of 8 form the medium group and those with scores of 9 form the high group.

8.2.13.2 Results By Demographic Characteristics

When these results were analysed demographically the following groups had mean scores that were significantly higher (95% Confidence level) than the mean:

- Urban people
- Those aged 20-39
- Those with incomes of $30,000-$60,000
- Those with tertiary education
- Those in non-farming occupations

The following groups had mean scores that were significantly lower (95% Confidence level) than the mean:

- Rural people
- Those aged 18-19
- Those aged 60 and over
- Those with primary or secondary school education
- Those in farming occupations and those not in paid employment

8.2.13.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the following groups had mean scores that were significantly higher (95% Confidence Level) than the average for the region:

- Hamilton Urban
- Taupo Urban

The following areas had mean scores that were significantly lower than the average for the region:

- Matamata-Piako Urban and Rural
- Franklin Urban
- Otorohanga Rural
- Thames-Coromandel Rural

9 Protecting The Environment

Individuals can take action at several levels to protect the environment, including participation in public processes (e.g. by signing a petition) and by practising environmentally beneficial actions within their day to day lives (e.g. using public transport). The following questions asked people to report their levels of public and private actions, and to assess their effectiveness or frequency. However, because few people automatically and consistently carry out such actions, it is recognised that barriers exist to limit those actions. These barriers can be public (e.g. a lack of facilities) and/or personal (e.g. lack of interest). The set of questions relating to barriers to environmental action aims to determine which barriers are most significant. By determining what actions are widely practised and what barriers exist to limit action, regional and district councils can support further environmentally beneficial action within their communities through facilities, subsidies, and information.

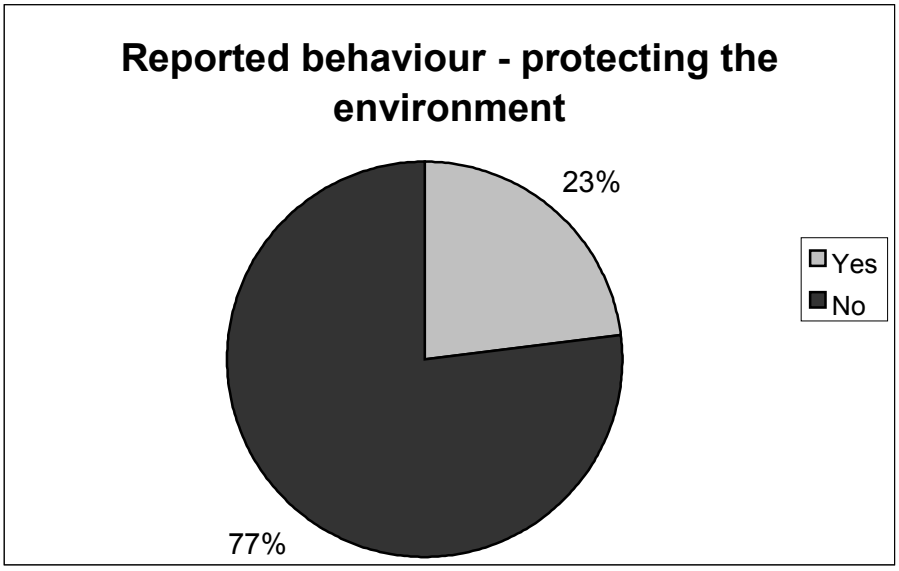
9.1 Took Action To Protect The Environment

9.1.1 Action Taken

9.1.1.1 Overview

Participants were asked if in the last year or so, they had tried to get information, advice, or been involved in any kind of public meetings, official hearings or consent processes with the aim of protecting the environment.

Almost one-quarter (23%) of participants had not tried to get information, advice or been involved in any kind of public meeting, official hearing or consent processes with the aim of protecting the environment. A large majority (77%) said they had not tried to do this.



**Graph shows percentage of weighted total*

9.1.1.2 Comparison To 1998 Study

When compared to the 1998 results there was a small increase in the proportion who said they had not tried to get information, advice or had been involved in some kind of meeting, official hearing or consent process with the aim of protecting the environment (+3%).

There was a decline in the proportion who said they had tried to get information, advice or had been involved in some kind of meeting, official hearing or consent process with the aim of protecting the environment (-3%).

Reported Behaviour – Protecting the Environment	1998	2000	Change
Yes	26%	23%	-3%
No	74%	77%	3%
Total	100%	100%	

9.1.1.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to have tried to get information, advice or had been involved in some kind of public meeting, official hearing or consent processes with the aim of protecting the environment were:

- Rural (95% confidence level)
- Earning $60,000 and over (90% confidence level)
- Tertiary educated (95% confidence level)

Those significantly more likely than the average regional resident to have not tried to get information, advice or had been involved in some kind of public meeting, official hearing or consent processes with the aim of protecting the environment were:

- Aged 18-19 (95% confidence level)
- Secondary school educated (95% confidence level)
- In unpaid occupations (90% confidence level)

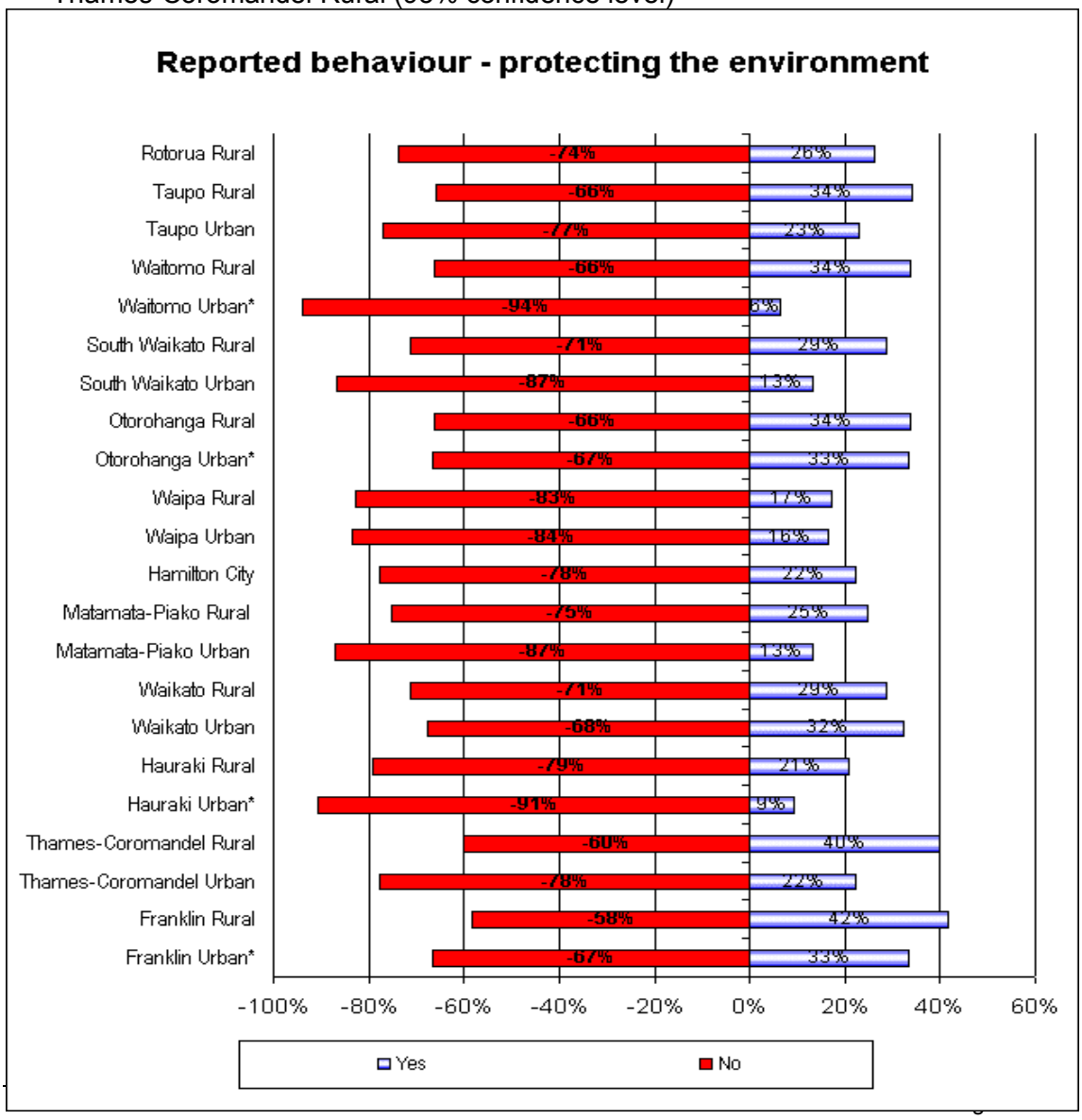
9.1.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to have not tried to get information, advice or been involved in some kind of public meeting, official hearing or consent processes with the aim of protecting the environment were in:

- Hauraki Urban (95% confidence level)
- Matamata-Piako Urban (95% confidence level)
- South Waikato Urban (95% confidence level)
- Waitomo Urban (95% confidence level)
- Waipa Urban (90% confidence level)

Those significantly more likely than the average regional resident to have tried to get information, advice or been involved in some kind of public meeting, official hearing or consent processes with the aim of protecting the environment were in:

- Franklin Rural (95% confidence level)
- Thames-Coromandel Rural (95% confidence level)



9.1.2 Type Of Action Taken

Of those participants who had taken action with the aim of protecting the environment, two-fifths (43%) had attending a meeting and one-fifth (18%) had joined an action group.

Approximately one-tenth had:

- Made a formal submission (13%).
- Read or sought information (12%).
- Been involved in a resource consent procedure (11%).
- Complained to a Council or other organisation (8%).
- Telephoned a council or other organisation (7%).

A wide range of other responses were given, each by less than seven percent (7%) of respondents.

9.1.2.1 Comparison To 1998 Study

When compared to the 1998 results there was a decline in the proportion who reported having made a formal submission (-12%), telephoned a Council or other organisation (-13%), taken part in a protest (-9%) and complained to a Council or other organisation (-6%).

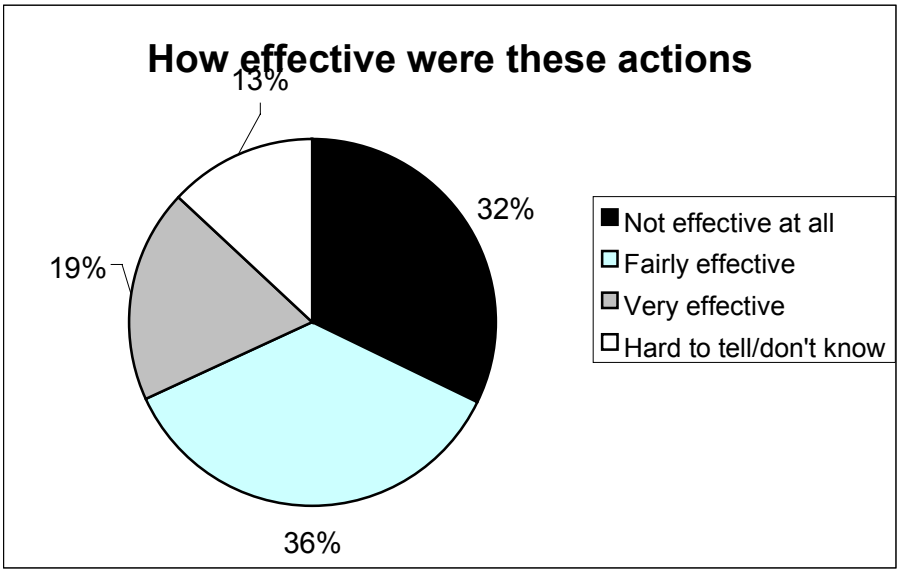
There were increases in the proportion who reported having joined an action group (+13%), participated in resource consent processes (+11%), read or sought information (+6%) signed a petition (+5%) or attended a meeting (+5%).

What did you do	1998	2000	Change
Attended a meeting	38%	43%	5%
Joined an action group	5%	18%	13%
Made a formal submission	25%	13%	-12%
Read or sought information	6%	12%	6%
Participated in resource consent process	0%	11%	11%
Complained to a council or organisation	14%	8%	-6%
Telephoned a council or organisation	20%	7%	-13%
Wrote a letter to the council or other organisation	13%	6%	-7%
Signed a petition	0%	5%	5%
Wrote a letter to the paper	2%	3%	1%
Took part in a protest	11%	2%	-9%
Complained to the company/person causing the damage	2%	1%	-1%
No action	0%	0%	0%
Other	0%	9%	9%
Don't know	0%	0%	0%

9.1.3 Effectiveness Of Action

9.1.3.1 Overview

Of those participants who reported taking action with the aim of protecting the environment, one-third (32%) considered the action they had taken was not effective at all. A further one-third (36%) considered the action they had taken was fairly effective. Nineteen percent (19%) considered the action they had taken was very effective and thirteen percent (13%) said it was hard to tell.



Graph shows percentage of total. Results not weighted since not all participants were asked this question.

9.1.3.2 Comparison To 1998 Study

When compared to the 1998 results there was a decline in the proportion who considered that the action they had taken was very effective (-5%) and small declines in those who considered it not at all effective (-1%) or didn't know.

There was an increase (+8%) in those who thought it fairly effective.

How effective were these actions	1998	2000	Change
Not effective at all	33%	32%	-1%
Fairly effective	28%	36%	8%
Very effective	24%	19%	-5%
Hard to tell/don't know	15%	14%	-1%
Total	100%	100%	

Percentage change may not appear to equal 0 due to rounding

9.1.3.3 Results By Demographic Characteristics

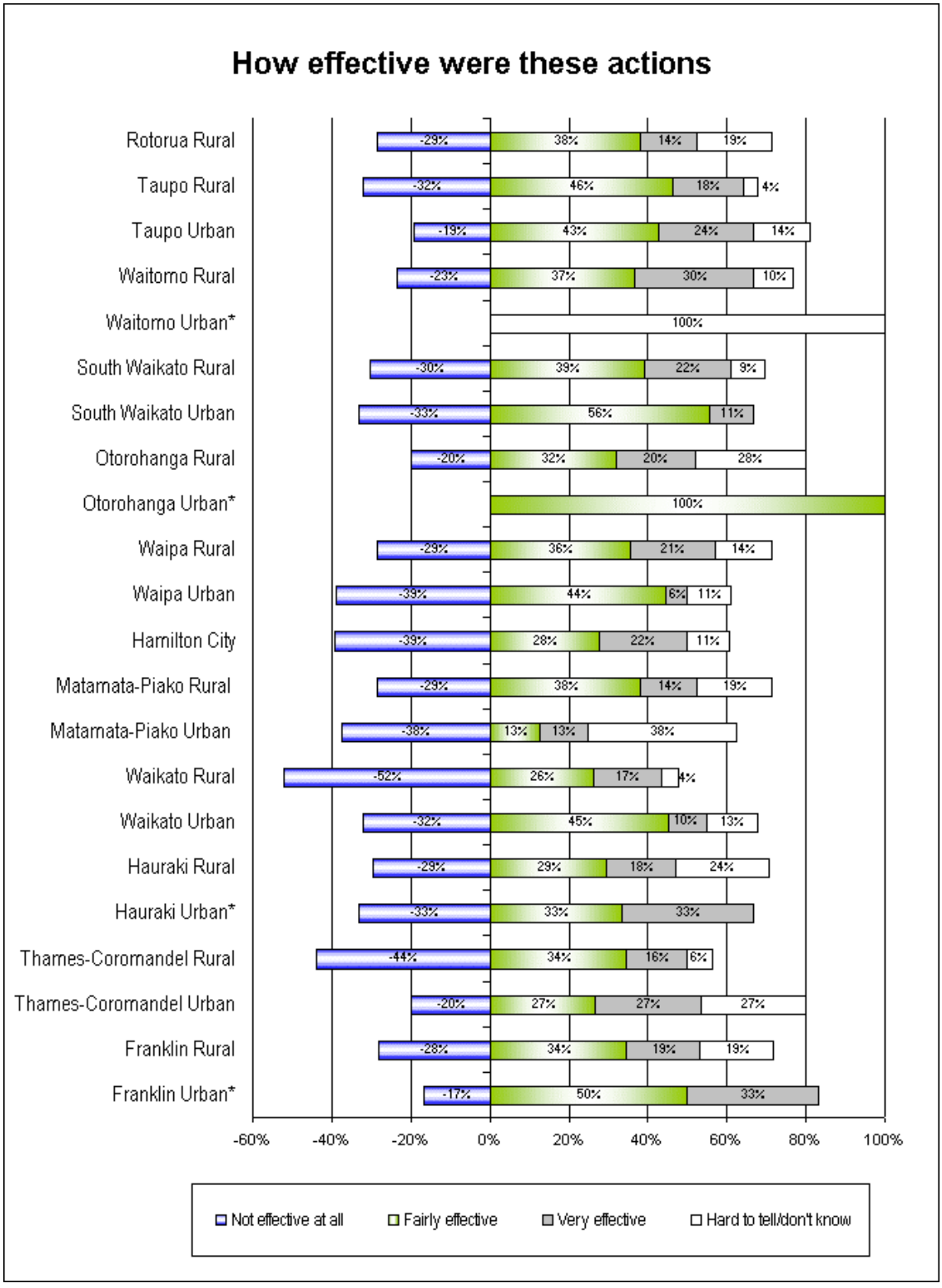
When these results were analysed demographically those significantly more likely than the average regional resident to consider the action they had taken was effective were:

- Aged 18-19 (95% confidence level)

There were no significant differences in the proportion who considered the action they had taken was not effective.

9.1.3.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, no significant differences were found.



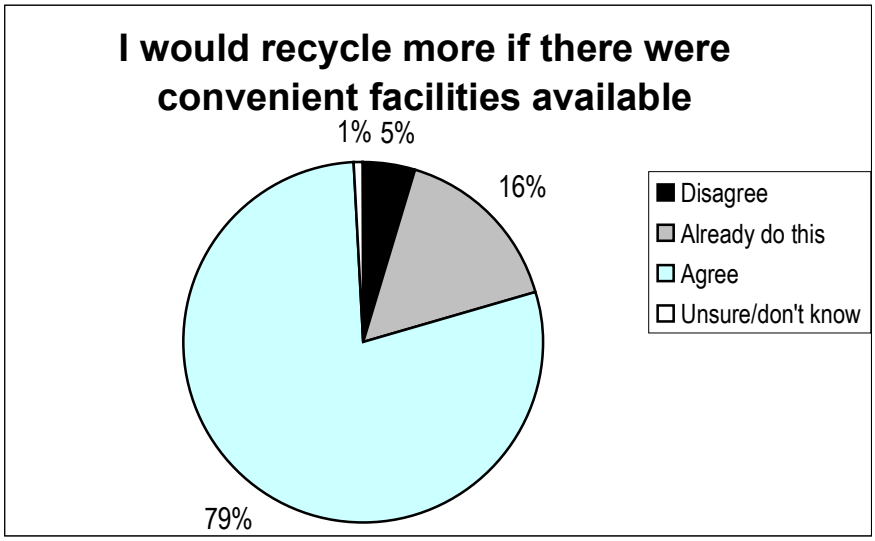
9.2 Attitudes

9.2.1 Recycle More If Convenient Recycling Facilities Available

9.2.1.1 Overview Of Results

Four-fifths (79%) of participants agreed that they would recycle more if convenient recycling facilities were available and sixteen percent (16%) said they already do this.

Five percent (5%) disagreed and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

9.2.1.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that they would recycle more if convenient recycling facilities were available were:

- Aged 20-29 (95% confidence level)
- Tertiary educated (95% confidence level)

There were no significant differences in the proportion who disagreed.

