

10 NEW ECOLOGICAL PARADIGM

This section gives an overall view of the results to questions pertaining to The New Ecological Paradigm (NEP) scale.

NEP Scale

The New Ecological Paradigm (NEP) scale is a means of assessing people's underlying ecological worldviews. The Council has undertaken a NEP survey using the 6-item NEP scale every four years since 2000. From 2008, the NEP included an additional nine statements, six of which are comparable with those from 2000 and 2004 and are referred to as the 6-item NEP scale; the additional nine statements are combined with the original six items to form the Expanded Ecological Values score (Ecological Value scale).

Categorisation and Scale Analysis

With the 6-item NEP and the 15-item EEV (Expanded Ecological Values) models, respondents respond to statements based on an agree or disagree scale. Their response has a corresponding numerical value as follows:

1. Strongly disagree
2. Disagree
3. Depends
4. Agree
5. Strongly agree.

The total of these values for each statement response is then summed with the summed value, categorising the respondent as either pro-ecological, mid-ecological or anti-ecological. A criterion for categorisation on each scale is provided below.

Table 10-1: Categorisation of Ecological Attitudes Based on the 6-Item NEP Scale and the Expanded Ecological Values Score

	6-item NEP Scale	15-item EEV Score
Number of scale items	6	15
Lowest possible score	6	15
Highest possible score	30	75
Anti-ecological	6 – 18	15 – 45
Mid-ecological	19 – 24	46 – 60
Pro-ecological	25 – 30	61 – 75

The individual statements are combined into two scales to assess the overall levels of environmental attitude amongst people living in the Waikato region. Half of the 6-item NEP scale and four of the nine Ecological Value scale statements are worded such that a 'disagree' response is environmentally positive. For the purposes of the overall scale creation, these 'negative' statements have had the polarity of their rating scales reversed, with scores given on a five point scale. Respondents were able to answer 'Don't know', however these responses are re-coded as 'depends', a mid-point response.

The NEP questions for the 2013 survey are analysed by both the 6-item and the Expanded Ecological Values score (Ecological Values scale). The results for each statement are also included, however, statements that required their polarity to be reversed for scale creation are shown in their pre-reversal format for ease of interpretation.

Key findings are:

- Respondents' attitudes based on the 6-item NEP scale are divided as 12 per cent anti-ecological, 57 per cent mid-ecological and 32 per cent pro-ecological. A spread of attitudes quite different to 2008 (15% anti, 70% mid, 16% pro) and 2004 (23% anti, 58% mid, 19% pro) but similar to those seen in 2000 (10% anti, 54% mid, 36% pro) using the same scale.

- When respondents' attitudes are analysed by the Expanded Ecological Values Score, the results show 5 per cent anti-ecological, 64 per cent mid-ecological and 32 per cent pro-ecological, indicative of a slightly more pro-ecological spread than the previous measure in 2008.
- When the two scales are compared, the majority of respondents who are either pro-ecological or mid-ecological on the 6-item NEP scale continue to be classified as such on the Expanded Ecological Values Score. However, only 32 per cent of those who were originally categorised as anti-ecological in the 6-item NEP scale continue to be categorised as such in the Expanded Ecological Values Score; the majority are reclassified as having a mid-ecological attitude.

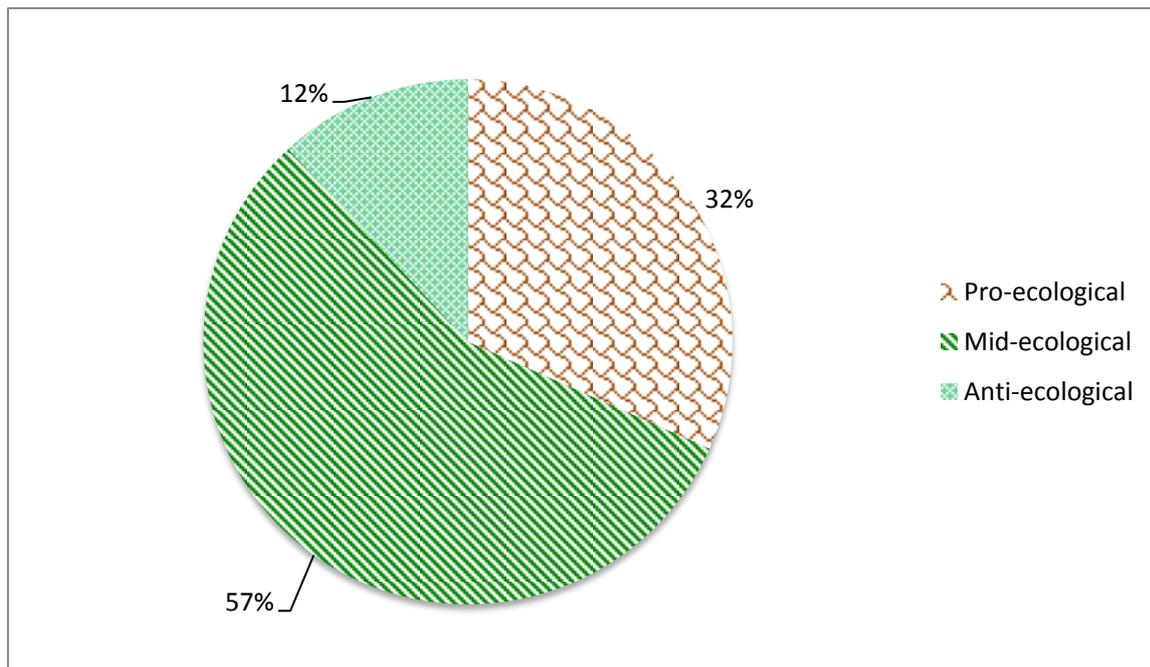
10.1 THE 6-ITEM NEP SCALE

The 6-item NEP scale consists of the following statements; those in italics have their polarity reversed when included in the scale creation.

1. The balance of nature is very delicate and easily upset
2. *Modifying the environment for human use seldom causes serious problems*
3. *Plants and animals exist primarily to be used by humans*
4. The Earth is like a spaceship with only limited room and resources
5. There are limits to economic growth even for developed countries like ours
6. *Humans were meant to rule over the rest of nature.*

10.1.1 OVERALL SCORE

Overall, 32 per cent of respondents are defined as Pro-ecological, 57 per cent are defined as Mid-ecological and 12 per cent are defined as Anti-ecological.



Base: All respondents (n=1005)

Figure 10-1: Categorisation of Ecological Attitudes Based on 6-Item NEP Scale

10.1.2 COMPARISON WITH PREVIOUS YEARS

There are a significantly higher proportion of respondents who are pro-ecological (32%) than in 2008 (16%) and 2004 (19%), but less than in 2000 (36%). Comparatively, only 12 per cent of respondents have anti-ecological attitudes in 2013 compared with 15 per cent in 2008 and 23 per cent in 2004.

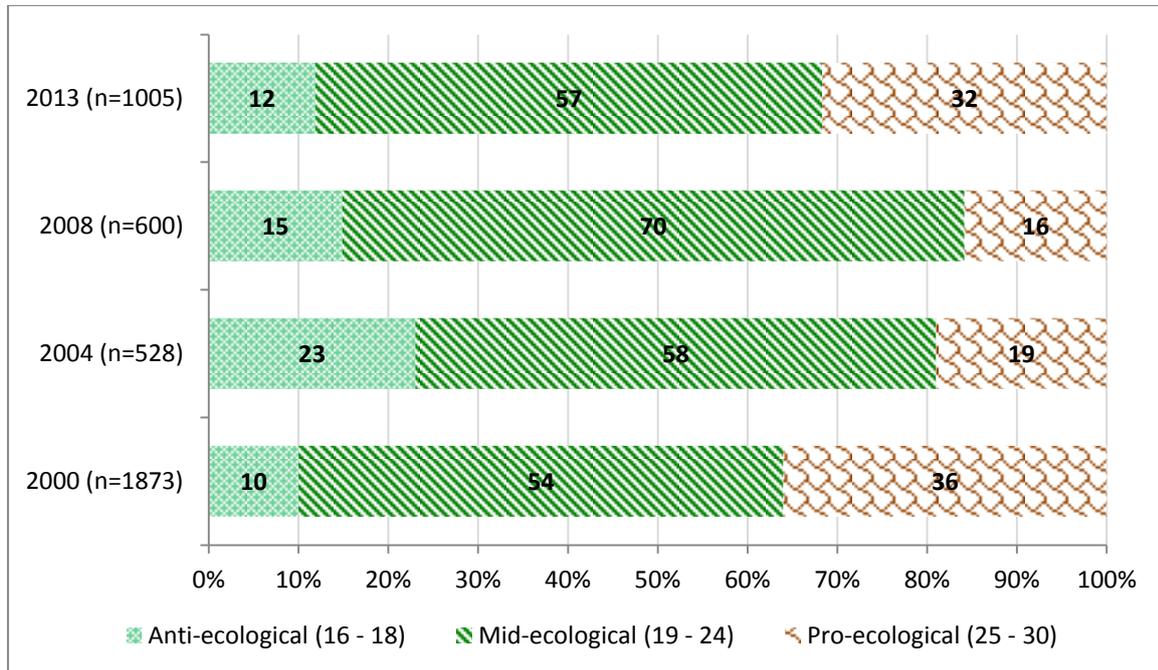


Figure 10-2: Categorisation of Ecological Attitudes Based on 6-Item NEP Scale 2000 to 2013