9.2.1.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that they would recycle more if convenient recycling facilities were available were in:

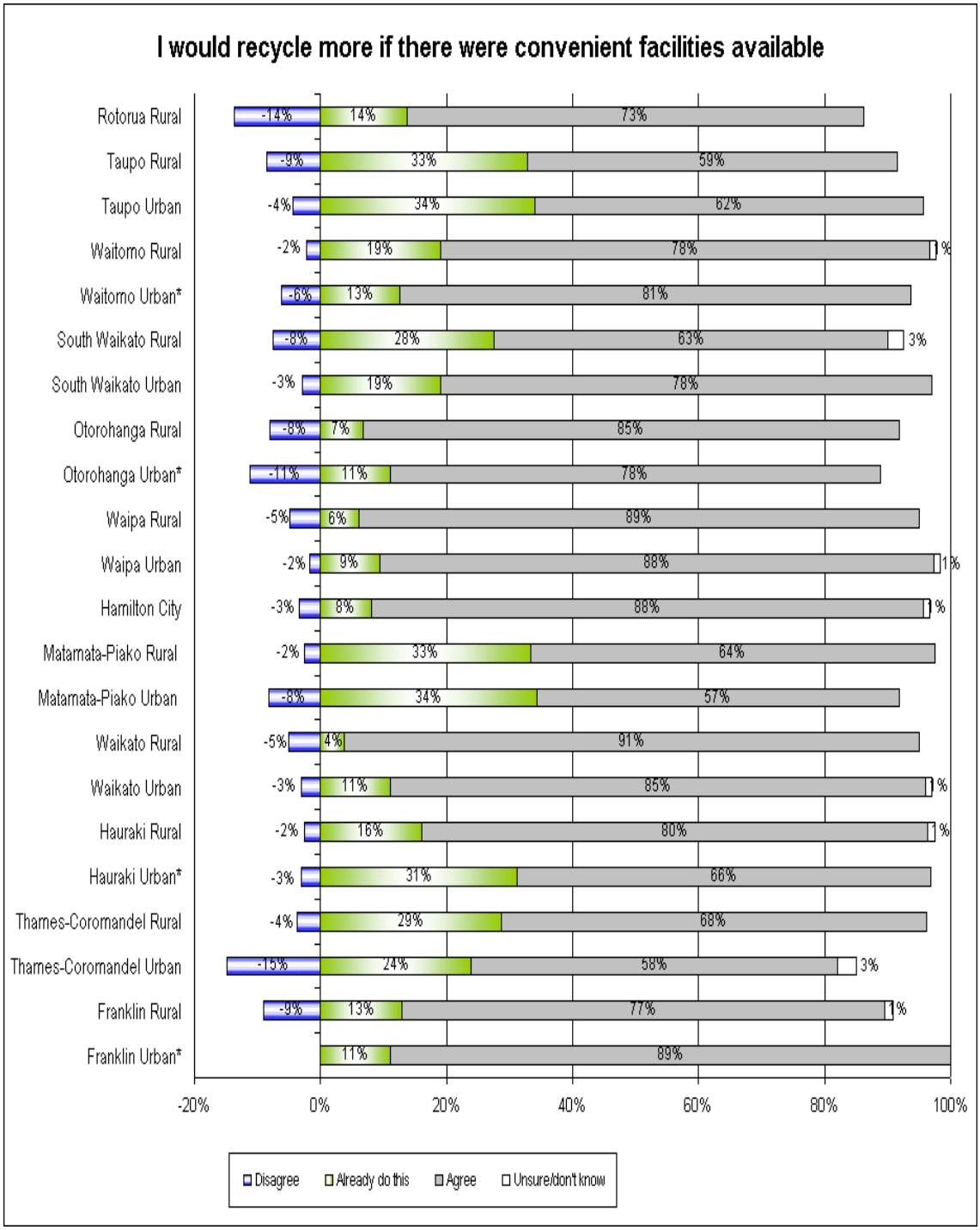
- Hamilton Urban (95% confidence level)
- Waipa Urban (95% confidence level)
- Franklin Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that they would recycle more if convenient recycling facilities were available were in:

- Thames-Coromandel Urban (95% confidence level)
- Matamata-Piako Urban (95% confidence level)
- Taupo Urban (95% confidence level)

It should be noted that these areas have the highest percentage that are already claiming to recycle:

- Matamata-Piako Urban (34%)
- Taupo Rural (33%)
- Thames-Coromandel Urban (24%)

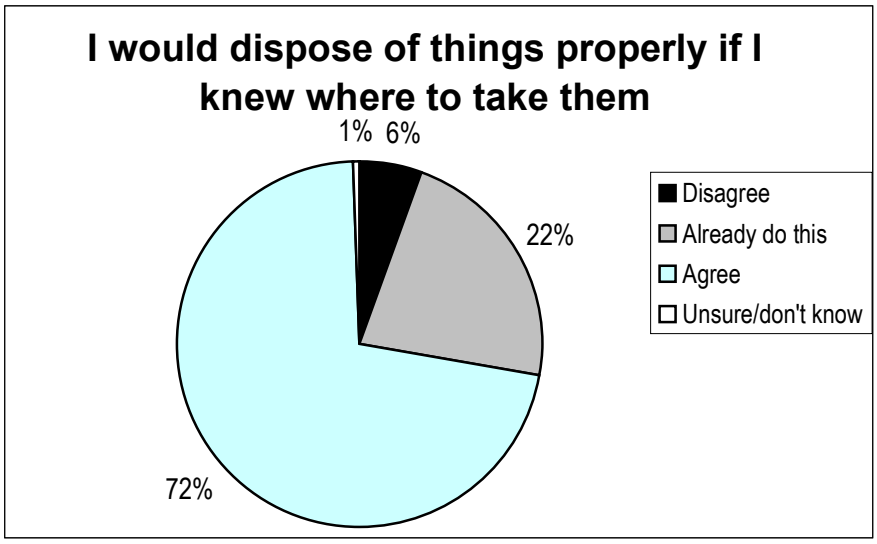


9.2.2 Dispose Of Things Properly If Knew Where To Take Them

9.2.2.1 Overview Of Results

Almost three-quarters (72%) of participants agreed that they would dispose of things properly if they knew where to take them and one-fifth (22%) said they already do this.

Six percent (6%) disagreed and one percent (1%) were unsure.



*Graph shows percentage of weighted total

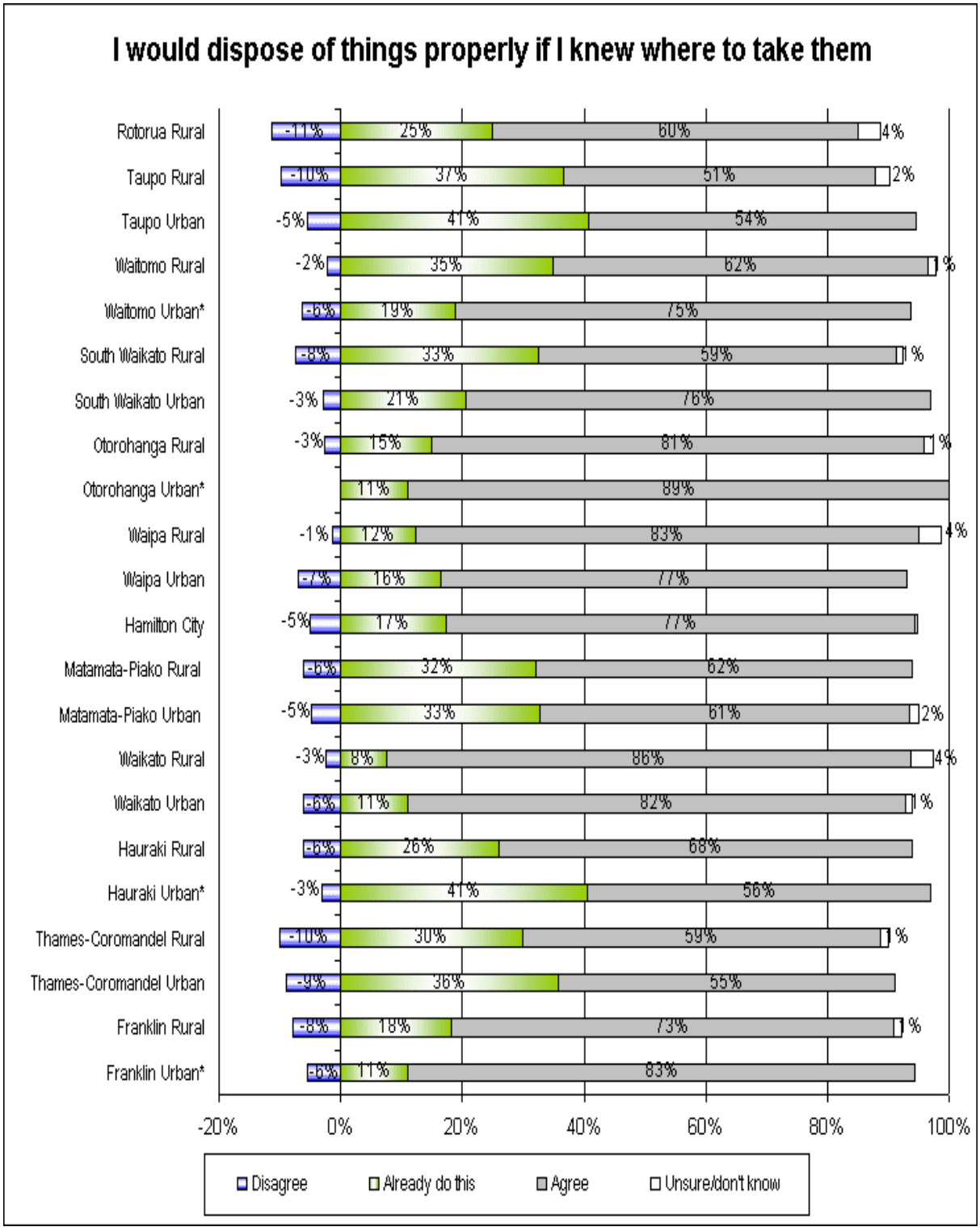
9.2.2.2 Results By Demographic Characteristics

When these results were analysed demographically the proportion to agree that they would dispose of things properly if they knew where to take them were:

- Aged 20-29 (95% confidence level) and aged 30-39 (90% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to disagree that they would dispose of things properly if they knew where to take them were:

- Aged 60+ (95% confidence level)



9.2.2.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that they would dispose of things properly if they knew where to take them were in:

- Waikato Rural (95% confidence level)
- Waipa Rural (95% confidence level)
- Otorohanga Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that they would dispose of things properly if they knew where to take them were in:

- Thames-Coromandel Urban (95% confidence level)

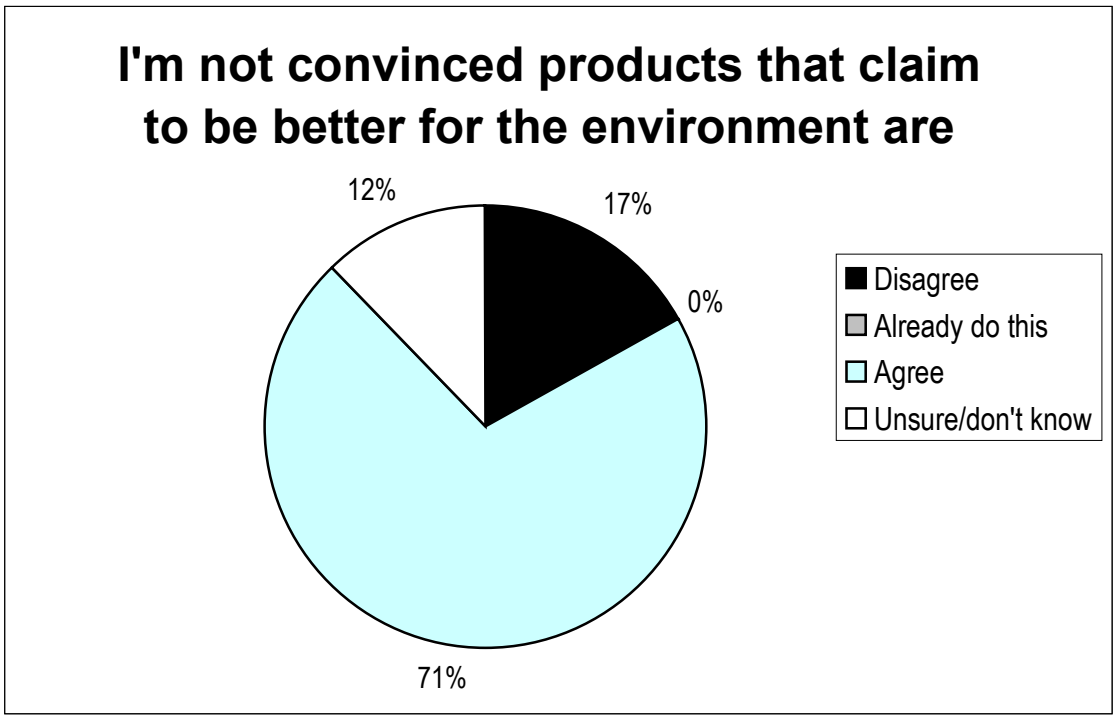
- Taupo Urban (95% confidence level)

9.2.3 Not Convinced Products Claiming To Be Better For The Environment Are

9.2.3.1 Overview Of Results

A large majority (71%) of participants agreed that they are not convinced that products that claim to be better for the environment actually are.

Seventeen percent (17%) disagreed and twelve percent (12%) were unsure.



**Graph shows percentage of weighted total*

9.2.3.2 Results By Demographic Characteristics

When these results were analysed demographically no significant differences were found.

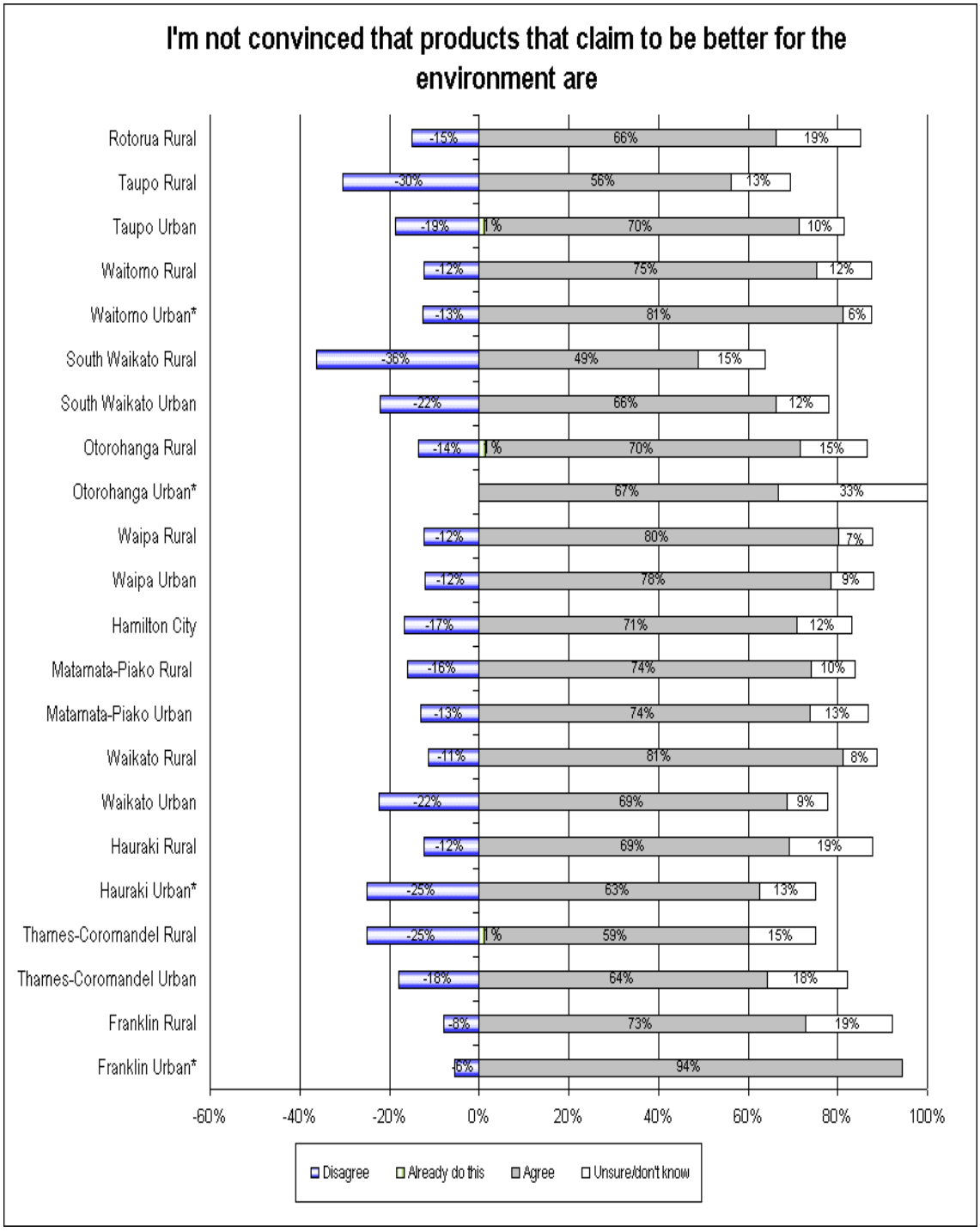
9.2.3.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that they are not convinced that products that claim to be better for the environment actually are were in:

- Franklin Urban (95% confidence level).

Those significantly more likely than the average regional resident to disagree that they are not convinced that products that claim to be better for the environment actually are were in:

- South Waikato Rural (95% confidence level)

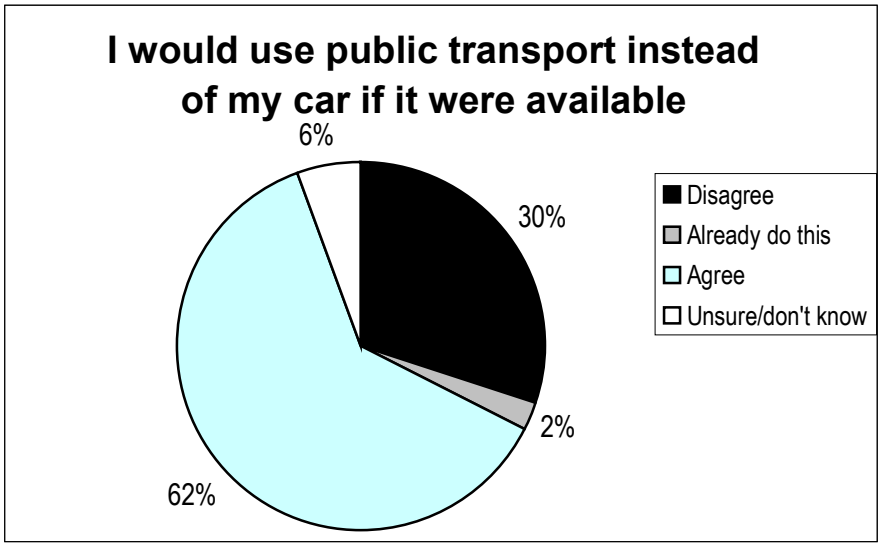


9.2.4 Would Use Public Transport Instead Of My Car If It Were Available And Convenient

9.2.4.1 Overview Of Results

The majority (62%) of participants agreed that they would use public transport instead of their car if it were available and convenient and two percent (2%) said they already do this.

Almost one-third (30%) disagreed and six percent (6%) were unsure.



**Graph shows percentage of weighted total*

9.2.4.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that they would use public transport instead of their car if it were available and convenient were:

- Aged 18-19 (95% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to disagree that they would use public transport instead of their car if it were available and convenient were:

- In farming occupations (95% confidence level)

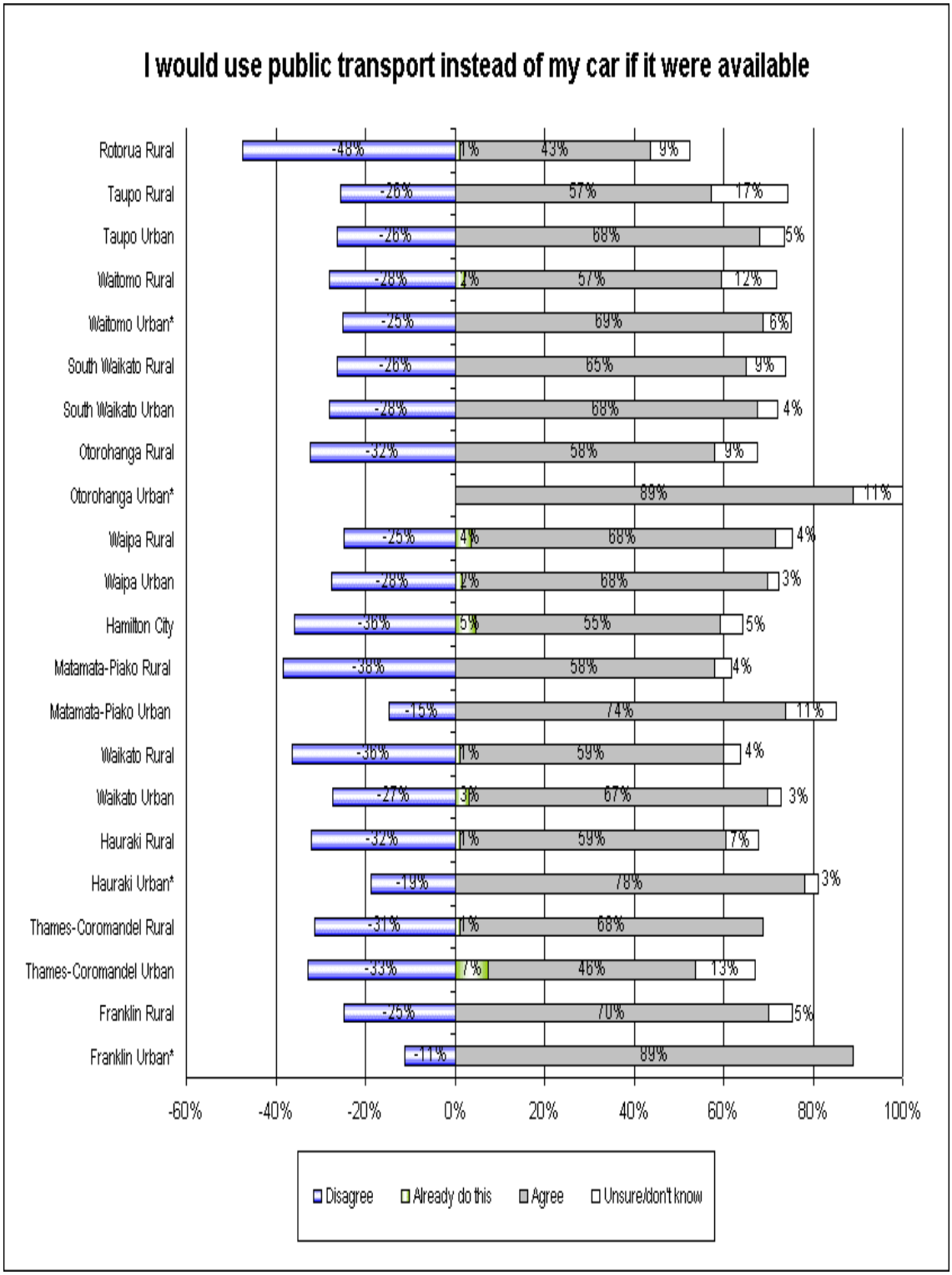
9.2.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that they would use public transport instead of their car if it were available and convenient were in:

- Franklin Urban (95% confidence level)
- Hauraki Urban (95% confidence level)
- Matamata-Piako Urban (95% confidence level)
- Otorohanga Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that they would use public transport instead of their car if it were available and convenient were in:

- Hamilton Urban (95% confidence level)

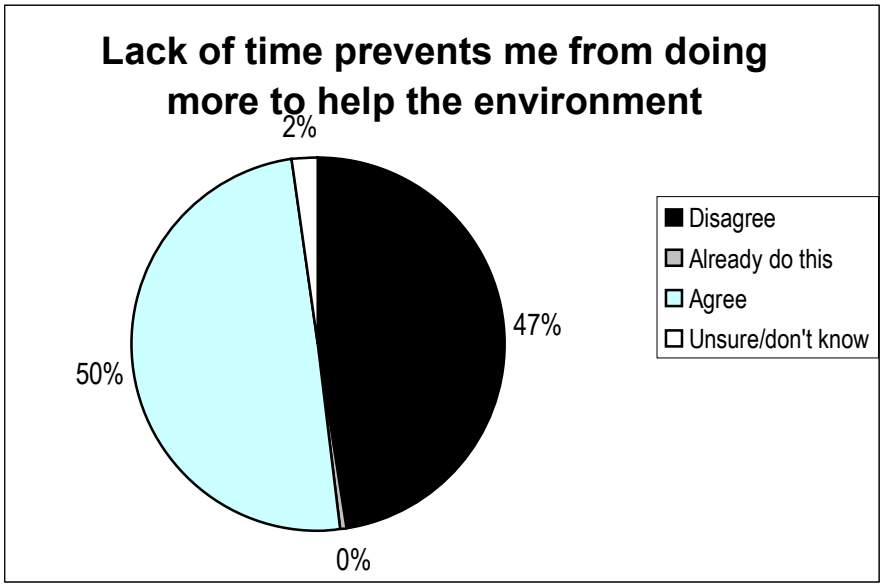


9.2.5 Lack Of Time Prevents Me From Doing Things That Help The Environment

9.2.5.1 Overview Of Results

Half (50%) of participants agreed that lack of time prevents them from doing things that help the environment.

Almost half (47%) disagreed and two percent (2%) were unsure.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

9.2.5.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that lack of time prevents them from doing things that help the environment were:

- Aged 20-29 (90% confidence level)

Those significantly more likely than the average regional resident to disagree that lack of time prevents them from doing things that help the environment were:

- Aged 60+ (95% confidence level)
- In unpaid occupations (90% confidence level)

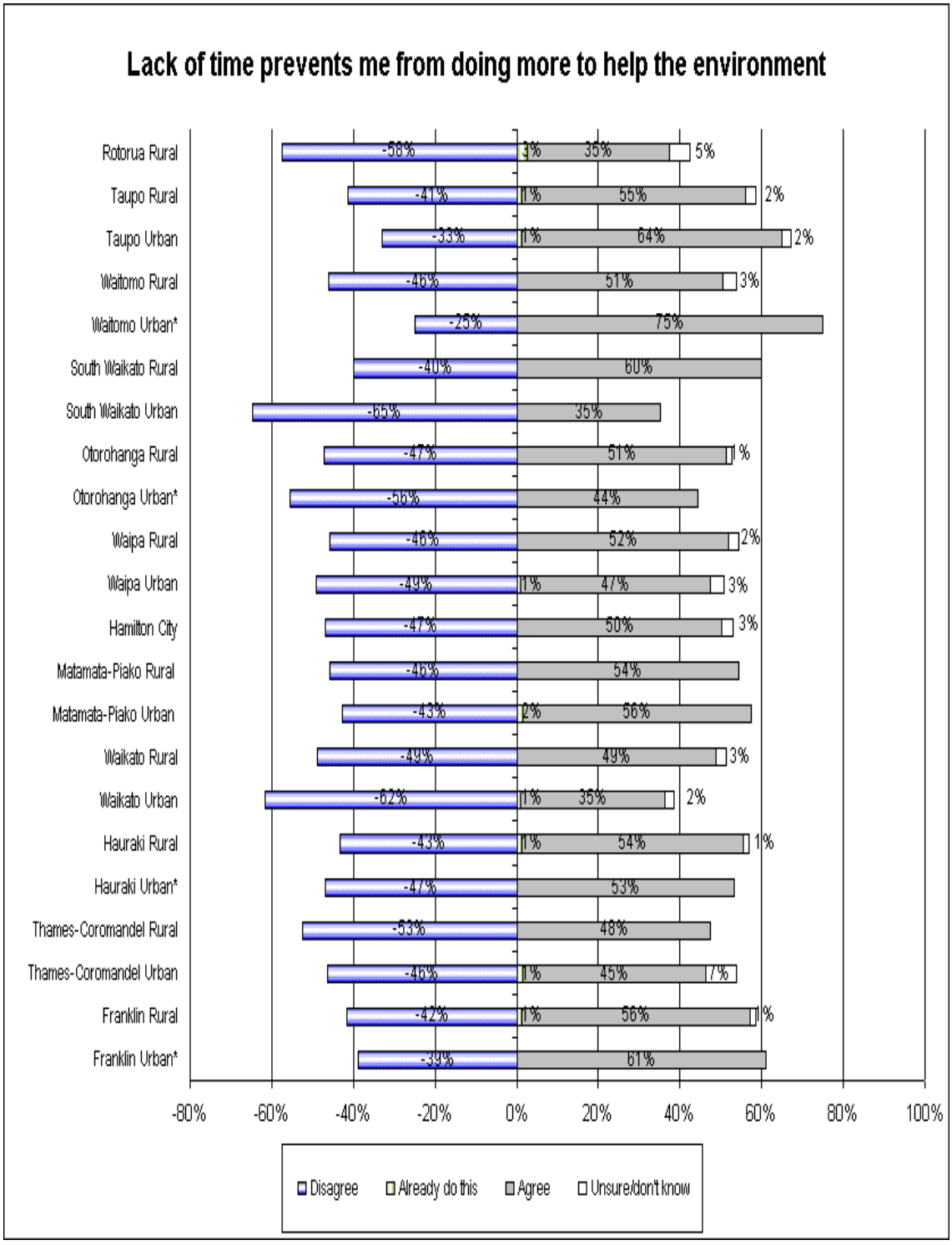
9.2.5.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that lack of time prevents them from doing things that help the environment were in:

- Waitomo Urban (95% confidence level)
- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to disagree that lack of time prevents them from doing things that help the environment were in:

- Waikato Urban (95% confidence level)
- South Waikato Urban (95% confidence level)

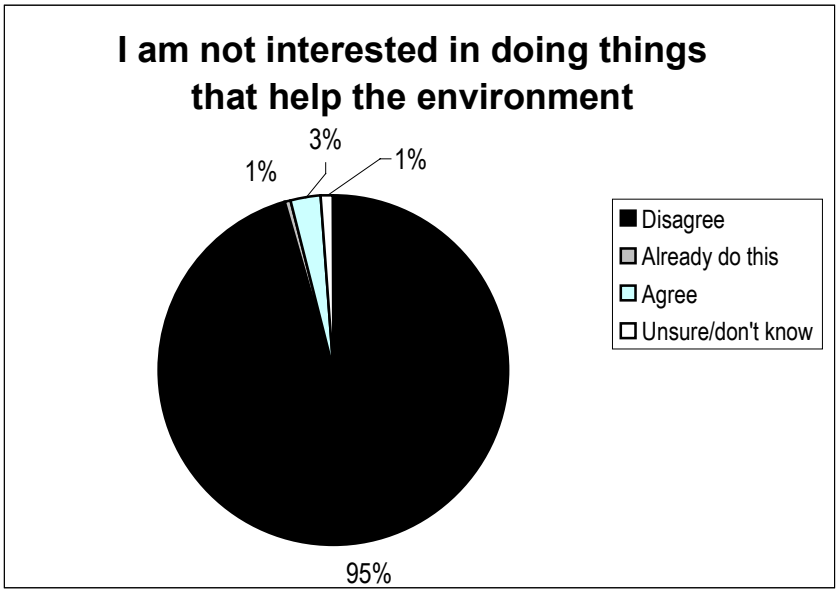


9.2.6 I Am Not Interested In Doing Things That Help The Environment

9.2.6.1 Overview Of Results

Most (95%) participants disagreed that they are not interested in doing things that help the environment and one percent (1%) said they already do this.

Three percent (3%) agreed that they are not interested in doing things that help the environment and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

9.2.6.2 Results By Demographic Characteristics

When these results were analysed demographically, those significantly more likely than the average regional resident to agree that they are not interested in doing things that help the environment were in:

- Refused to give ethnicity (90% confidence level).

There were no significant differences for those that disagreed.

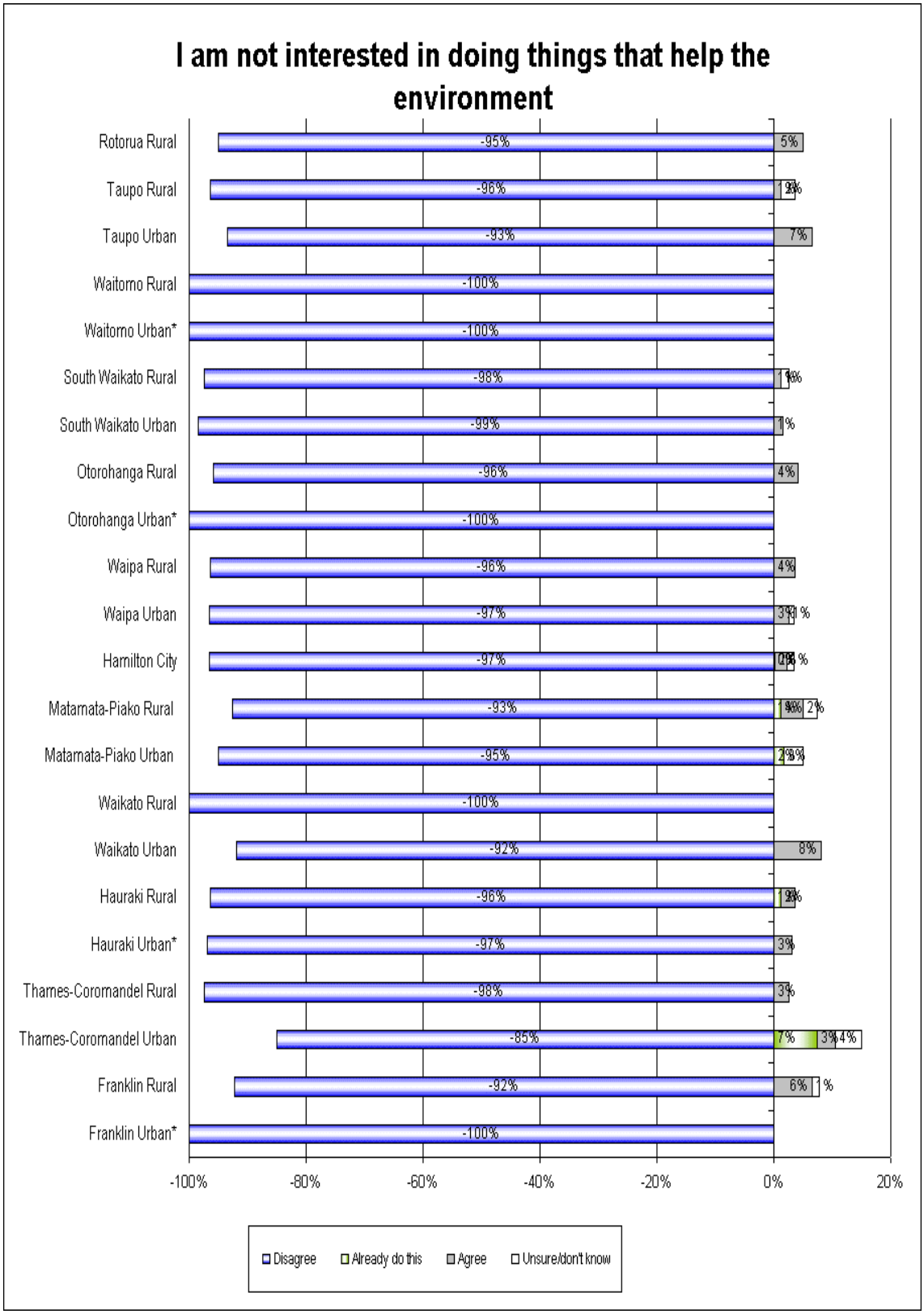
9.2.6.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that they are not interested in doing things that help the environment were in:

- Waikato Urban (90% confidence level)

Those significantly more likely than the average regional resident to disagree that they are not interested in doing things that help the environment were in:

- Matamata-Piako Urban (95% confidence level)

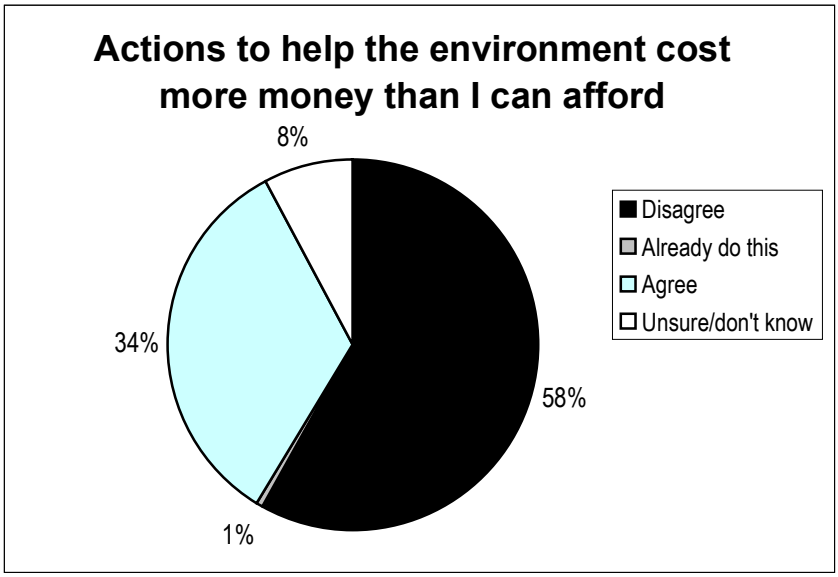


9.2.7 Actions To Help The Environment Cost More Money Than I Can Afford

9.2.7.1 Overview Of Results

Over half (58%) of participants disagreed that actions to help the environment cost more money than they can afford. One percent (1%) already do this.

One-third (34%) agreed that actions to help the environment cost more money than they can afford and eight percent (8%) were unsure.



**Graph shows percentage of weighted total*

9.2.7.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to agree that actions to help the environment cost more money than they can afford were:

- Aged 60+ (95% confidence level)
- Maori (95% confidence level)
- Earning under $30,000 (95% confidence level)
- Primary or Secondary school educated (95% confidence level)
- In unpaid occupations (95% confidence level)

Those significantly more likely than the average regional resident to disagree that actions to help the environment cost more money than they can afford were:

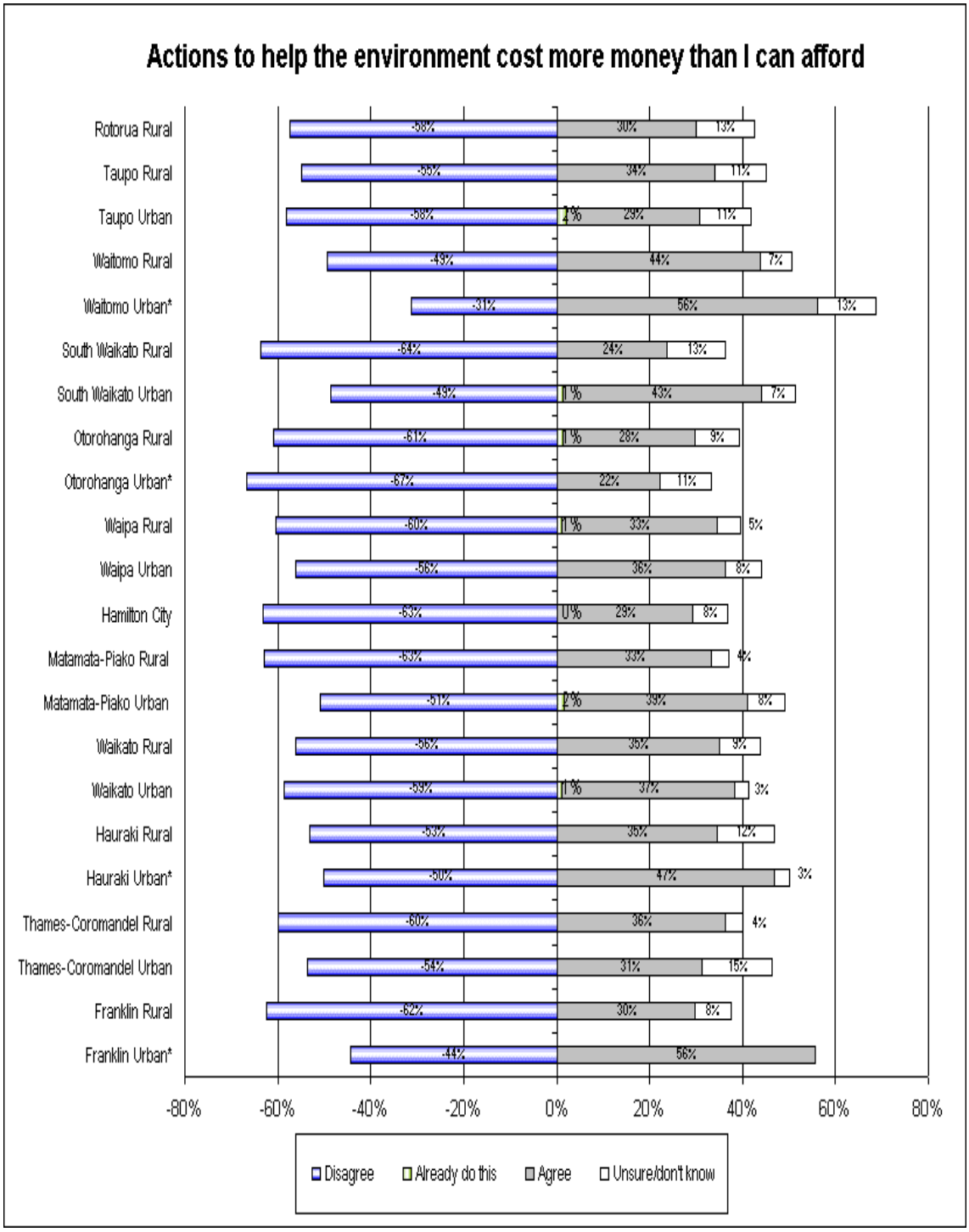
- Aged 20-29 (95% confidence level)
- Earning $60,000 and over (95% confidence level)
- Tertiary educated (95% confidence level)
- In non-farming occupations (95% confidence level)

9.2.7.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to agree that actions to help the environment cost more money than they can afford were in:

- Waitomo Urban (95 confidence level)
- Franklin Urban (90% confidence level)

There were no significant differences in the proportion who disagreed.