The spread of scores in 2013 have returned to similar levels to those seen in 2000 with peaks in the mid-range scores.

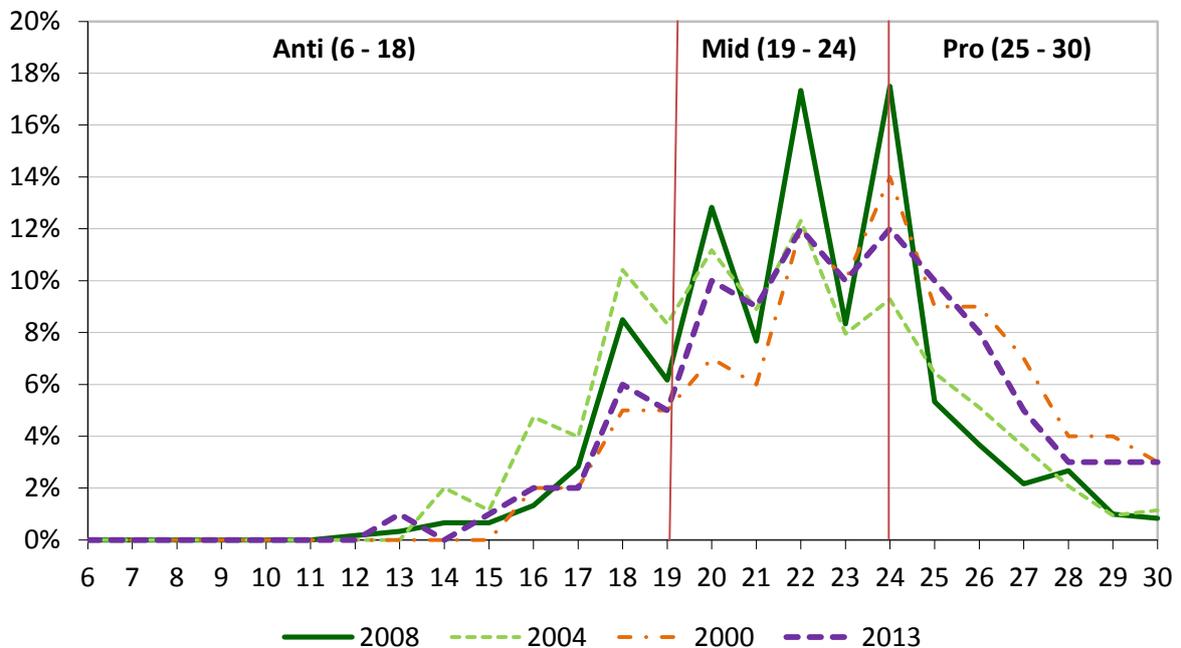


Figure 10-3: Distribution of Scores for Ecological Attitudes Based on 6-Item NEP Scale 2000 to 2013

The mean score for 2013 is 23. This is an increase of one point since 2008 and is identical to 2000.

Table 10-2: Mean Scores for Ecological Attitudes Based on 6-Item NEP Scale 2000 to 2013

	2000	2004	2008	2013	Change 00-13	Change 08-13
Mean score	23	21	22	23	-	+1
Base (respondents)	1873	528	600	1005		

10.1.3 DEMOGRAPHIC VARIATION

Respondents who are significantly more likely (than the regional average) to have a **pro-ecological** attitude are those who are:

- aged between 30 and 39 years or between 40 and 49 years (37% each)
- educated to a trade certificate or tertiary level (39% and 38% respectively)
- in a household with an income of between \$90,001 and \$150,000 per annum (40%)
- working full time (37%)
- of European ethnicity (37%)
- of no Māori ancestry (34%).

Respondents who are significantly more likely (than the regional average) to have a **mid-ecological** attitude are those who are:

- educated to a secondary school level (63%)
- currently a student (62%)
- in a household with an income of between \$30,001 and \$60,000 per annum (63%).