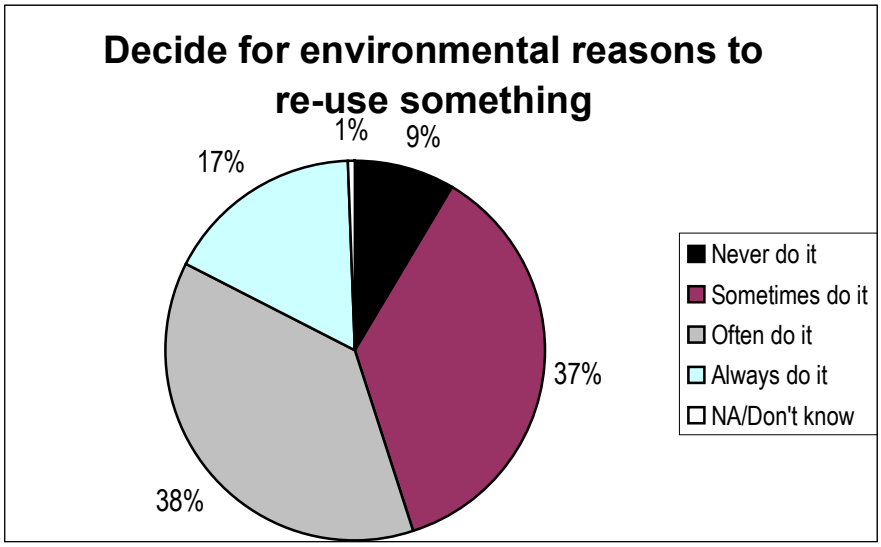
9.3 Reported Behaviour

9.3.1 Re-use For Environmental Reasons

9.3.1.1 Overview Of Results

Seventeen percent (17%) of participants said they always decide for environmental reasons to re-use something instead of throwing it away. Two-fifths (38%) said they often did.

Two-fifths (37%) said they sometimes decide for environmental reasons to re-use something instead of throwing it away and nine percent (9%) said they never do and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

9.3.1.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to report that they often decide for environmental reasons to re-use something instead of throwing it away were:

- Aged 50-59 (95% confidence level)

Those significantly more likely than the average regional resident to report that they less often decide for environmental reasons to re-use something instead of throwing it away were:

- Aged 20-29 (95% confidence level)
- Refused to give their ethnicity (95% confidence level)

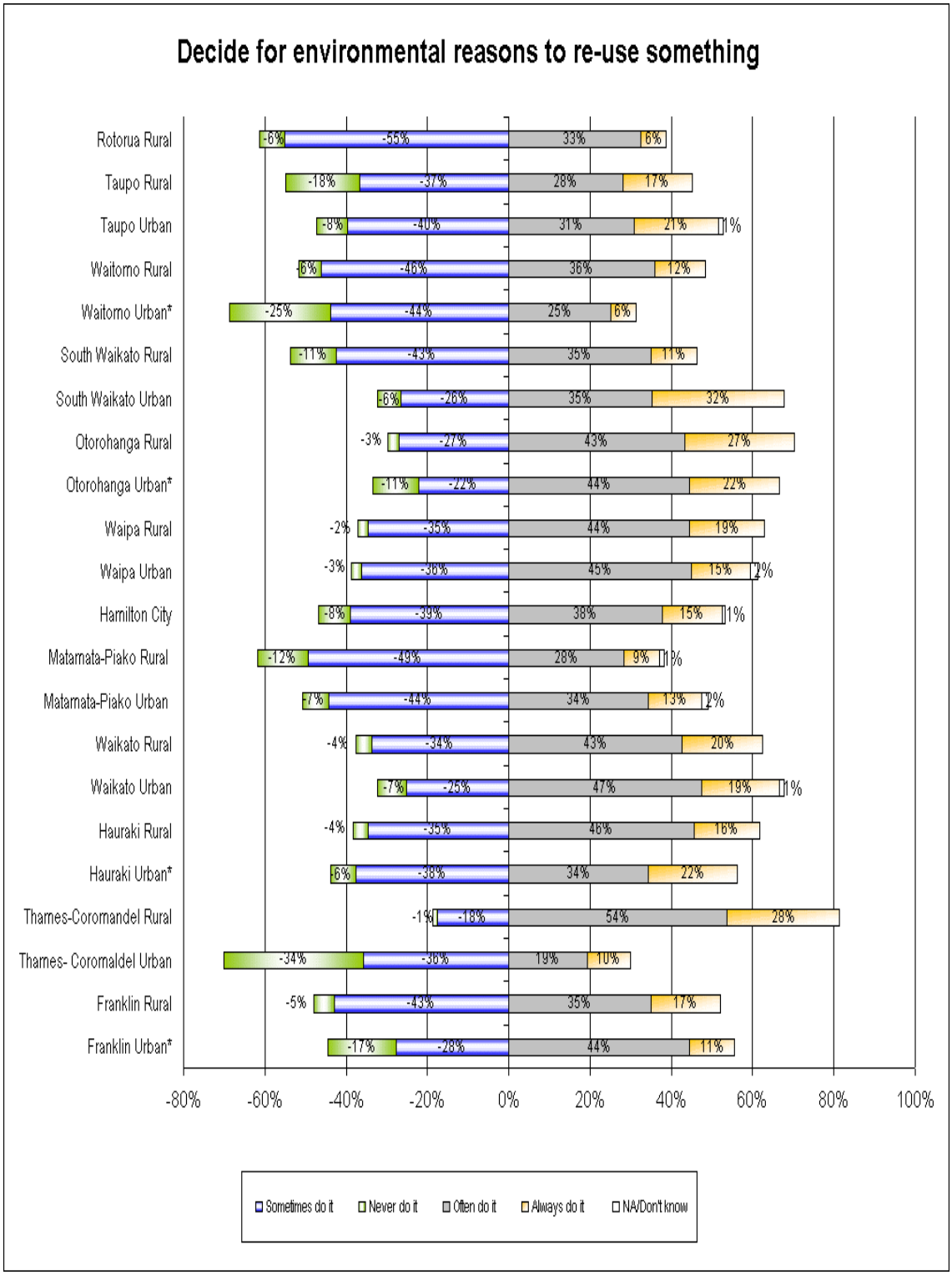
9.3.1.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often decide for environmental reasons to re-use something instead of throwing it away were in:

- Thames-Coromandel Rural (95% confidence level)
- South Waikato Urban (95% confidence level)
- Waikato Urban (90% confidence level)
- Otorohanga Rural (90% confidence level)

Those significantly more likely than the average regional resident to say they would less often decide for environmental reasons to re-use something instead of throwing it away were in:

- Thames-Coromandel Urban (95% confidence level)
- Matamata-Piako Rural (95% confidence level)
- Waitomo Urban (95% confidence level)

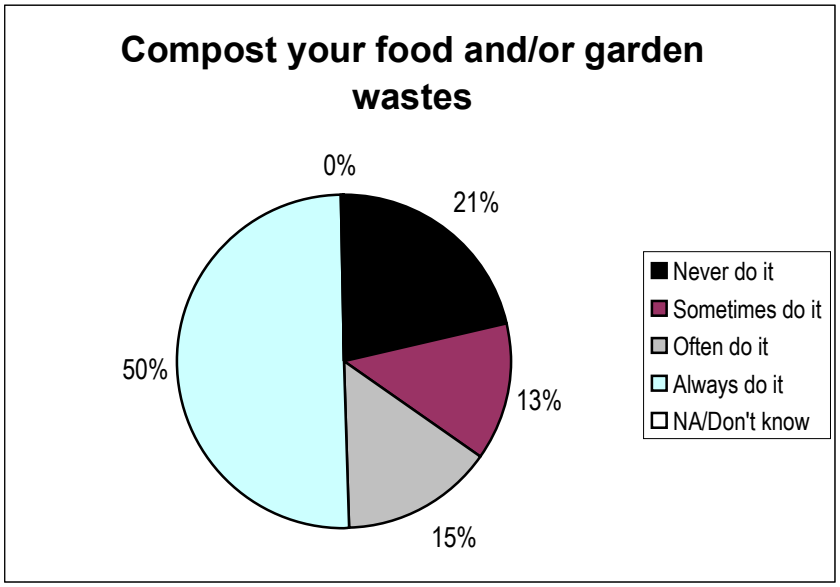


9.3.2 Compost Your Food And/Or Garden Wastes

9.3.2.1 Overview Of Results

Half (50%) of participants said they always compost their food and/or garden wastes. Fifteen percent (15%) said they often compost their food and/or garden wastes.

Thirteen percent (13%) said they sometimes compost their food and/or garden wastes and one-fifth (21%) said they never do.



**Graph shows percentage of weighted total*

9.3.2.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often compost their food and/or garden wastes were:

- Aged 60+ (90% confidence level)
- Rural (95% confidence level)

Those significantly more likely than the average regional resident to say that they less often compost their food and/or garden wastes were:

- Aged 20-29 (95% confidence level)
- Earning $60,000 and over (90% confidence level)

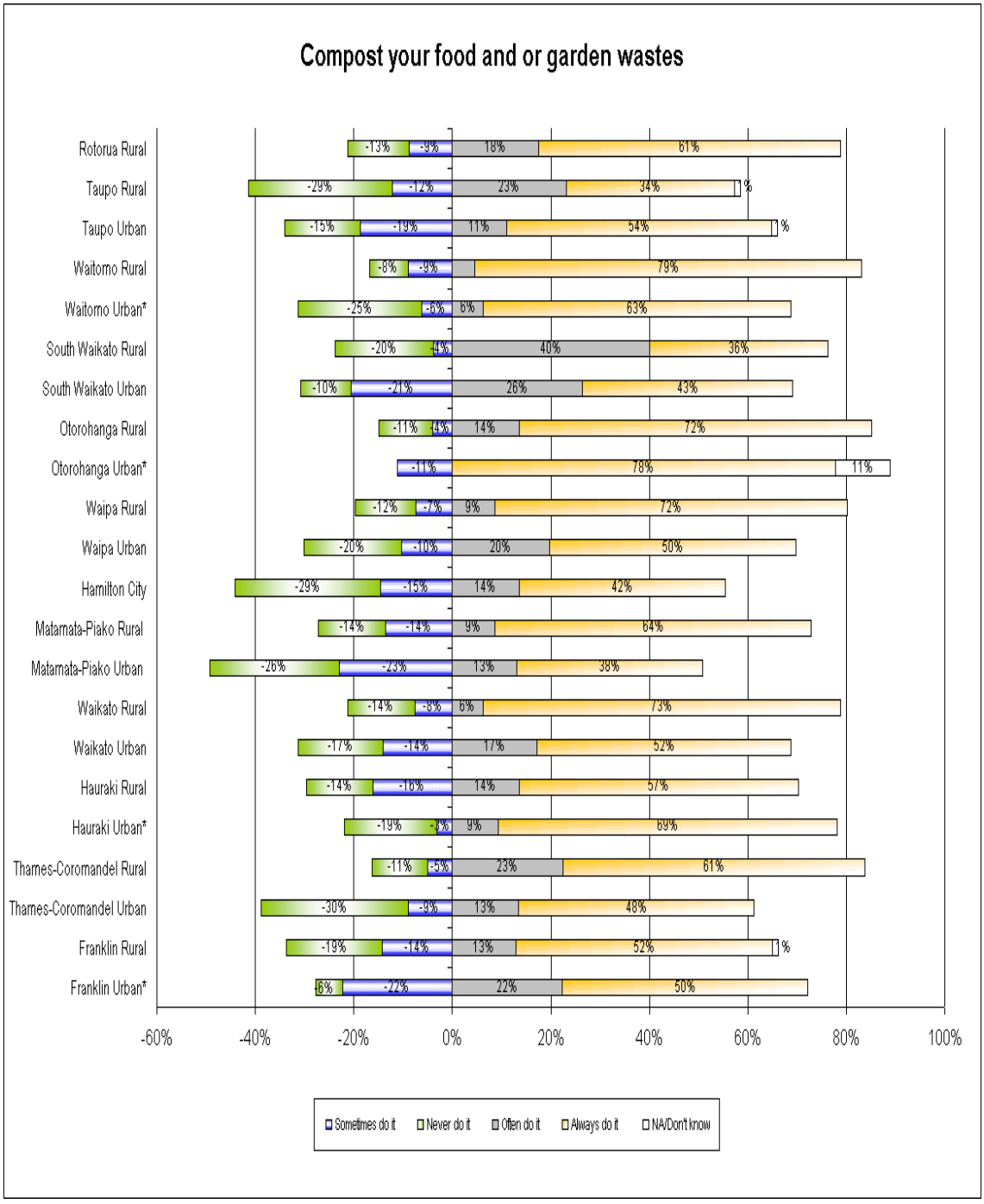
9.3.2.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often compost their food and/or garden wastes were in:

- Thames-Coromandel Rural (95% confidence level)
- Waikato Rural (95% confidence level)
- Waipa Rural (95% confidence level)
- Otorohanga Urban (95% confidence level)
- Otorohanga Rural (95% confidence level)
- Waitomo Rural (95% confidence level)
- Matamata-Piako Rural (90% confidence level)

Those significantly more likely than the average regional resident to say they would less often compost their food and/or garden wastes were in:

- Matamata-Piako Urban (95% confidence level)
- Hamilton Urban (95% confidence level)

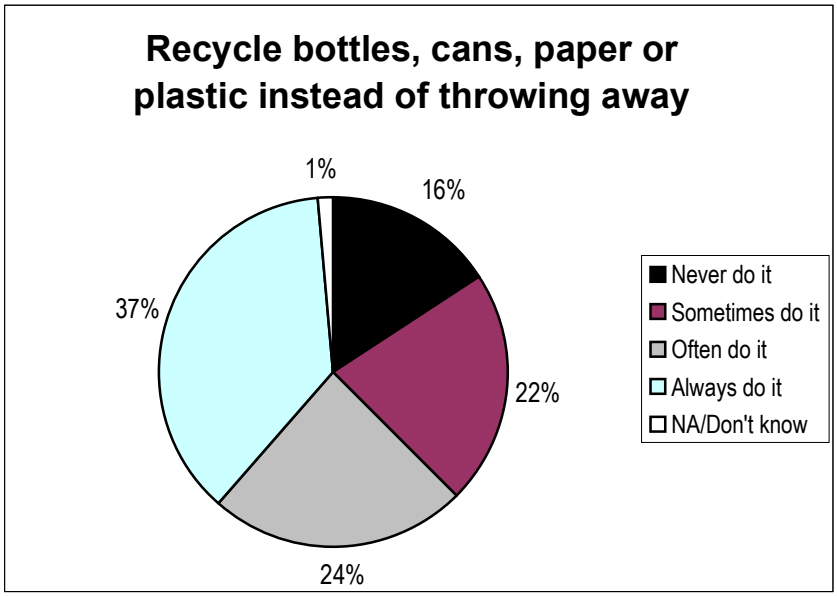


9.3.3 Recycle Bottles Or Cans Or Paper Or Plastic Instead Of Throwing Them Away

9.3.3.1 Overview Of Results

Almost two-fifths (37%) of participants said they always recycle bottles or cans or paper or plastic instead of throwing them away. One-quarter (24%) said they often recycle bottles or cans or paper or plastic instead of throwing them away.

One-fifth (22%) said they sometimes recycle bottles or cans or paper or plastic instead of throwing them away and sixteen percent (16%) said they never do and one percent (1%) were unsure.



**Graph shows percentage of weighted total*

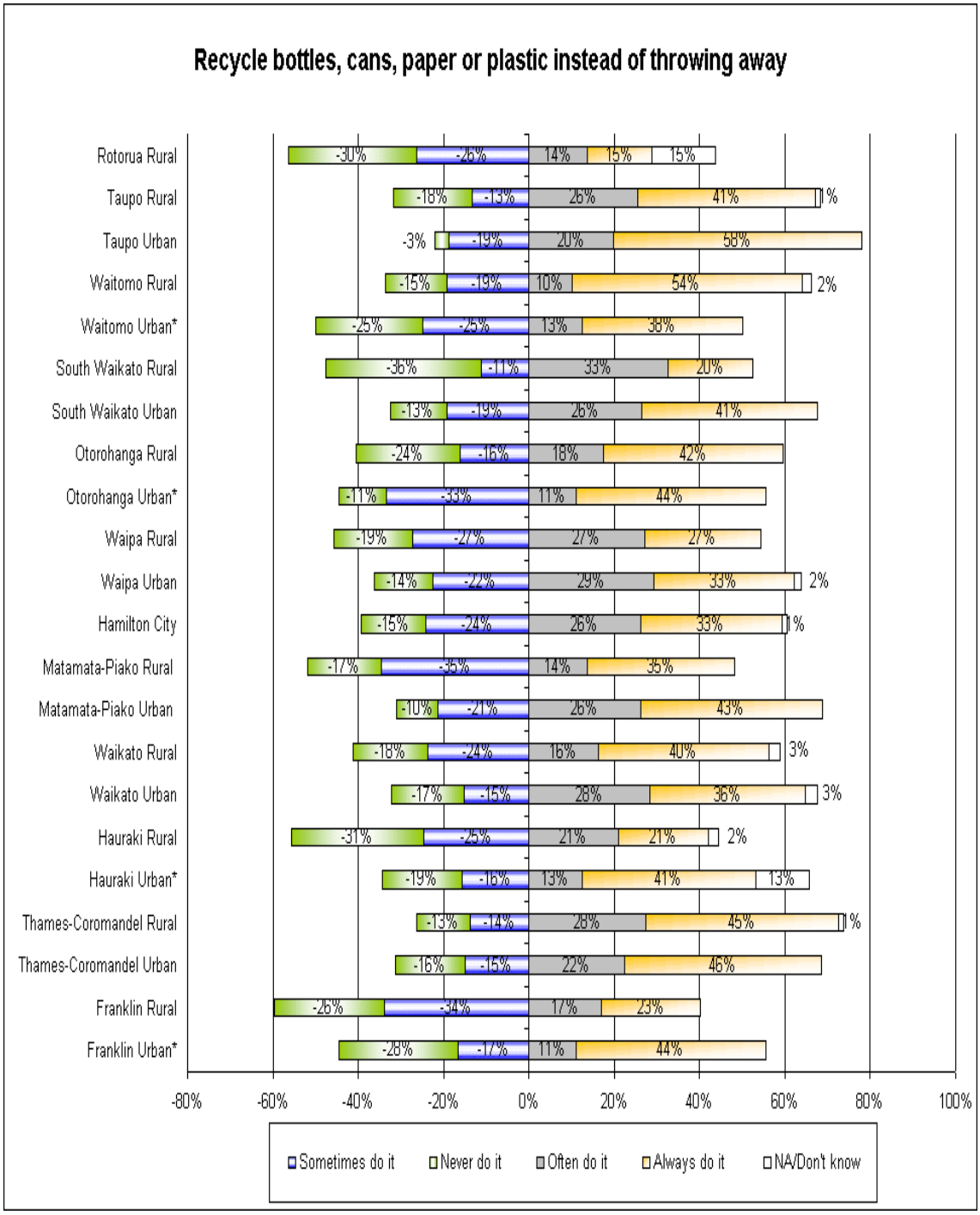
9.3.3.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often recycle bottles or cans or paper or plastic instead of throwing them away were:

- Aged 60+ (95% confidence level)

Those significantly more likely than the average regional resident to report that they less often recycle bottles or cans or paper or plastic instead of throwing them away were:

- Aged 20-29 (95% confidence level)
- Rural (95% confidence level)
- In farming occupations (95% confidence level)



9.3.3.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often recycle bottles or cans or paper or plastic instead of throwing them away were in:

- Taupo Urban (95% confidence level)

Those significantly more likely than the average regional resident to say they would less often recycle bottles or cans or paper or plastic instead of throwing them away were in:

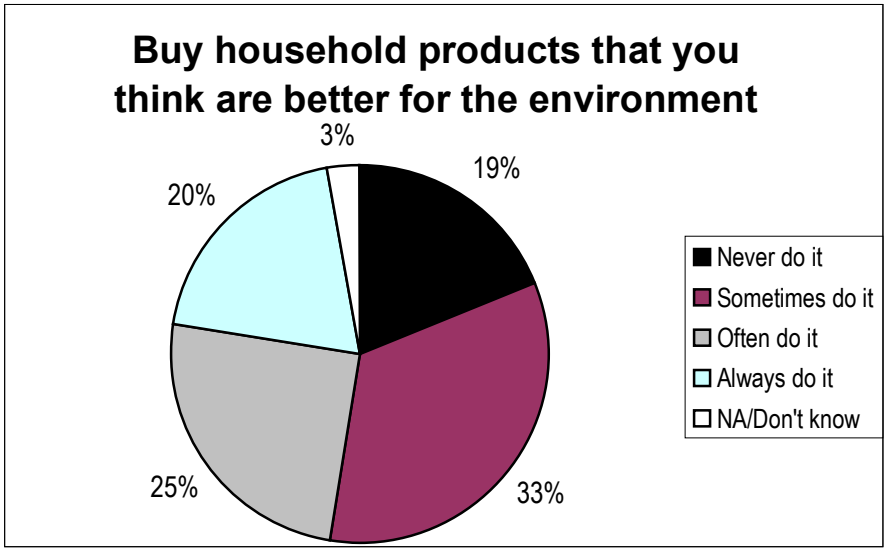
- Franklin Rural (95% confidence level)
- Hauraki Rural (95% confidence level)
- Rotorua Rural (95% confidence level)

9.3.4 Buy Household Products That You Think Are Better For The Environment

9.3.4.1 Overview Of Results

One-fifth (20%) of participants said they always buy household products that they think are better for the environment. One-quarter (25%) said they often buy household products that they think are better for the environment.

One-third (33%) said they sometimes buy household products that they think are better for the environment and one-fifth (19%) said they never do. Three percent (3%) were unsure.



**Graph shows percentage of weighted total*

9.3.4.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often buy household products that they think are better for the environment were:

- Female (95% confidence level)

Those significantly more likely than the average regional resident to say that they less often buy household products that they think are better for the environment were:

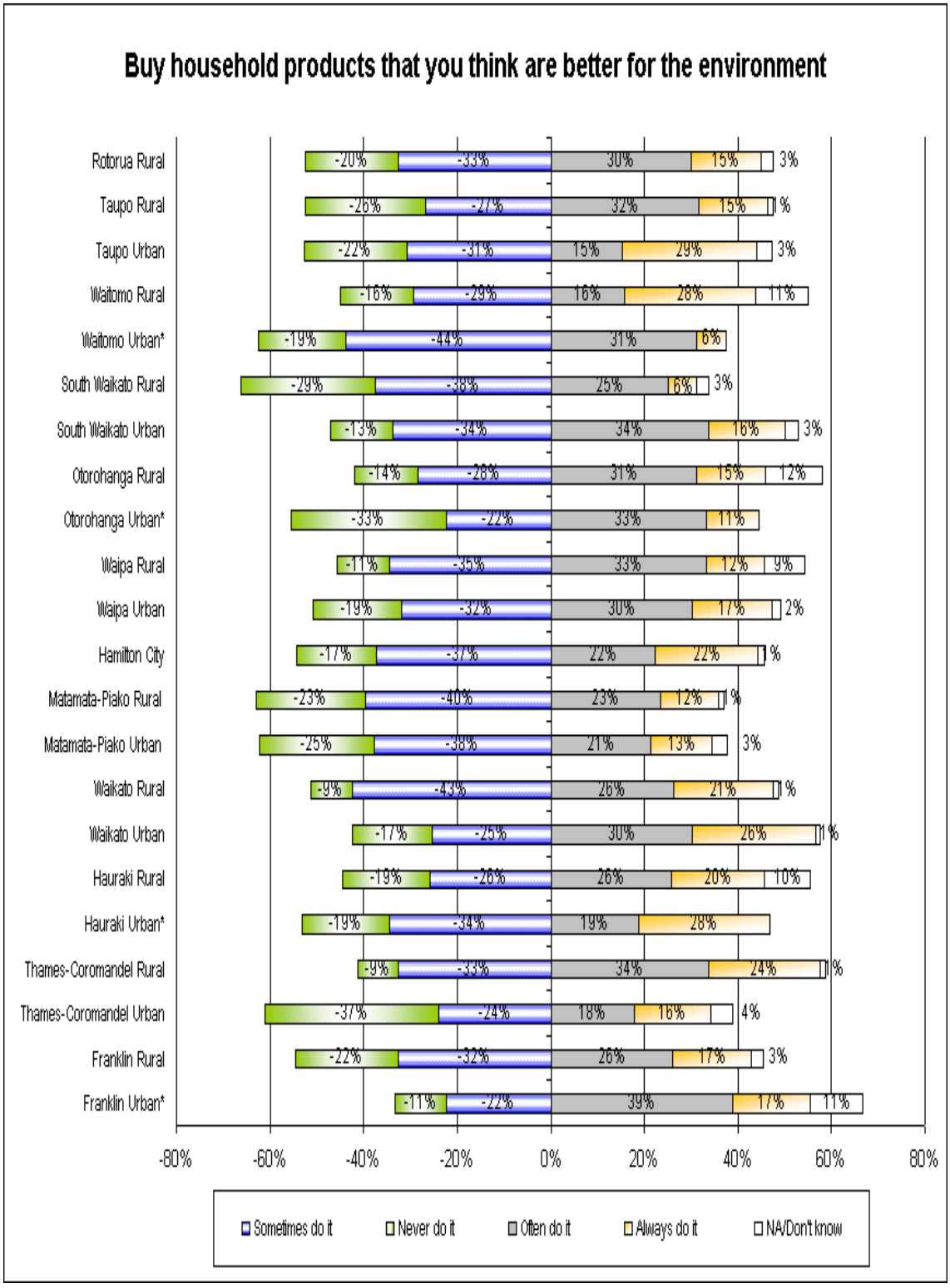
- Aged 18-19 (95% confidence level)
- Male (95% confidence level)
- Refused to give their ethnicity (95% confidence level)
- In farming occupations (95% confidence level)

9.3.4.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion to say they often buy household products that they think are better for the environment did not vary significantly.

Those significantly more likely than the average regional resident to say they would less often buy household products that they think are better for the environment were in:

- Thames-Coromandel Urban (95% confidence level)

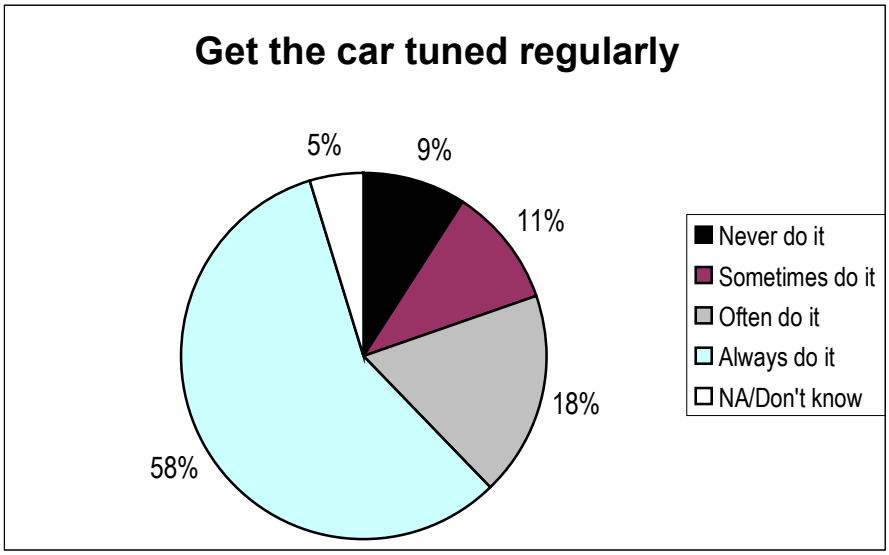


9.3.5 Get The Car Tuned Regularly

9.3.5.1 Overview Of Results

The majority (58%) of participants said they always get their car tuned regularly. One-fifth (18%) said they often get their car tuned regularly.

Eleven percent (11%) said they sometimes get their car tuned regularly and nine percent (9%) said they never do. Five percent (5%) were unsure.



**Graph shows percentage of weighted total*

9.3.5.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often get their car tuned regularly were:

- Aged 60+ (95% confidence level)
- Aged 40-49 (90% confidence level)
- Earning $60,000 and over (95% confidence level)

Those significantly more likely than the average regional resident to say that they less often get their car tuned regularly were:

- Aged 18-29 (95% confidence level)
- Earning under $30,000 (90% confidence level)

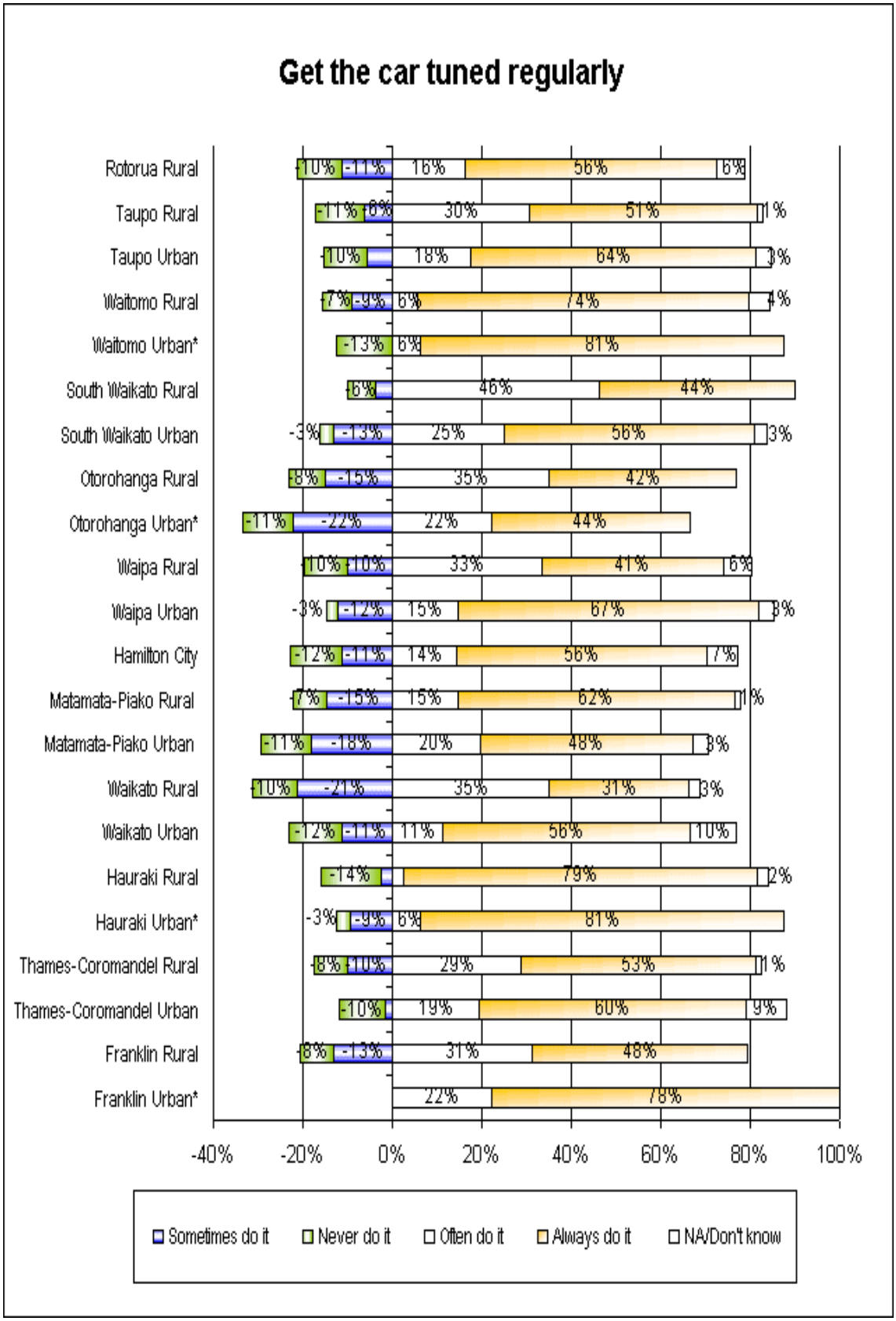
9.3.5.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often get their car tuned regularly were in:

- Franklin Urban (95% confidence level)
- Hauraki Urban (95% confidence level)
- Waipa Urban (95% confidence level)

Those significantly more likely than the average regional resident to say they would less often get their car tuned regularly were in:

- Waikato Rural (95% confidence level)

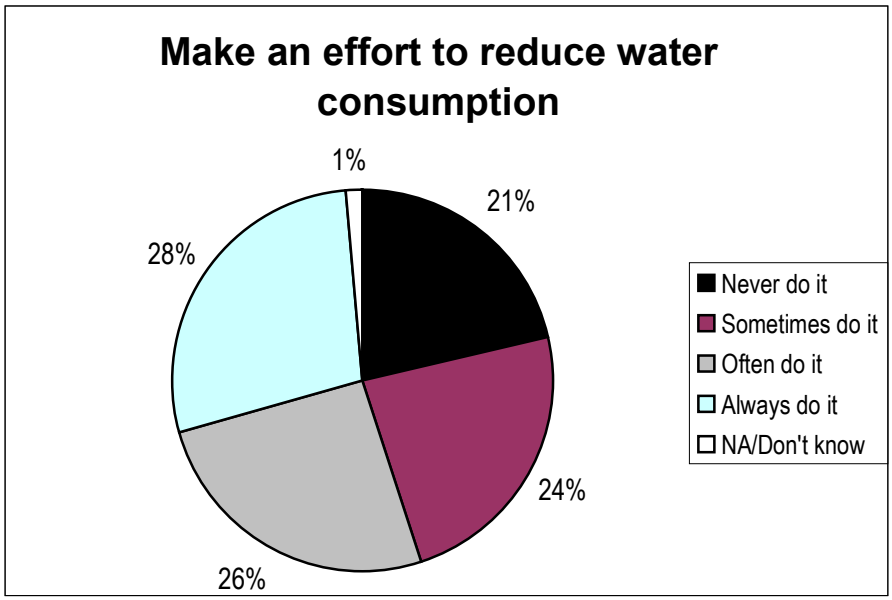


9.3.6 Make An Effort To Reduce Water Consumption

9.3.6.1 Overview Of Results

Twenty-eight percent (28%) of participants said they always make an effort to reduce water consumption. One-quarter (26%) said they often make an effort to reduce water consumption.

Almost as many (24%) said they sometimes make an effort to reduce water consumption and one-fifth (21%) said they never do. One percent (1%) were unsure.



**Graph shows percentage of weighted total*

9.3.6.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often make an effort to reduce water consumption were:

- Earning under $30,000 (90% confidence level)

Those significantly more likely than the average regional resident to say that they less often make an effort to reduce water consumption were:

- Aged 18-19 (95% confidence level)
- Earning $60,000 and over (95% confidence level)

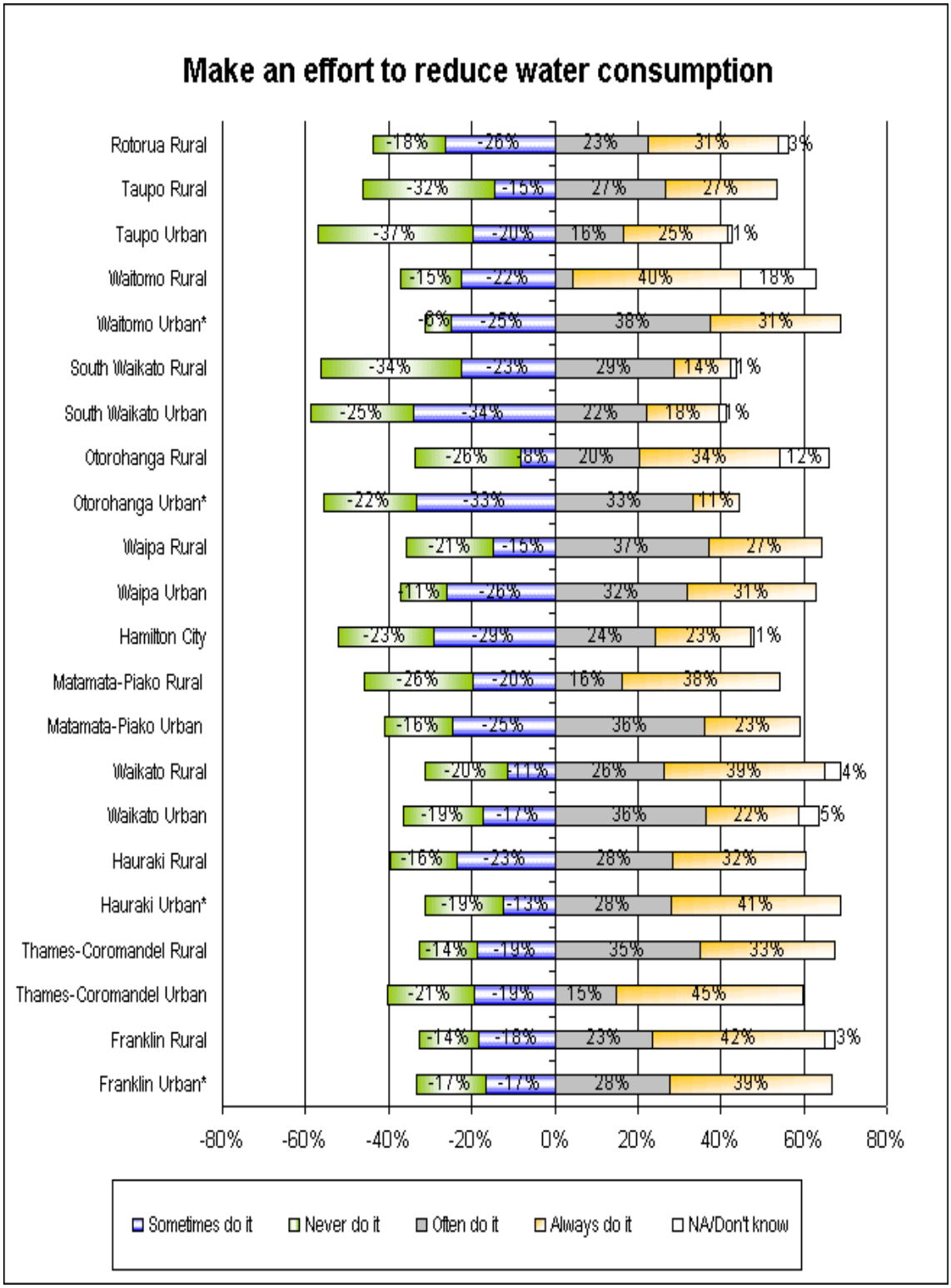
9.3.6.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often make an effort to reduce water consumption were in:

- Waipa Urban (95% confidence level)
- Franklin Rural (90% confidence level)

Those significantly more likely than the average regional resident to say they would less often make an effort to reduce water consumption were in:

- South Waikato Urban (95% confidence level)
- Taupo Urban (95% confidence level)

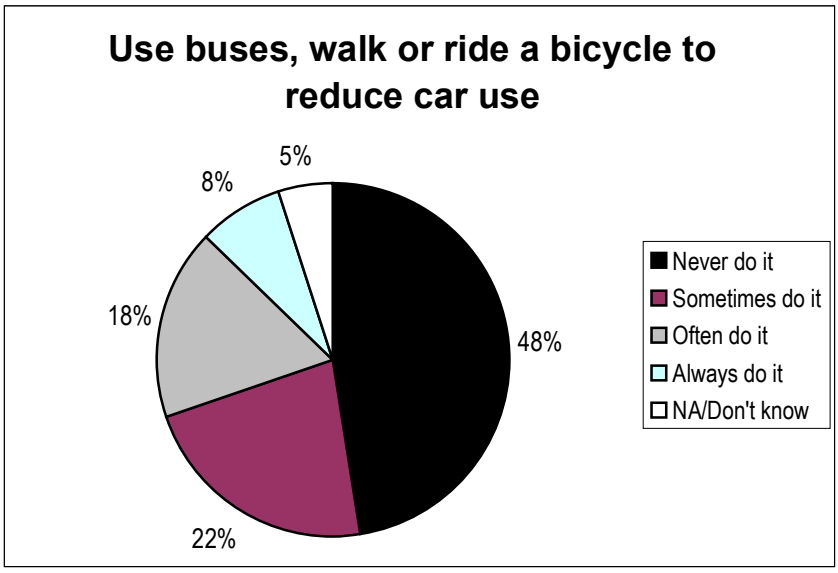


9.3.7 Use Buses, Walk Or Ride A Bicycle To Reduce Car Use

9.3.7.1 Overview Of Results

Eight percent (8%) of participants said they always use buses, walk or ride a bicycle to reduce car use. One-fifth (18%) said they often use buses, walk or ride a bicycle to reduce car use.

One-fifth (22%) said they sometimes use buses, walk or ride a bicycle to reduce car use and half (48%) said they never do. Five percent (5%) were unsure.