Respondents who are significantly more likely (than the regional average) to have an **anti-ecological** attitude are those who are:

- aged between 18 and 19 years (21%)
- in a household with a total income of \$30,000 or less per annum (19%)
- retired (15%)
- Māori (18%).

10.1.4 GEOGRAPHIC VARIATION

When considered by territorial authority and by urban and rural locations, the following differences emerge:

- Respondents in Taupo (40%) are more likely (than the regional average) to have a **pro-ecological** attitude.
- Respondents in South Waikato (67%) are more likely (than the regional average) to have a **mid-ecological** attitude.

No respondents from a particular territorial authority or urban or rural setting are more likely (than the regional average) to have an **anti-ecological** attitude.

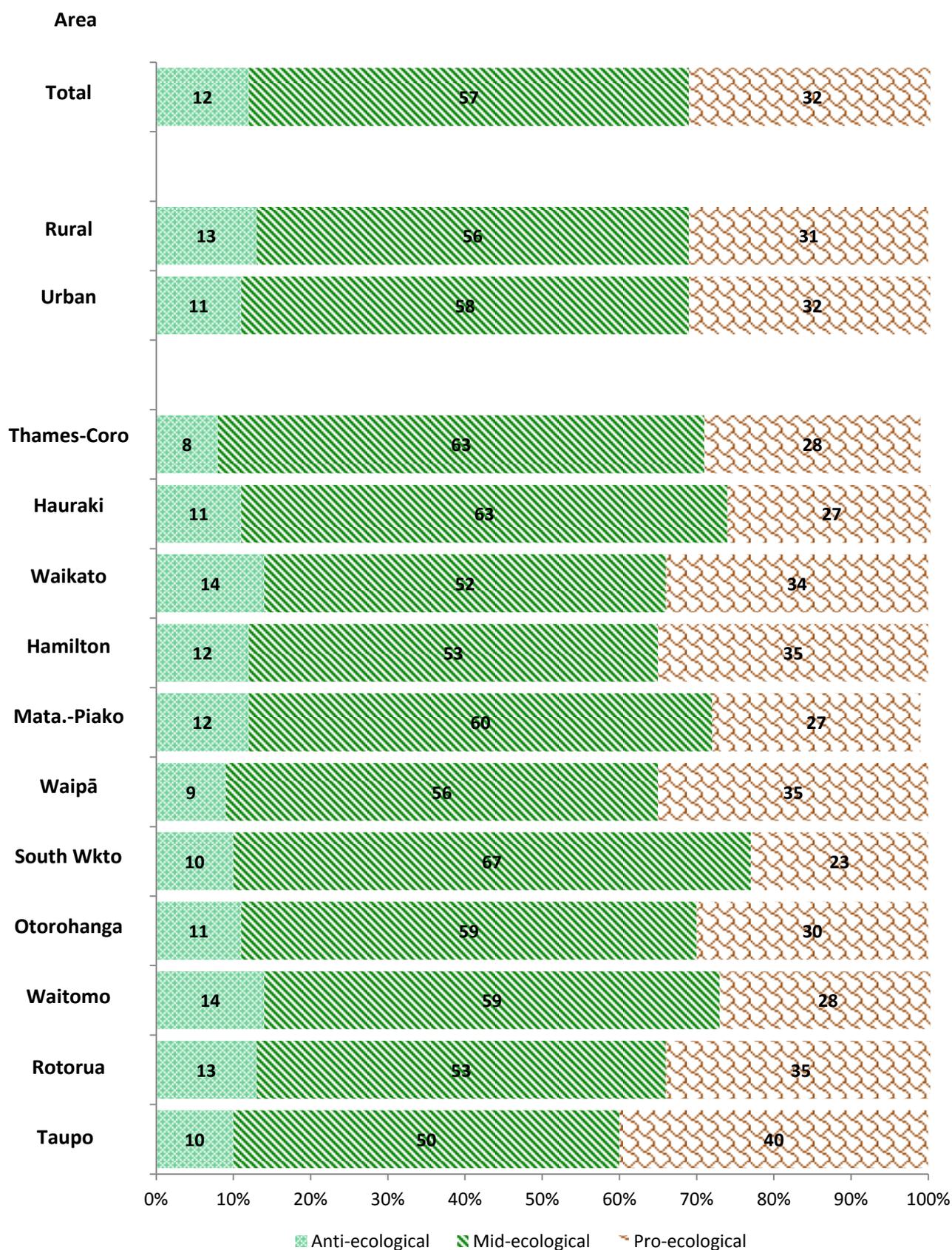


Figure 10-4: Categorisation of Ecological Attitudes Based on 6-Item NEP Scale by Area, Rural and Urban