**Graph shows percentage of weighted total*

9.3.7.2 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to say that they often use buses, walk or ride a bicycle to reduce car use were:

- Aged 18-29 (95% confidence level)
- Female (90% confidence level)
- Urban (95% confidence level)
- Maori (95% confidence level)

Those significantly more likely than the average regional resident to say that they less often use buses, walk or ride a bicycle to reduce car use were:

- Aged 40-49 (95% confidence level)
- Male (95% confidence level)
- Rural (95% confidence level)
- Earning $60,000 and over (95% confidence level)
- In farming occupations (95% confidence level)
- Aged 60+ (90% confidence level)

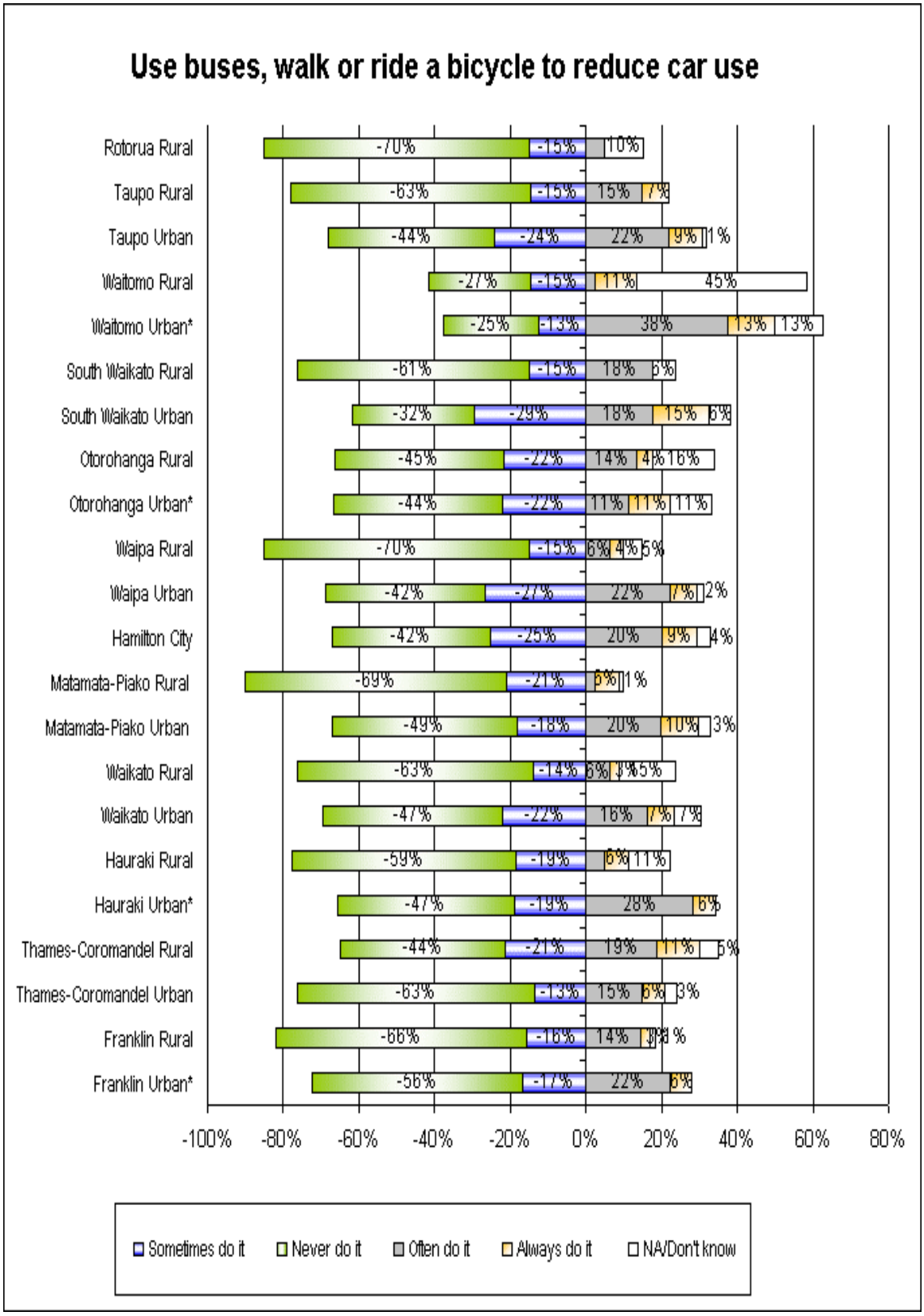
9.3.7.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to say they often use buses, walk or ride a bicycle to reduce car use were in:

- Waitomo Urban (95% confidence level)
- South Waikato Urban (95% confidence level)

Those significantly more likely than the average regional resident to say they would less often use buses, walk or ride a bicycle to reduce car use were in:

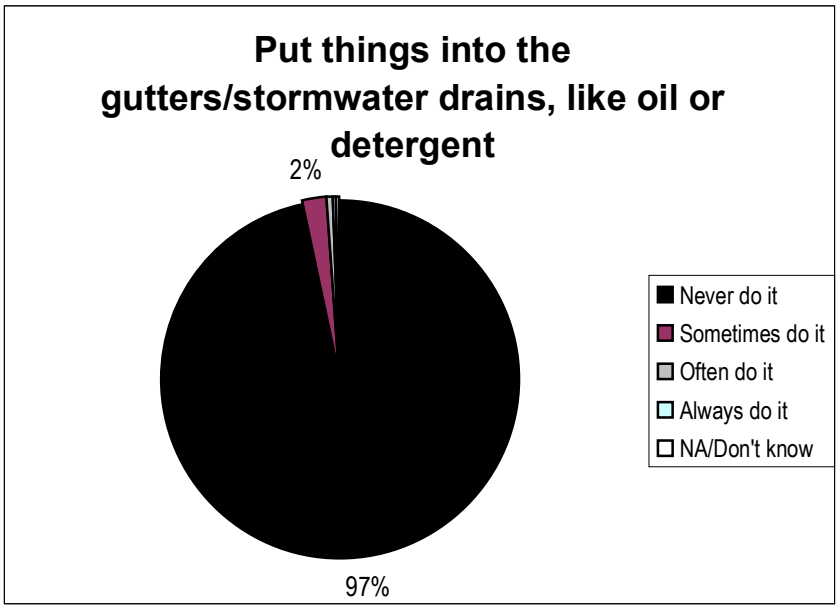
- Franklin Rural (95% confidence level)
- Waikato Rural (95% confidence level)
- Matamata-Piako Rural (95% confidence level)
- Waipa Rural (95% confidence level)
- Rotorua Rural (95% confidence level)
- Hauraki Rural (90% confidence level)



9.3.8 Put Things Into The Gutters Or Stormwater Drains, Like Oil Or Detergent

9.3.8.1 Overview Of Results

Almost all (97%) participants said they never put things into the gutters or stormwater drains, like oil or detergent. Two percent (2%) said they sometimes do.



**Graph shows percentage of weighted total*
May not equal 100% due to rounding

9.3.8.2 Results By Demographic Characteristics

When these results were analysed demographically the proportion to say that they often put things into the gutters or stormwater drains, like oil or detergent did not vary significantly.

Those significantly more likely than the average regional resident to say that they less often put things into the gutters or stormwater drains, like oil or detergent were:

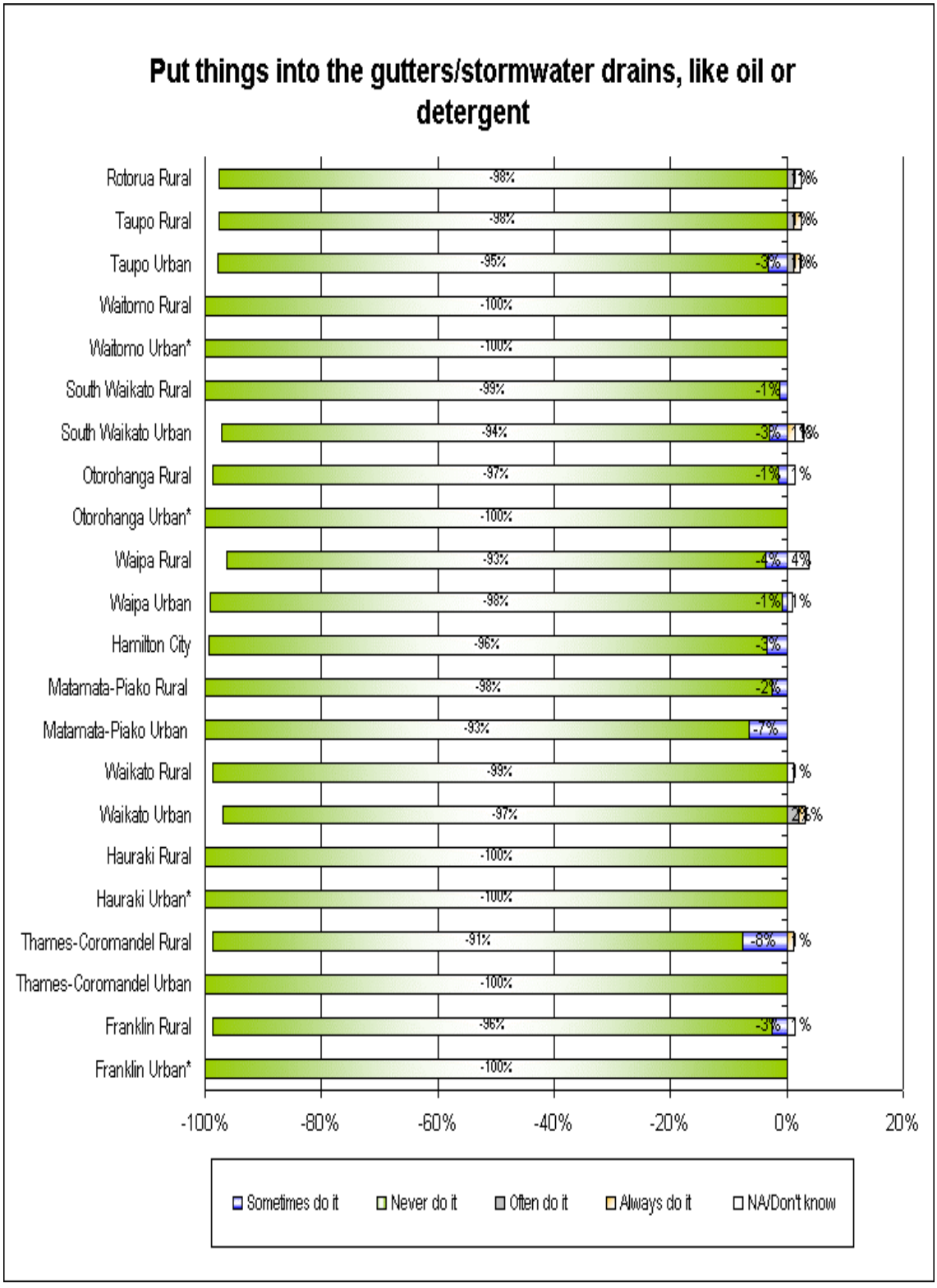
- Aged 60+ (90% confidence level)

9.3.8.3 Results By Area

When these results were analysed by urban and rural areas for each local authority, the proportion to say they often put things into the gutters or stormwater drains, like oil or detergent did not vary significantly.

Those more likely than the average regional resident to say they would less often put things into the gutters or stormwater drains, like oil or detergent were in:

- Waikato Rural (95% confidence level)



9.3.9 Additional Action Taken

9.3.9.1 Proportion Who Took Action

After being asked this series of questions about their environmental behaviours, participants were asked to describe anything else they had done to help the environment.

Almost two-fifths (37%) were able to describe actions they had taken. The remainder could not (63%).

9.3.9.2 Actions Described

Additional action taken to help the environment	1998	2000
Plants/trees planted	29%	33%
Rubbish/waste reduced or disposed of properly	43%	18%
Education and awareness	6%	17%
Chemical use reduced	20%	11%
Recycled	55%	10%
Pick up rubbish/clean up roads, beaches		10%
Animals killed	8%	7%
Joined a group/environmental	1%	5%
Weeds killed	15%	5%
Tidy/clean up property		5%
Bought 'green' products	10%	4%
Fence off native bush/waterways		3%
Compost heap	20%	3%
Don't light fires		3%
Don't smoke		3%
Good farming practices		3%
Car used less often	12%	2%
Water saved	16%	1%
Environmental beautification	2%	1%
Home heating issue/burn wood/double glaze	2%	1%
Electricity saved	13%	0%
Other		9%

One-third (33%) of those who had taken action to help the environment said they had planted trees, shrubs or other flora. One-fifth (18%) said they had taken care to dispose of waste effectively and almost as many (17%) said they had become more aware or taken up educational opportunities.

One-tenth of participants gave each of the following responses:

- Reduced use of chemicals (11%).
- Recycled (10%).
- Removed litter from public places (10%).

A wide range of other actions were described. The most common of these were:

- Killed animal pests (7%).
- Joined an environmental group (5%).
- Killed weeds (5%).
- Tidied or cleaned their property (5%).
- Purchased “green” products (4%).

The responses to this question are not directly comparable to those from the 1998 study, because it asked about life-style changes within the previous year, and the 2000 study asked about actions.

10 Satisfaction With Local Environment

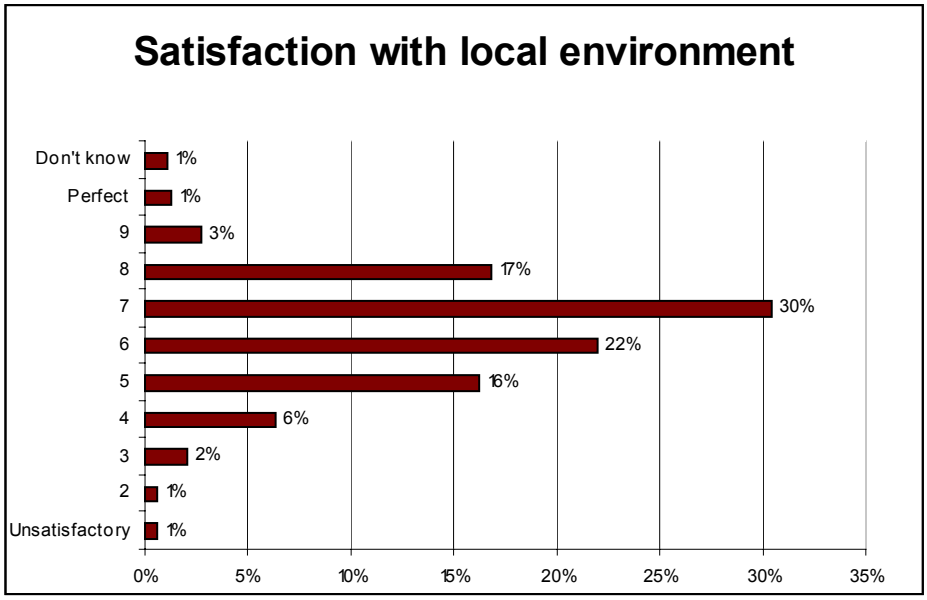
This question is used to check people’s overall ratings of where they live. For instance, people may have expressed concern that specific parts of their environment are deteriorating, but yet still consider that the environment they live in is of very high quality. Or they may consider that whilst their local environment is of very low quality, it is improving.

10.1.1.1 Overview Of Results

Toward the end of the interview participants were asked to rate their satisfaction with their local environment on a scale from one to ten, where one indicated “completely unsatisfactory” and ten indicated “perfect in every way”. The mean score was 6.42.

The most common responses were on or above the mid point:

- Seven (30%)
- Six (22%)
- Eight (17%)
- Five (16%)



One-tenth (10%) rated the environment below five, four percent (4%) rated it nine or ten and one percent (1%) said they were unable to answer.

10.1.1.2 Comparison to 1998 Study

When compared to the 1998 results there was almost no change in the rating of participants' overall satisfaction with their local environment. In 1998, the rating was 6.5 and in 2000 it was 6.42.

10.1.1.3 Results By Demographic Characteristics

When these results were analysed demographically those significantly more likely than the average regional resident to rate their score above the mean were:

- Aged 60+ (95% confidence level)
- Refused to give their ethnicity (90% confidence level)
- In farming occupations (90% confidence level)

Those significantly more likely than the average regional resident to rate their score below the mean were:

- Aged 30-39 (95% confidence level)
- Maori (95% confidence level)

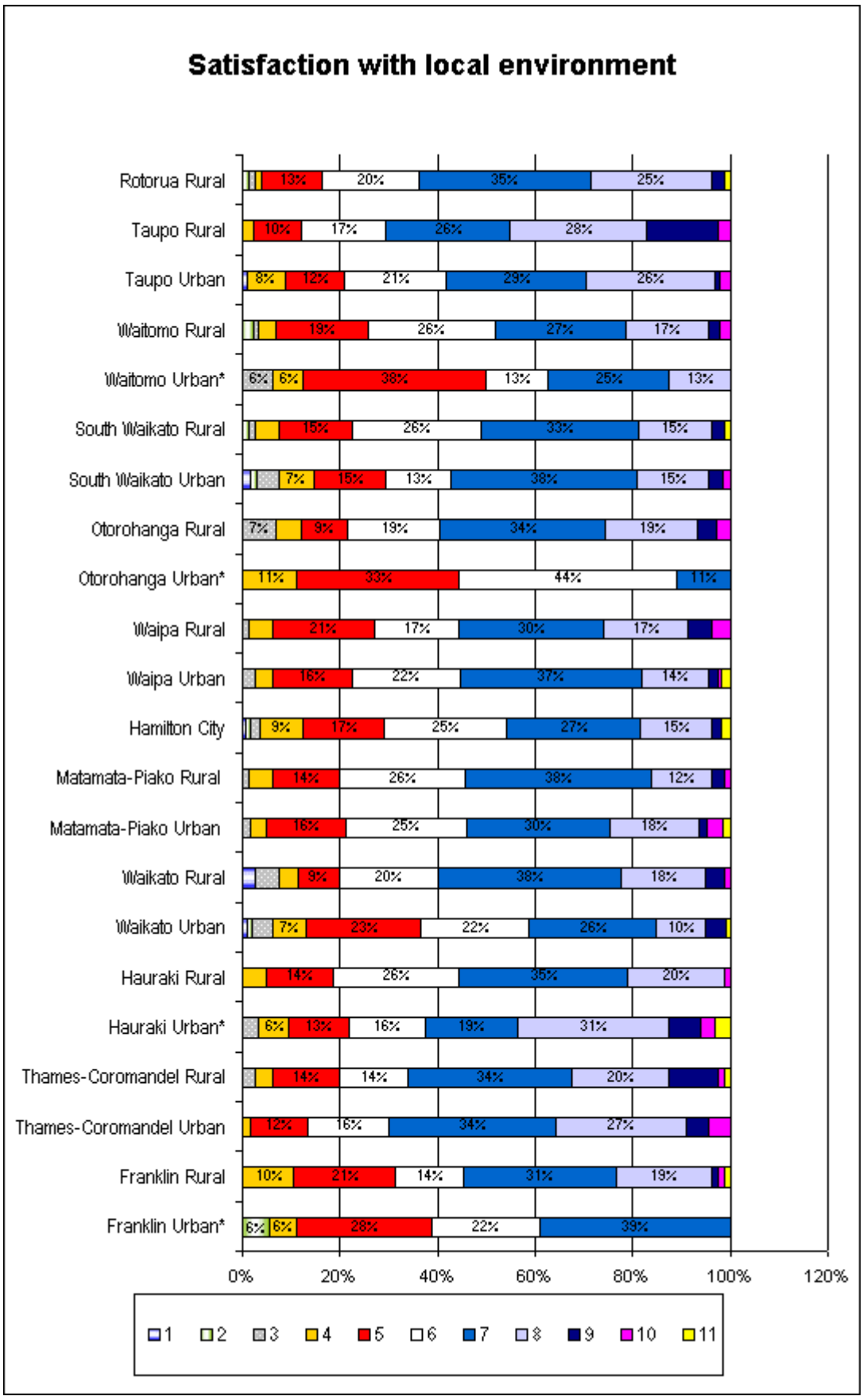
10.1.1.4 Results By Area

When these results were analysed by urban and rural areas for each local authority, those significantly more likely than the average regional resident to rate their score above the mean were in:

- Thames-Coromandel Urban (95% confidence level)
- Taupo Rural (95% confidence level)
- Hauraki Urban (90% confidence level)

Those significantly more likely than the average regional resident to rate their score below the mean were in:

- Waikato Urban (95% confidence level)
- Otorohanga Urban (95% confidence level)
- Franklin Rural (95% confidence level)



11 Advanced Analysis

11.1 Cluster Analysis

11.1.1 Description Of Method

Cluster analysis attempts to identify relatively homogenous groups of participants, based on selected characteristics. This is achieved using an algorithm that can handle large numbers of cases. This section summarises the outcome of cluster analysis using a K-Means clustering technique.

The aim was to produce five clusters. This number of clusters allows for clusters of a meaningful size. Other numbers of clusters were tested (4, 6, 7) but none of these produced groupings as useful as the 5-cluster solution. More clusters split the data too far and fewer result in poor discrimination.

An F-test was then applied to test the variance attributable to the cluster, versus that not attributable to the cluster and produced an F-ratio. A high F-ratio indicates that variables are important for separating the clusters. A low, single digit, F-ratio suggests the variable is a weak driver of cluster membership.

AnswerTree was used to analyse the differences between members of the five clusters. This is a system that creates classifications using chi-squared automatic interaction detector (CHAID), which identifies optimal splits in the data.

11.1.2 Clusters Determined

Environment Waikato requested the cluster analysis be based on questions 2a-c, 2e, 3, 10a, 11a-c, 11e, 18f and 19. When interpreting the outcomes of the cluster analysis it should be remembered that it is not usual to run clustering across such a wide range of questions. The results should be treated carefully and are indicative only. They provide a broad picture.

The K-Means cluster algorithm ran through 15 iterations to arrive at five clusters. This resulted in clusters which each had a reasonable share of the membership:

Number of Cases in each Cluster

		Unweighted	Weighted
Cluster	1	333.000	332.914
	2	629.000	590.246
	3	283.000	294.880
	4	233.000	247.826
	5	395.000	407.321
Valid		1873.000	1873.187
Missing		.000	.000

As the table below shows, many F-ratio's were robust, indicating that the variables are important for separating the clusters. Four were low (under 10), indicating these variables are weak drivers of cluster membership.

No.	Question	Cluster		Error		F	Sig.
		Mean Square	df	Mean Square	df		
2a	Water Quality in Streams etc	483.799	4	.767	1868	572.067	.000
2b	Level of Pollution or Waste	602.364	4	.817	1868	737.625	.000
2c	Availability of Recycling Services	265.922	4	1.079	1868	246.508	.000
3	Overall State of Local Environ.	73.661	4	.706	1868	104.378	.000
10a	Balance of Nature Easily Upset	7.649	4	.684	1868	11.176	.000
11a	Councils should enforce rules for Environment	.281	4	.198	1868	1.416	.226
11b	The Public Have Enough say	23.923	4	.976	1868	24.510	.000
11c	Landowners should be allowed to do what they like	2.923	4	.522	1868	5.597	.000
18f	Biological Controls are Acceptable To Me	1.891.	4	.590	1868	3.205	.012
19	Overall how satisfied with local environment?	478.834	4	1.316	1868	363.907	.000

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

The four key differentiators are:

1. Level of Pollution or Waste
2. Water Quality in Streams
3. Overall Satisfaction with Environment
4. Availability of Recycling Services

11.1.3 Cluster Characteristics

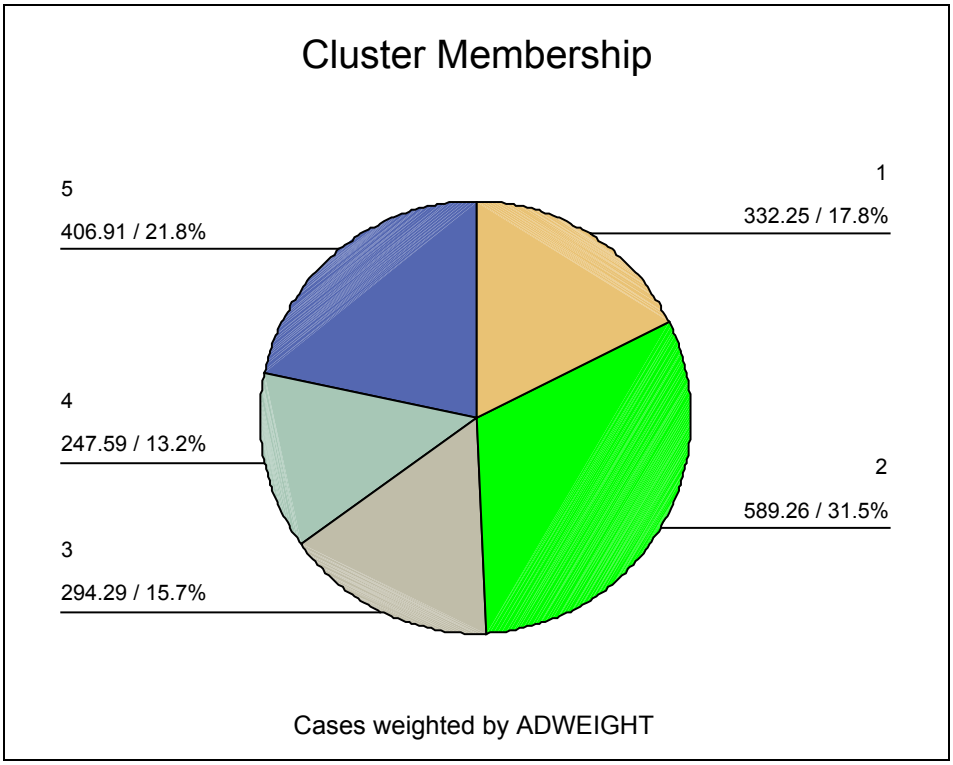
The cluster analysis splits people according to their perceptions and attitudes – so in order to get a better understanding of who these people are, clusters 1-5 are compared to each other in terms of other descriptors including demographics and geographic area.

To determine the key characteristics of the members of different clusters, cluster membership was analysed across several demographic variables – to compare mean scores.

Factor Analysis was used to run the demographic and geographic variables as factors to test the degree to which these may explain the characteristics of each cluster. For the most part geographic differences accounted for most of the differences, but it should be remembered that the geographic information – including 21 locations – provides more room for discrepancy than do the more binary factors such as gender and Maori/Non-Maori ethnicity. Factor Analysis provided a guideline however.

A more fruitful tool is AnswerTree, which applies a chi-squared analysis to compare the different clusters. The advantage of this tool is that it analyses several variables at once – so while age or gender or area may each individually have a 'nuance' effect on cluster membership, when combined we can see whether – for example males in age-group x living in area y are the archetypal members of Cluster z. AnswerTree provides a more narrative explanation.

11.1.4 Cluster Descriptions



11.1.4.1 Cluster One – "Middle Aged Rural Centred"

Approximately two-fifths (17.8%) of participants fall into Cluster One. Cluster One has been dubbed "Middle Aged - Rural Centred" because its participants are characterised by dwelling in rural areas or rural centres – but significantly less-so in Hamilton City. They are under-represented by those 60+, and strongly represented by those aged 30-39 and 50-59. Their incomes reflect this age-bracket while their occupations include no more or fewer farmers than the total mean for all respondents, but more non-farmers. There are fewer without any income. There is a slight over-representation of those with Maori ancestry.

Cluster 1		
Differentiating factors.	**Under-represented by:**	**Over-represented by:**
Geographic Skew	Hamilton Urban	Waikato Urban, Matamata-Piako Urban/Rural, South Waikato, Taupo Urban
Urban/Rural	Almost no Skew Compared to Mean for Total	Almost no Skew Compared to Mean for Total
Gender	Almost no Skew	Almost no Skew. Slight male bias.
Age	Significant Under-representation of 60+	Over-representation of 50-59s, 30-39s
Maori/Non Maori		Slightly higher Maori Representation
Education	No Skew Whatsoever Compared to Mean for Total	No Skew Whatsoever Compared to Mean for Total
Income	Slight Under-representation in the low income bracket	Strong in the middle income bracket
Occupation	Under-representation of Unpaid	Slight over-representation of Non-farming employed

11.1.4.2 Cluster Two – "Country Backboners".

One-third (31.5%) of participants fall into Cluster Two. Cluster Two has been dubbed Country Backboners because its participants tend to be older, rural dwellers and, by a slight margin, male. On the face of it, they are likely to be traditional farmers by outlook.

Cluster 2		
Differentiating factors.	**Under-represented by:**	**Over-represented by:**
Geographic Skew	Waikato Urban, Hamilton Urban,	Thames-Coromandel Urban, South Waikato Urban/Rural, Taupo Rural
Urban/Rural	71% Urban versus 73% for Total Mean	29% Rural versus 27% for Total Mean
Gender	47% female against Total Mean of 52%	53% male against Total Mean of 48%
Age	Under-representation amongst 30-39s	Over-representation of 60+
Maori/Non Maori	Low Maori Representation	High Non-Maori Representation
Education	No Skew Whatsoever Compared to Mean for Total	No Skew Whatsoever Compared to Mean for Total
Income	Slight Under-representation in the low income bracket	Strong in the middle income bracket
Occupation	Under-representation of Unpaid	Over-representation of Farming – at 10.4% the highest % within any cluster.

The Factor Analysis suggests that Cluster Two membership is influenced more heavily by income, age, and location as factors. District, by contrast, appears to account for comparatively little of the story.

Communalities[a]

	Initial	Extraction
Age Group	1.000	.652
Gender	1.000	.395
Town or Country	1.000	.625
Education	1.000	.453
PreTax Household Income	1.000	.658
Ethnicity	1.000	.581
ADMIN CODE	1.000	.261

Extraction Method: Principal Component Analysis.
[a] Only cases for which Env. Waikato. Cluster membership. = 2 are used in the analysis phase

11.1.4.3 Cluster Three – "Retirement Centred"

Almost sixteen percent (15.7%) of participants fall into Cluster Three. Cluster Three has been dubbed "Retirement Centred" because its participants are characterised by their relatively high age, their urban dwelling (highest of any cluster) and by low incomes and education levels that reflect lack of tertiary education (a characteristic of older people) and a high level of non-paid employment, (presumably Superannuation).

Cluster 3		
Differentiating factors.	**Under-represented by:**	**Over-represented by:**
Geographic Skew	Thames-Coromandel Urban, Waikato Rural, Waipa District, South Waikato, Waitomo, Taupo District, Rotorua District	Hamilton Urban (39%) Hauraki Urban, Matamata-Piako Urban/Rural, Taupo Urban
Urban/Rural	Only 22% Rural versus Total Mean 27%	78% Urban versus Total Mean 73%
Gender	Only 35% male versus Total Mean 48%	65% female versus Total Mean 52%
Age	Slight under-representation of 20-39 – 33% compared to 36% for Total.	Over -representation of 60+ 29% compared to 22% for Total.
Maori 20% /Non Maori 78%	Maori 19%. Very slight under-representation.	-
Education	Tertiary 33% v 43% for Total Mean	Primary School 4.5% vs 3.3% Total Mean. Secondary School 63% vs 54% Total mean.
Income	Under-representation in the middle income (38% v 40% Total) and high income bracket (19% versus 24% Total)	Very high representation in the low income bracket: 44% versus 36% Total Mean.
Occupation	Under-representation of Non-Farming. 51% versus 59% for Total.	Over-representation of Not-Paid: 40% versus 33% for Total.

Factor Analysis confirms that the more significant characteristics of Cluster Three are:

1. Income
2. Education
3. Age
4. Occupation

As with Cluster Two, district is a secondary driver of this cluster.

11.1.4.4 Cluster Four – "Middle of the Road – Independent Thinkers"

Thirteen percent (13.3%) of participants fall into Cluster Four. Cluster Four appears to be driven by the attitudes of its members, rather than by any over-riding demographic or geographic characteristics. On almost every variable, Cluster Four members reflect very closely the mean scores for the total survey respondent base. On this basis they are "Middle of the Roaders." They come from across the spectrum, and it is their attitudes that distinguish them.

Among their nuances as a group, they are slightly over-represented by Maori, by high income earners as well as those without paid employment.

Cluster 4		
Differentiating factors.	**Under-represented by:**	**Over-represented by:**
Geographic Skew	Hauraki Rural, Waikato Urban, Waitomo Rural, Thames-Coromandel Rural, Taupo Rural, South Waikato, Taupo Urban	Franklin Urban/Rural, Waikato Rural, Matamata-Piako Urban/Rural, Hamilton Urban, Waipa Urban, Otorohanga Urban, Waitomo District
Urban/Rural	Almost no Urban/Rural Skew compared to Total Mean	Almost no Urban/Rural Skew compared to Total Mean
Gender	46.4% male compared to 47.8% Total Mean	53.6% Female compared to 52.2% Total Mean
Age	Under-representation by 18-29 and 40-49s.	High representation by 50+
Maori/Non Maori	Under-representation by Non-Maori	Stronger representation by Maori 22.2% vs 19.6 Total mean
Education	No Skew	No Skew
Income	Under-representation by Middle Income Earners 32% versus 40% Total Mean	Over-representation by High Income Earners 31% versus 24% Total Mean
Occupation	Under-representation by Non-Farmers	Over-representation by Not-Paid

Factor analysis confirms that taken in concert, the above variables are not strong drivers of this cluster. Variance is explained primarily by Maori, occupation, income and by geographic location.

11.1.4.5 Cluster Five – "The Professionals"

Two-fifths (22%) of participants fall into Cluster Five. Cluster Five has been dubbed "The Professionals" because a strong characteristic of its participants is the presence of people with tertiary qualifications, aged in their 30s, non-farmers and on middle incomes. In general terms one can expect this group to have a more urban perception and attitude towards the environment – less pragmatic than that of the more rural clusters (especially Cluster Two). However, the propensity of this group to live in urban areas is only marginally higher than the Total Mean.

Cluster 5		
Differentiating factors.	**Under-represented by:**	**Over-represented by:**
Geographic Skew	Matamata-Piako Rural, Thames-Coromandel Urban, Hauraki Urban, Thames-Coromandel Rural, South Waikato, Taupo Urban/Rural, Rotorua District	Hamilton Urban, Waikato Urban, Franklin Urban, Otorohanga Urban,
Urban/Rural	Very marginally less rural.	Very marginally more urban than the Total mean – 74% compared to 73%.
Gender	Slightly Under-represented by females in general compared to Total Mean	Slight males skew though also over-represented by Urban females.
Age	Under-representation of 50+	Over-representation of 18-49s
Maori/Non Maori	Slightly under-represented by those with no Maori heritage. 75% versus 78% for Total Mean.	Slightly higher Maori Representation – 24% versus 20% Total Mean
Education	Under-represented by those with primary school or secondary school education only.	Stronger representation by those with tertiary qualifications – 49% versus 43% for the Total Mean.
Income	Slight Under-representation in the high income bracket	Slightly Stronger in the middle income bracket
Occupation	Under-representation of Not-Paid, and of those in Farming.	Over-representation of Non-farming employed 67% versus 59% for Total Mean.

A Factor Analysis suggests that Cluster 5 membership is influenced more heavily by occupation and by ethnicity (Maori/Non-Maori) – but this is relative. As with Cluster 4, the Cluster 5 membership can most be explained by what they think rather than

by their demographic attributes. All the above variables are relatively luke-warm drivers of Cluster 5 membership.

11.1.5 Commentary On Cluster Membership Analysis.

In the view of the research team, the cluster analysis has produced only moderately useful data. The core purpose of cluster analyses is to assist strategists to identify and visualise core groups with identifiable commonalties. Here, the clusters have been generated by attitudinal differences – and while the subsequent analysis has identified some underlying demographic and geographic differences between the five cluster groups, these are not strong differences. In essence, one could have next door neighbours of the same age, income, gender, ethnicity and income – and this would be no indication that they would belong to the same cluster group.

The cluster data – though it has been carefully generated, and analysed at great length using a variety of procedures – should be treated with some caution. The clusters – demographic and geographic-wise – represent shades of grey.

11.2 AnswerTree Analysis

11.2.1 Cluster Membership

AnswerTree was used to analyse membership of the five cluster groups. Geography emerged as the pivotal variable. Relatively strong memberships were in:

- Cluster one: Hauraki rural, Waikato urban, Waitomo rural, Waikato rural, Otorohanga urban, Waitomo urban and Rotorua.
- Cluster two: Thames-Coromandel urban and rural, Taupo rural, South Waikato urban and rural, Waikato rural and Rotorua.
- Cluster three: Hauraki urban, Matamata urban and rural, and Taupo urban.
- Cluster four: Franklin urban and rural, Waipa urban and Thames-Coromandel urban.
- Cluster five: Hauraki rural, Waikato urban and Waitomo rural.

A gender split was evident in the Hauraki urban, Matamata urban and Taupo urban areas, with males from these areas having relatively strong membership of cluster one and females having relatively strong membership of clusters two and three.

An age split was evident in Hamilton urban and Otorohanga rural with those aged under sixty having relatively strong membership of cluster five and those aged sixty and over having relatively strong membership of cluster three.

11.2.2 NEP Rating

AnswerTree was also used to analyse membership of the high, medium and low NEP groups. The demographic variable that emerged as most important is education. The higher the educational qualification, the stronger the membership of the high NEP group.

Other variables were also important. Age is linked to NEP membership. Those aged fifty and older tend to be less strongly represented in the high NEP group – which is perhaps reflective of their lower education levels. Among those who have secondary school education, rural people appear to be more strongly represented in the low NEP group. Among those aged sixty or older, those in the lower income category were more strongly represented in the low NEP group.

When geographic area was excluded and both demographic characteristics and cluster membership included, cluster membership proved to be an important variable, with age, occupation and gender also being significant:

- Cluster one participants tended toward the medium NEP category. Those with educational qualifications below tertiary level were strongly represented in the medium NEP category, while those with tertiary qualifications were strongly represented in the high NEP category.

- Clusters two, three and four participants tended to be strongly represented in the medium category, with people from these clusters who were in farming and non-paid occupations being more strongly represented in the low NEP category and those in other occupations being more strongly represented in the medium NEP category.

- Cluster five participants tended to be strongly represented in the high NEP category, with stronger membership of the high NEP category amongst the females from this cluster.

When geographic area and cluster membership were excluded from the AnswerTree and other demographic variables included, education emerged as the single most important determinant of NEP attitude:

- Those with primary school education were strongly represented in the low NEP category, those with secondary in the medium category and those with tertiary in the high NEP category.

- For those with secondary school level education, occupation is the next most important driver with stronger representation of farmers in the low category and non-farmers in the medium category.

- Gender was the next most important variable, with females from both farming and non-farming occupations being more strongly represented in higher NEP categories than their male counterparts.

11.2.3 Attitudes To Environmental Regulations Rating

AnswerTree was also used to analyse membership of the high, medium and low "attitudes to environmental regulations" groups. The demographic variable that emerged as most important is education. The higher the educational qualification, the stronger the membership of the high group.

Other variables were also important:

- Among those with secondary school education, rural people were more strongly represented in the low group.

- Among those with tertiary education, urban people were more strongly represented in the high group, with those from clusters one and five tending toward higher scores than those in clusters two, three and four.

- Rural people were more strongly represented in the low group, with low income rural people being more strongly represented in the low group and medium to high income rural people being more strongly represented in the high group.

11.2.4 Economy Versus Environment Rating

AnswerTree was also used to analyse membership of the high, medium and low "economy versus environment" groups. The demographic variable that emerged as most important is education. Those with tertiary education were more strongly

represented in the high group, while those with lower levels of education were more strongly represented in the low group.

Among those without tertiary level qualifications, those in paid employment were more highly represented in the medium and high groups. This group was further split to reveal significant differences between those in clusters one, three and five who were more strongly represented in the high group and clusters two and four that were more strongly represented in the low group.

Those not in paid employment were more highly represented in the low group, with unpaid rural people more strongly represented in the low group than unpaid urban people.

When geographic area and cluster membership were excluded from the AnswerTree, education emerged as the single most determinant of "economy versus environment" group:

- Those with tertiary education were more strongly represented in the high group while those with lower qualifications were more strongly represented in the low group.

- Among those with tertiary education, income became the next level determinant, with more of those in the medium and high income categories in the high group, with more non-Maori than Maori in this group having a high rating.

- Among those without tertiary education, more of those in paid employment were in the high group and more of those in unpaid employment were in the low group. Unpaid rural people were more strongly represented in the low group than unpaid urban people who had comparatively high representation in the urban group.

11.3 Multivariate Analysis

11.3.1 Methodology

Multivariate Analysis explores the relationships across different variables. There are limitless statistical techniques available – and while the project brief outlined which variables are to be explored (Q12-17, Q18e, Demographic Questions 20-28) the objectives of the exercise are to explore which people are most or least likely to perform pro-environmental behaviours, and who is most likely to have "barriers" to positive environmental behaviour.

A variety of procedures were used to explore the relationships and patterns in the data including:

- Cross-tabulations of mean scores.
- Error-bar graphs to test for significance at 95%.
- Correlation tests to indicate relationships between variables.
- AnswerTree analysis.
- One-way Analysis of Variance (ANOVA) at 95% confidence level.

- The Cross-tabulations and mean scores, as well as AnswerTrees, 95% Error-Bar charts and descriptive and confidence-interval data from the ANOVA analysis are incorporated in the document entitled "Key Data". This section summarises the ANOVA analysis.

11.3.2 Protecting The Environment

11.3.2.1 Took Action To Protect The Environment

ANOVA analysis at the 95% confidence level revealed that:

- People with higher education are more likely to have tried to get information or advice, or been involved in some kind of public meeting, official hearings or consent process with the aim of protecting the environment.

- More non-farmers had tried to get information or advice, or been involved in some kind of public meeting, official hearings or consent process with the aim of protecting the environment.

- More higher-income people had tried to get information or advice, or been involved in some kind of public meeting, official hearings or consent process with the aim of protecting the environment.

11.3.3 Barriers To Protecting Environment

11.3.3.1 Recycle More If Convenient Recycling Facilities Available

ANOVA analysis at the 95% confidence level revealed that:

- People with higher education were more likely to say they would recycle more if there were convenient recycling facilities available or that they already recycle.

- Older people were more likely to say they would recycle more if there were convenient recycling facilities available or that they already recycle.

- Among those who already recycle there was higher than expected membership from cluster numbers 4 or 5.

11.3.3.2 Dispose Of Things Properly If Knew Where To Take Them

ANOVA analysis at the 95% confidence level revealed that:

- More Non-Maori said they would dispose of things properly if they knew where to take them, or already did.

- Older people were more likely to say they would dispose of things properly if they knew where to take them, or already did.

11.3.3.3 Not Convinced Products Claiming To Better For The Environment Are

ANOVA analysis, at the 95% confidence level revealed that those who were not convinced that products that claim to be better for the environment actually are display no significant differences in demographic group membership from those who disagree.

11.3.3.4 Would Use Public Transport Instead Of Car If It Were Available And Convenient

ANOVA analysis at the 95% confidence level revealed that:

- More non-farmers already use public transport instead of their car if it is available and convenient.

- More non-Maori say they would not use public transport instead of their car if it were available and convenient.

- Significantly more females say they would not use public transport instead of their car if it were available and convenient.