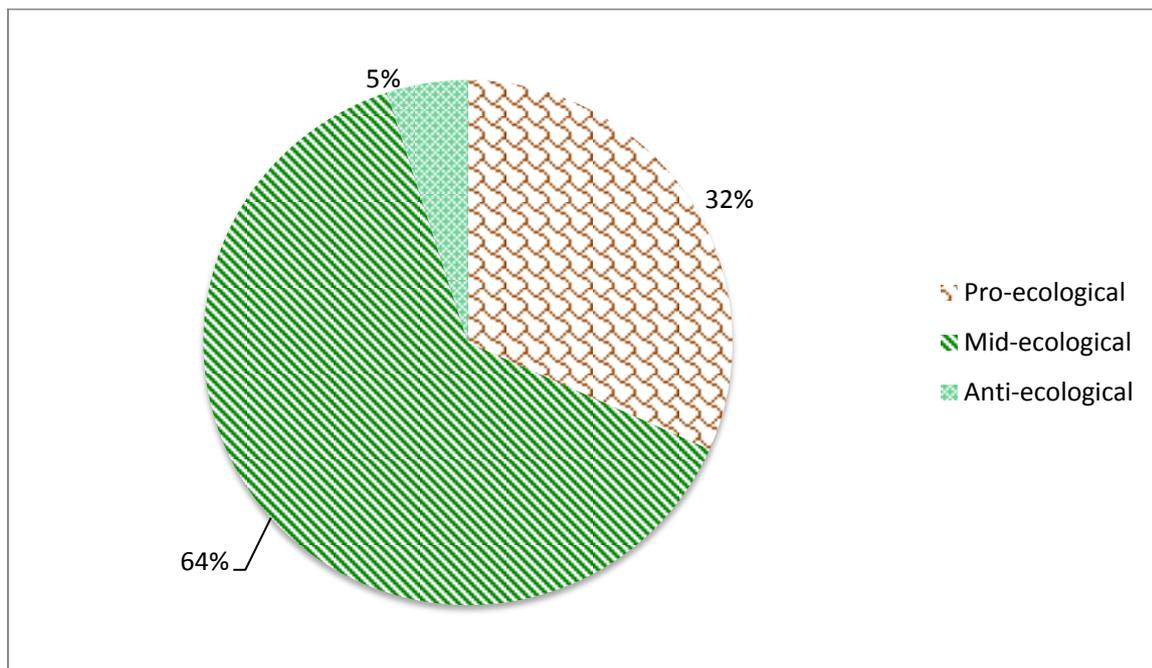
10.2 EXPANDED ECOLOGICAL VALUES SCALE

The Expanded Ecological Values Scale is based on the six items listed in the 6-Item NEP scale and adds the following additional nine items to the final scale calculation; those in italics have their polarity reversed when included in the scale creation:

1. *Present generations of humans have NO moral duties and obligations to future human generations*
2. *The so-called 'ecological crisis' facing humankind has been greatly exaggerated*
3. We must take stronger measures to conserve or nation's resources
4. Humans have moral duties and obligations to other animal species
5. *Environmental regulations have placed unfair burdens on industry*
6. Natural resources should be used primarily to provide for basic needs rather than material wealth
7. *Humans have the right to alter nature to satisfy wants and desires*
8. Nature is valuable for its own sake
9. Humans live on a planet with limited room and resources.

10.2.1 OVERALL SCORE

Using the Expanded Ecological Values Score, 32 per cent of respondents are defined as pro-ecological, 64 per cent are defined as mid-ecological and 5 per cent are defined as anti-ecological.



Base: All respondents (n=1005)

Figure 10-5: Categorisation of Ecological Attitudes Based on Expanded Ecological Values Score

10.2.2 COMPARISON WITH PREVIOUS YEARS

Analysis for the Expanded Ecological Values Scale also shows a higher proportion of respondents who are pro-ecological than in 2008. Comparatively, 5 per cent of respondents have anti-ecological attitudes in 2013 compared with 4 per cent in 2008.

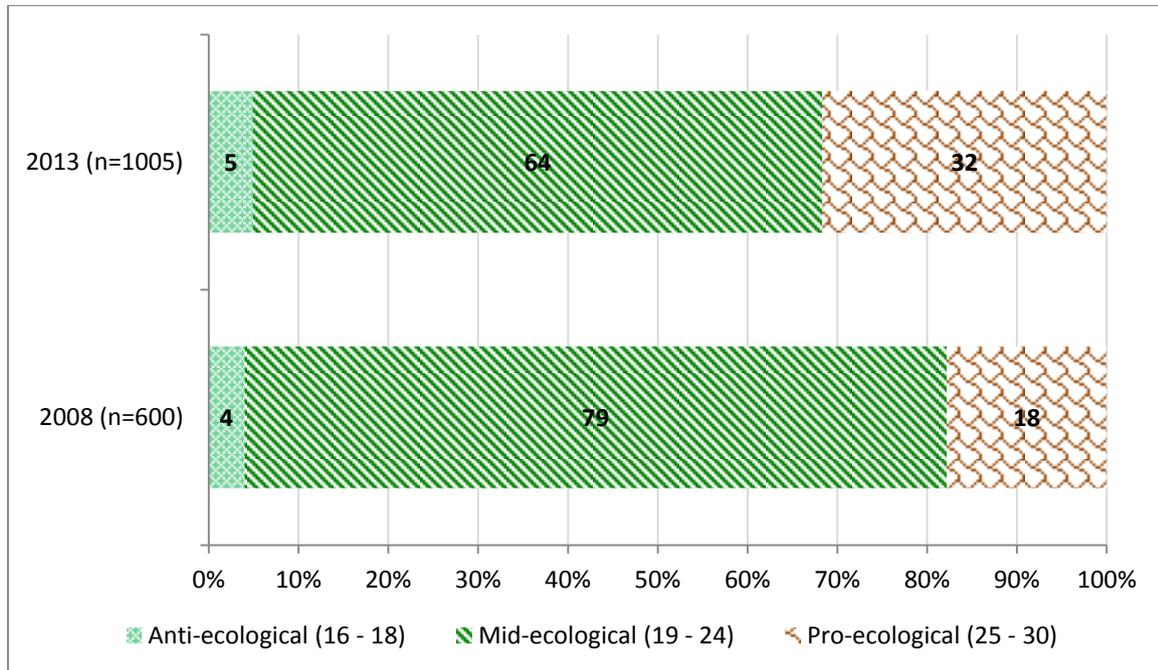


Figure 10-6: Categorisation of Ecological Attitudes Based on Expanded Ecological Values Score 2008 to 2013

The distribution of scores in 2013 shows a greater number of pro-ecological attitudes with a higher number of respondents with scores of 61 or greater.

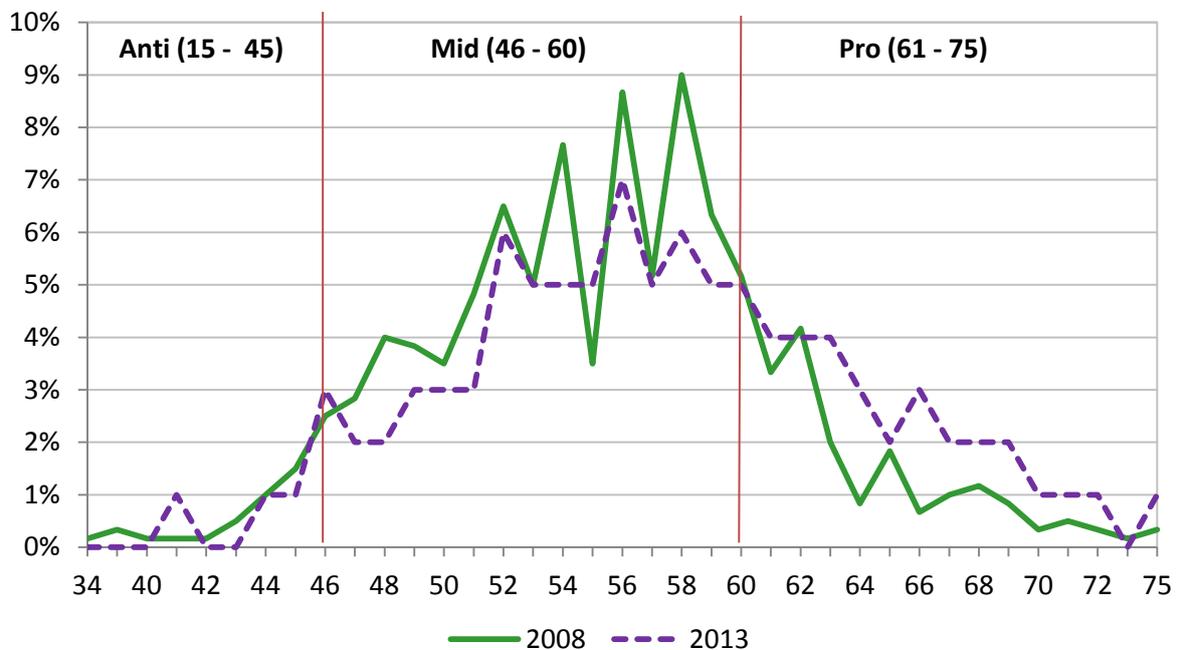


Figure 10-7: Distribution of Scores for Ecological Attitudes Based on Expanded Ecological Values Score 2008 to 2013