- Fewer higher-income people already use public transport instead of their car if it is available and convenient and there are more higher-income people amongst those who said they would not use public transport instead of their car if it were available and convenient.

11.3.3.5 Lack Of Time Prevents Me From Doing Things That Help The Environment

ANOVA analysis at the 95% confidence level revealed that:

- More younger people agree that lack of time prevents them from doing more to help the environment, while more older people disagree.

- Those who said they already do as much as they can, and are not prevented by time, earn significantly less than the total mean.

11.3.3.6 I Am Not Interested In Doing Things That Help The Environment

ANOVA analysis at the 95% confidence level revealed that:

- Those who agree that they are not interested in doing things that help the environment have a significantly lower level of education.

- Older people were more likely to agree that they are not interested in doing things that help the environment.

- More females agree that they are not interested in doing things that help the environment.

- Those who responded that they “Already Do” are significantly more likely to be male.

11.3.4 Reported Behaviour

11.3.4.1 Re-use For Environmental Reasons

ANOVA analysis at the 95% confidence level revealed that:

- People who never decide for environmental reasons to re-use something themselves instead of throwing it away are likely to be younger.

- People who always decide for environmental reasons to re-use something themselves instead of throwing it away are likely to be older.

- Those who always decide for environmental reasons to re-use something themselves instead of throwing it away have a significantly lower income.

11.3.4.2 Compost Your Food And/Or Garden Wastes

ANOVA analysis at the 95% confidence level revealed that those who never compost their food and / or garden wastes are significantly younger.

11.3.4.3 Recycle Bottles Or Cans Or Paper Or Plastic Instead Of Throwing Them Away

ANOVA analysis at the 95% confidence level revealed that those who sometimes recycle bottles or cans or paper or plastic instead of throwing them away are younger. Those who always do it are significantly older.

11.3.4.4 Buy Household Products That You Think Are Better For The Environment

ANOVA analysis at the 95% confidence level revealed that those who never buy household products that they think are better for the environment are younger. Those who always do it are older.

11.3.4.5 Get The Car Tuned Regularly

ANOVA analysis at the 95% confidence level revealed that:

- Those who never or sometimes get the car tuned regularly are younger. Those who always do it are older.

- Those who never get the car tuned regularly are on lower incomes.

11.3.4.6 Make An Effort To Reduce Water Consumption

ANOVA analysis at the 95% confidence level revealed that:

- Those who sometimes make an effort to reduce water consumption are younger. Those who always do it are older.

- Those who never make an effort to reduce water consumption are on higher incomes.

11.3.4.7 Use Buses, Walk Or Ride A Bicycle To Reduce Car Use

ANOVA analysis at the 95% confidence level revealed that:

- Those who often use buses, walk or ride a bicycle to reduce car use are less likely to be farmers.

- Those who never use buses, walk or ride a bicycle to reduce car use are more likely to be Non-Maori. Those who always do it are more likely to have Maori ancestry.

- Those who Never Do It are older. Those who Always Do It are younger.

- Those who never use buses, walk or ride a bicycle to reduce car use are more likely to be male. Those who always do it are more likely to be female.

- Those who always use buses, walk or ride a bicycle to reduce car use are on lower incomes.

11.3.4.8 Put Things Into The Gutters Or Stormwater Drains Like Oil Or Detergent

Of the 1873 respondents, 1806 said they never put things into the gutters or stormwater drains like oil or detergent. Because of this, there are no differences between respondent groups significant at 95% confidence.

11.3.5 Balancing Environmental And Economic Interests

11.3.5.1 Government Restrictions On The Use Of Private Property Are Necessary

ANOVA analysis at the 95% confidence level revealed that:

When asked whether they believed that government restrictions on the use of private property are necessary, those who answered “depends” were more likely to be farmers.

- Those who did not know were more likely to be Non-Farmers.

- Those who said it depends were likely to be older.

- Those who disagreed that Government restrictions on the use of private property are necessary were more likely to be male.

11.3.5.2 A Healthy Environment Is Necessary For A Healthy Economy

ANOVA analysis at the 95% confidence level revealed that:

- Those who disagreed that a healthy environment is necessary for a healthy economy were more likely to have a higher education.

- Those who disagreed that a healthy environment is necessary for a healthy economy were more likely to be male.

11.3.5.3 Okay To Sacrifice Environmental Quality For Economic Growth

ANOVA analysis at the 95% confidence level revealed that:

- Those who agree that it is okay to sacrifice environmental quality for economic growth tend to have a lower educational level.

- Those who agree that it is okay to sacrifice environmental quality for economic growth tend more to be non-Farmers.

- Those who say it depends that it is okay to sacrifice environmental quality for economic growth tend to be older.

- Those who say it depends that it is okay to sacrifice environmental quality for economic growth are more likely to be male.

- Those who agree that it is okay to sacrifice environmental quality for economic growth tend to have a lower income.

11.3.5.4 Environmental Protection And Economic Development Can Go Hand In Hand

ANOVA analysis at the 95% confidence level revealed that:

- Those disagree or say it depends when asked if environmental protection and economic development can go hand in hand tend to have a lower educational level.

- Those who say it depends tend to have a lower income level.

11.3.5.5 There Is A Lot I, As An Individual, Can Do To Protect The Environment

ANOVA analysis at the 95% confidence level revealed that:

- Those who disagree that there is a lot they, as individuals, can do to protect the environment tend to be non-Farmers.

- Those who disagree that there is a lot they, as individuals, can do to protect the environment tend to be older.

- Those who disagree or say depends tend to have lower incomes. Those who agree have higher incomes.

11.3.5.6 Use Of Biological Controls Is Acceptable To Me

ANOVA analysis at the 95% confidence level revealed that those who disagree that use of biological controls is acceptable to me that tend to be younger.

12 Appendix One: Questionnaire

(Greeting) it's (name) speaking on behalf of Environment Waikato and Key Research. I'm doing an important interview about the environment. When you take part you are entered in a prize draw to win a weekend away for two. Would you mind helping me with this? (*If necessary*: My questions will take around 15 minutes depending on your answers. Is now convenient (or when could I call back)?). Before we begin may I just check that you are 18 years of age or over?

Q1 Can you tell me which District you live in? (Circle one only - If necessary: ask for nearest town and identify District using your map) (READ if necessary)

01 Franklin
02 Thames-Coromandel
03 Hauraki
04 Waikato
05 Hamilton
06 Matamata-Piako
07 Waipa
08 South Waikato
09 Otorohanga
10 Waitomo
11 Rotorua
12 Taupo

Q2 I'm going to read a list of environmental issues. Please say whether you feel each of these has become better, become worse or stayed the same? [INTERVIEWER PROMPT: Would that be much (better/worse) or a little (better/worse).]

		Much worse	A little worse	Stayed the same	A little better	Much better	Unsure / D.K
A	The water quality in your local streams, rivers, and lakes	1	2	3	4	5	6
B	The level of pollution or waste produced by nearby businesses, farms and industries	1	2	3	4	5	6
C	The availability of waste recycling services and facilities in your area	1	2	3	4	5	6
D	The careful use of chemicals and sprays	1	2	3	4	5	6
E	Soil and land erosion	1	2	3	4	5	6
F	The number of animal pests	1	2	3	4	5	6
G	The number of plant pests and weeds	1	2	3	4	5	6
H	The fencing off of areas of native bush or wetland on private property	1	2	3	4	5	6
I	The correct disposal of rubbish and waste	1	2	3	4	5	6

Q3 Thinking now about the overall state of your local environment, do you think this has generally become better, become worse or stayed the same? [INTERVIEWER PROMPT: Would that be much (better/worse) or a little (better/worse)? (*Circle one only*)

Much worse	A little worse	Stayed the same	A little better	Much better	Unsure / Don't Know
1	2	3	4	5	6

Q4a What do you think is the single most important environmental issue facing the Waikato Region today? *(ONE answer ONLY)* _____

_____

Q4b And the next most important environmental issue? *(ONE answer ONLY)*

_____

Q4c What do you think will be the most important environmental issue facing you in five years time? *(ONE answer ONLY)*

_____

Q5. How concerned are you about the following environmental issues in the Waikato Region? [INTERVIEWER PROMPT: Would that be not concerned at all or not very concerned / Would that be slightly concerned or very concerned?]

		Not concerned at all	Not very concerned	Neither concerned nor unconcerned	Slightly concerned	Very concerned	Don't Know
A	Water pollution from industry	1	2	3	4	5	6
B	The state of native bush and wetlands on private property	1	2	3	4	5	6
C	Water pollution from farmland	1	2	3	4	5	6
D	Loss of the natural character of the region's beaches through development	1	2	3	4	5	6
E	Water pollution from towns and city areas	1	2	3	4	5	6
F	Soil and land erosion	1	2	3	4	5	6
G	The state of our coasts	1	2	3	4	5	6
H	The spread of cities/towns across farmland	1	2	3	4	5	6

Q6 Are there any activities that in your opinion are damaging the air quality in the region?

Yes 1
No 2 } Skip to Q7
Don't know 3 } Skip to Q7

Q6a What are these activities? *(Probe: and what else, multiple answers allowed*)

1	Dust on the road	9	Burn offs
2	Pollen	10	Road burning (eg, tar)
3	Indoor farming (pigs, chickens)	11	Other dust
4	Unsealed yards	12	Sprays / chemicals
5	Industrial emissions	13	Other (specify)
6	Vehicle emissions	14	Don't know
7	Domestic fires for home heating	15	Refused
8	Backyard fires at houses		

Q7 Do you agree or disagree with each of these statements? (Mark beginning statement and read out in rotated order)

		AGREE	'DEPENDS'	DISAGREE	DON'T KNOW
A	Grazing stock in native bush is not harmful to the bush	1	2	3	4
B	Most stormwater drains and road gutters drain directly into streams, rivers or the sea	1	2	3	4
C	Pollution in the Region's rivers and streams comes mainly from farmland	1	2	3	4
D	Most of the oil in our lakes, rivers and harbours gets there from spillage from industries	1	2	3	4
E	Land-based activities have an effect on the health of our coasts and harbours	1	2	3	4

Q8 What natural hazards do you know of that could damage you or your property?

IF NECESSARY: "*Natural hazards are those disasters or emergencies caused by nature.*"

Interviewer prompt: *Any others?*

01	Coastal erosion
02	Earthquakes
03	Flooding
04	Forest or bush fire
05	High winds/Storms/Cyclones
06	Land erosion/land slips
07	Ozone layer damage
08	Rising sea levels
09	Volcanic or thermal eruption
10	Mining
11	Animal Pests
12	Trees Falling
13	Roadways
14	Drought
15	Other (SPECIFY)_____
16	None

Q9 Imagine there were a natural disaster tomorrow. How prepared do you feel you are to cope with it? Would you be (*read*):

1	Very well prepared
2	Fairly well prepared
3	Not very well prepared
4	Not prepared at all
5	Don't know

Q10 Do you agree or disagree with each of these statements? [INTERVIEWER PROMPT: Would that be agree strongly or just agree / would that be disagree strongly or just disagree?]

		STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	DON'T KNOW
A	The balance of nature is very delicate and easily upset	1	2	3	4	5	6
B	Modifying the environment for human use seldom causes serious problems	1	2	3	4	5	6
C	Plants and animals exist primarily to be used by humans	1	2	3	4	5	6
D	The earth is like a spaceship with only limited room and resources	1	2	3	4	5	6
E	There are limits to economic growth even for developed countries like ours	1	2	3	4	5	6
F	Humans were meant to rule over the rest of nature	1	2	3	4	5	6

Q11 Do you generally agree or disagree with each of these statements about the Waikato environment? (*Mark beginning statement and read out in rotated order*)

		DISAGREE	'*DEPENDS*'	AGREE	D/K
A	Council should enforce its rules and laws to make sure that the environment is well looked after	1	2	3	4
B	The public have enough say in the way the environment is managed	1	2	3	4
C	Landowners should be allowed to do what they like on their own land	1	2	3	4
D	The most important objective of any business should be to maximise profit even if that means damaging the environment	1	2	3	4
E	Businesses usually find it is too expensive to be more environmentally friendly	1	2	3	4

Q12 In the last year or so, have you tried to get information, advice, or been involved in any kind of public meetings, official hearings or consent processes with the aim of protecting the environment?
Yes……1
No……..2 (GO TO Q15)

Q13 What did you do? (*DO NOT READ - record all mentioned below*)

01	Wrote a letter to the paper
02	Attended a meeting
03	Made a formal submission
10	Read or sought information
04	Wrote a letter to council or other organisation
05	Telephoned a council or organisation
06	Complained to a council or organisation
07	Took part in a protest
08	Complained to the company/person causing the damage
09	Joined an action group
11	Participated in resource consent process
12	Signed a petition
13	Other (SPECIFY)
14	Don't know
15	No action

Q14 And *generally*, how effective do you feel this/these actions was/were? (*Circle one only*)

Not effective at all	Fairly effective	Very effective	Hard to tell (don't know)
1	2	3	4

Q15 Please say whether you disagree or agree with each of these statements:

		Disagree	"Already do this"	Agree	Unsure / don't know
A	I would recycle more if there were convenient recycling facilities available	1	2	3	4
B	I would dispose of things properly if I knew where to take them	1	2	3	4
C	I'm not convinced that products that claim to be better for the environment actually are	1	2	3	4
D	I would use public transport instead of my car if it were available and convenient	1	2	3	4
E	Lack of time prevents me from doing more to help the environment	1	2	3	4
F	I am not interested in doing things that help the environment	1	2	3	4
G	Actions to help the environment cost more money than I can afford	1	2	3	4

Q16 Thinking about things you might do to protect the environment, do you:
[INTERVIEWER PROMPT: Would you do this never, sometimes, often or always?]

		Never do it	Sometimes do it	Often do it	Always do it	Don't Know
A	Decide for environmental reasons to re-use something yourself instead of throwing it away	0	1	2	3	4
B	Compost your food and/or garden wastes	0	1	2	3	4
C	Recycle bottles or cans or paper or plastic instead of throwing them away	0	1	2	3	4
D	Buy household products that you think are better for the environment	0	1	2	3	4
E	Get the car tuned regularly	0	1	2	3	4
F	Make an effort to reduce water consumption	0	1	2	3	4
G	Use buses, walk or ride a bicycle to reduce car use	0	1	2	3	4
H	Put things into the gutters or stormwater drains, like oil or detergent	0	1	2	3	4

Q17 Is there anything else that you do to help the environment?
(Record up to four more in box)

	Additional Actions Taken to Help the Environment
1	
2	
3	
4	

Q18 Do you generally agree or disagree with each of these statements about the Waikato environment? (Mark beginning statement and read out in rotated order)

		DISAGREE	'DEPENDS'	AGREE	D/K
A	Government restrictions on the use of private property are necessary so that the environment will not be harmed	1	2	3	4
B	A healthy environment is necessary for a healthy economy	1	2	3	4
C	It is okay to sacrifice environmental quality for economic growth	1	2	3	4
D	Environmental protection and economic development can go hand in hand	1	2	3	4
E	There is a lot I, as an individual, can do to protect the environment	1	2	3	4
F	The use of biological controls, such as immuno-contraceptives for possum control, is acceptable to me	1	2	3	4

Q19 Overall, taking everything into account, I would like you to think about how satisfied you are with your local environment in general. Please use a scale from 1 to 10, where a score of 1 means you find your local environment completely unsatisfactory, and a score of 10 means it is perfect in every way. (CIRCLE ONE ONLY)

Completely unsatisfactory									Perfect in every way	Don't know
01	02	03	04	05	06	07	08	09	10	11

We're almost at the end now. I just need to ask some questions about you and where you live, so we can be sure we've talked to a wide cross-section of people. This all remains completely confidential.

Q20 Could you please tell me which of the following age groups you fit into? (*Read*)

1 18 to 19 years
2 20 to 29 years
3 30 to 39 years
4 40 to 49 years
5 50 to 59 years
6 60 years or older

Q21 Interviewer circle one only

1	Male	2	Female

Q 22 Do you live in **town** or in the **country**? (*Record one only*)

1	Country (rural)	2	Town (urban)

Q23 What is your highest educational qualification? (*Circle one only*)

1 Primary school
2 Secondary school qualification
3 Secondary school
4 Trade certificate
5 Tertiary qualification

Q24 And which of the following groups best matches you total household income before tax?

1 $0 to $30,000
2 $30,001 to $60,000
3 $60,001 or more
4 Refused
5 Don't know

Q25 What is your occupation? (*Record, probing until clear) (If farmer, type of farmer (eg dairy*))

_____

Q26 To which ethnic group do you belong? *(Read)*

1	European	5	Other
2	Maori (Skip to Q28)	6	'New Zealander' And would that be of European descent? *If so, recode as 1*
3	Pacific Island	7	Don't know
4	Asian	8	Refused

Q 27 Which of these statements would best describe you?

1. I have some Maori ancestry OR
2. I have no Maori ancestry
3. Refused.

Q28 Could I ask the name of the two roads that meet at the intersection nearest you. First, the road you live on and the next one it intersects with. (If necessary: its just to be sure I classify you into the correct geographic area

Q28A Name of **road or street they live on:** ***including*** if it is a street, road, avenue, crescent, lane, close, etc

THIS *MUST* BE FILLED IN CORRECTLY!

Q28b Name of the nearest **road which intersects** the road they live on ***including*** if it is a street, road, avenue, crescent, lane, close, etc:

THIS *MUST* BE FILLED IN CORRECTLY!

Q28c **City or nearest Township:**

THIS *MUST* BE FILLED IN CORRECTLY!

May I also ask your first name? This is just so my supervisor can do quality control checks on me if necessary, and for your name to go into the prize draw.

First name: Phone:

Thank you very much for your time. Key Research, Environment Waikato and I appreciate your help. *(If necessary: If you have any queries regarding this interview, you are welcome to contact us on Key Research's freephone number, which is 0800 501 015)*

13 Appendix Two: Comparison of Project Targets to Achievements

13.1 Gender

	Franklin (Part)*		Thames-Coromandel		Hauraki*		Waikato		Matamata-Piako*		Hamilton City		Waipa		Otorohanga*		South Waikato		Waitomo*		Taupo (Part)*		Rotorura (Part)*		Total
	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	
Gender Target																									
Target Male	9	41	32	41	15	41	46	42	27	42	190		53	42	5	46	32	42	7	42	42	45		43	924
Target Female	9	39	35	39	17	39	49	38	31	38	213		60	38	5	34	32	38	8	38	44	35		37	916
Total	18	80	67	80	31	80	95	80	58	80	403	0	113	80	9	80	64	80	16	80	87	80	0	80	1840
Gender Actual																									
Male	8	40	32	41	15	41	46	42	27	42	183		53	42	4	47	35	42	8	46	45	42		43	924
Female	10	39	35	39	17	40	53	38	31	39	227		64	38	5	34	33	38	8	38	46	34		43	949
Total	18	79	67	80	32	81	99	80	58	81	410	0	117	80	9	81	68	80	16	84	91	76	0	86	1873
Difference Target & Actual																									
Male	-1	-1	0	0	0	0	0	0	0	0	-7	0	0	0	-1	1	3	0	1	4	3	-3	0	0	0
Female	1	0	0	0	0	1	4	0	0	1	14	0	4	0	0	0	1	0	0	0	2	-1	0	6	33
Total	0	-1	0	0	1	1	4	0	0	1	7	0	4	0	0	1	4	0	0	4	4	-4	0	6	33

13.2 Ethnicity

Gender Target	Franklin (Part)*		Thames-Coromandel		Hauraki*		Waikato		Matamata-Piako*		Hamilton City		Waipa		Otorohanga*		South Waikato		Waitomo*		Taupo (Part)*		Rotorura (Part)*		Total
	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	Urb	Rur	
Ethnicity Target																									
Maori	4	11	7	10	5	9	22	12	5	8	56		14	6	3	17	17	10	6	20	21	22		12	296
Non-Maori	14	69	59	70	26	71	73	68	52	72	347		99	74	7	63	47	70	10	60	66	58		68	1544
Total		80	67	80	31	80	95	80	58	80	403	0	113	80	9	80	64	80	16	80	87	80	0	80	1840
Ethnicity Actual																									
Maori	5	16	7	16	5	17	23	12	10	14	67		16	11	4	18	20	17	9	21	29	17		12	366
Non-Maori	13	63	60	64	27	64	76	68	48	67	343		101	69	5	63	48	63	7	63	62	59	74	74	1507
Total	18	79	67	80	32	81	99	80	58	81	410	0	117	80	9	81	68	80	16	84	91	76	0	86	1873
Difference Target & Actual																									
Maori	1	5	0	6	0	8	1	0	5	6	11	0	2	5	1	1	3	7	3	1	8	-5	0	0	68
Non-Maori	-1	-6	1	-6	1	-7	3	0	-4	-5	-4	0	2	-5	-2	0	1	-7	-3	3	-4	1	0	6	-37
Total	0	-1	0	0	1	1	4	0	0	1	7	0	4	0	0	1	4	0	0	4	4	-4	0	6	33