The mean score for 2013 is 57, an increase of two points since 2008.

Table 10-3: Mean Scores for Ecological Attitudes Based on Expanded Ecological Values Score 2008 to 2013

	2008	2013	Change 08-13
Mean score	55	57	+2
Base (respondents)	600	1005	

10.2.3 DEMOGRAPHIC VARIATION

Respondents who are significantly more likely (than the regional average) to have a **pro-ecological** attitude are those who are:

- aged between 40 and 49 years (41%)
- educated to a tertiary level (39%)
- in a household with an income of between \$90,001 and \$150,000 per annum (38%)
- in a family household with mainly school-aged children or an older household with no children (37% and 42% respectively)
- working full time (37%)
- of European ethnicity (36%)
- of no Māori ancestry (34%).

Respondents who are significantly more likely (than the regional average) to have a **mid-ecological** attitude are those who are:

- aged 65 years or older (70%)
- educated to a secondary school level (69%)
- in an older household with no children (68%)
- retired or working part time (69% each)
- Māori (74%).

Respondents who are significantly more likely (than the regional average) to have an **anti-ecological** attitude are those who are:

- currently undertaking home responsibilities (12%)
- of New Zealand ethnicity (6%).

10.2.4 GEOGRAPHIC VARIATION

When considered by territorial authority and by urban and rural locations, the following differences emerge:

- Respondents in Hamilton (36%) are more likely (than the regional average) to have a **pro-ecological** attitude.
- Respondents in Waikato (11%) or Otorohanga (8%) are more likely (than the regional average) to have an **anti-ecological** attitude.

No respondents from a particular territorial authority or urban or rural setting are more likely (than the regional average) to have a **mid-ecological** attitude.

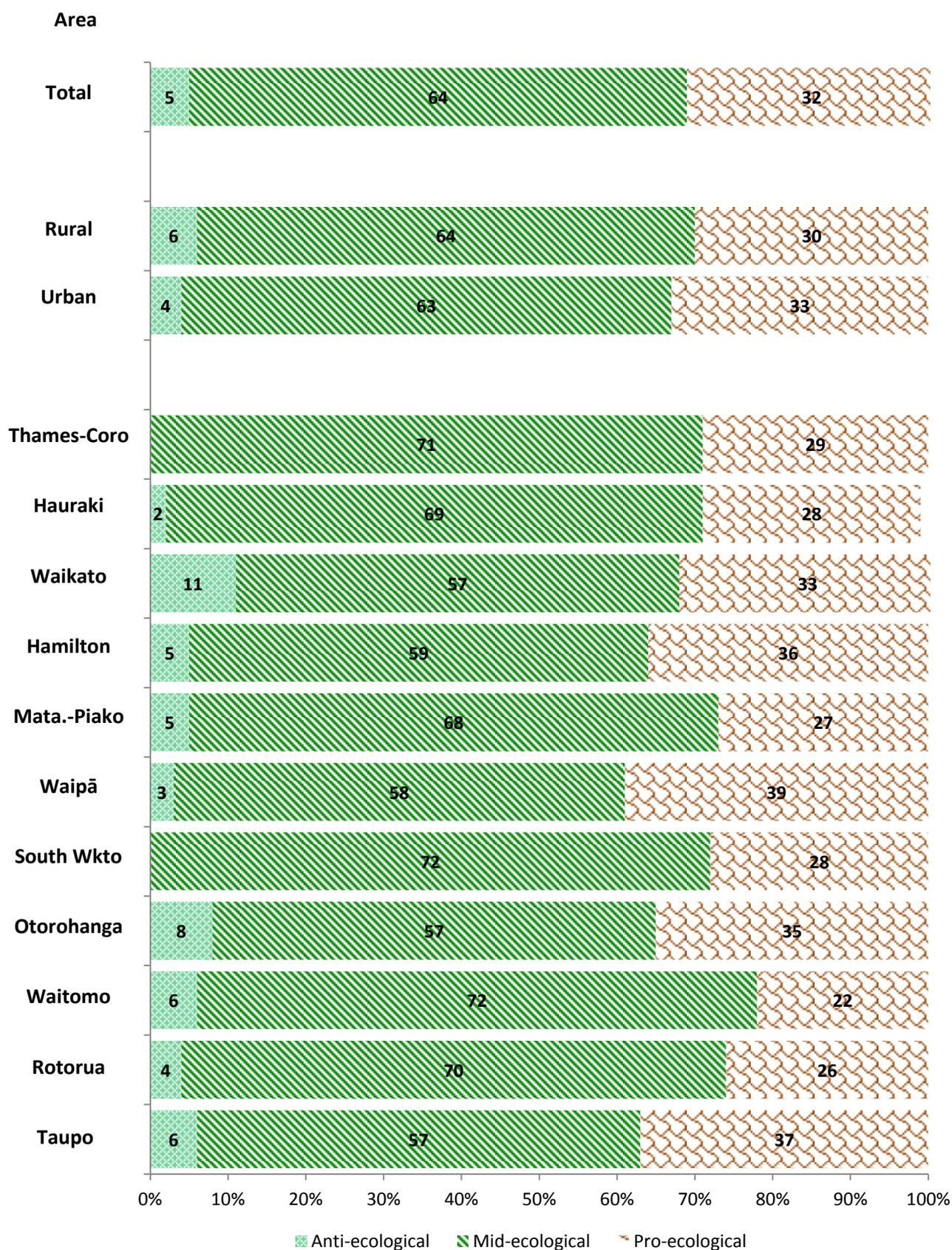


Figure 10-8: Categorisation of Ecological Attitudes Based on Expanded Ecological Values Score by Area, Rural and Urban

10.3 SCALE COMPARISONS

As expected, there appears to be a significant amount of overlap between the attitude categorisation created by the two scales. While the majority of respondents retain the same ecological attitude, there is some movement between pro and mid and mid and anti.

Of those respondents who originally displayed pro-ecological attitudes in the 6-item NEP scale, 81 per cent continue to show pro-ecological attitudes once they are reclassified according to the Expanded Ecological Values model while 19 per cent are now classified as mid-ecological. In comparison, 88 per cent of those who display mid-ecological attitudes based on the 6-item NEP scale continue to display mid-ecological attitudes in the Expanded Ecological Values model.

The largest shift in categorisation is amongst those who originally displayed anti-ecological attitudes in the 6-item NEP scale. Amongst this group, only 32 per cent continue to be classified as anti-ecological while 68 per cent are reclassified as displaying mid-ecological attitudes.

Table 10-4: Comparison of Attitude Categorisation of Ecological Attitudes based on the 6-Item NEP scale and the Expanded Ecological Values Scores

	6-item NEP Scale Pro-ecological (25 - 30) (%)	6-item NEP Scale Mid-ecological (19-24) (%)	6-item NEP Scale Anti-ecological (6-18) (%)
Expanded Ecological Values Pro-ecological (61-75)	81	11	0
Expanded Ecological Values Mid-ecological (46-60)	19	88	68
Expanded Ecological Values Anti-ecological (15-45)	0	2	32

10.4 PROFILING OF ENVIRONMENTAL ATTITUDES WITHIN THE REGION

To better understand the environmental attitudes within the Waikato region, the NEP clusters have been profiled further. Given the robust nature of the 6-item NEP Scale, the pro, mid and anti groupings using the 6-Item NEP Scale were used in preference to the Expanded Ecological Values Scale groupings.

The profiles focus on the attitudes and responses to the previous sections; demographic and geographic variations between these groups are outlined in section 10.2.3 (Demographic Variation) and 10.2.4 (Geographic Variation).

10.4.1 PROFILE OF PRO-ECOLOGICAL RESPONDENTS

Thirty-two per cent of respondents are classified as pro-ecological. This group is much more likely (than the regional average) to think that their local environment is worse than in previous years (20%, regional average 17%) and are also more likely to have participated in public actions in the last year (15% participation compared to the regional average of 11%). The most common actions this group partakes in are joining a group (34%), planting trees (24%) and/or attending a committee meeting (21%). This group is also more likely (than the regional average) to educate people on environmental issues (9% compared to the regional average of 4%). This group is also less likely to feel that the public has enough say in how the environment is managed (51% disagree with this statement, compared to the regional average of 46%).

Pro-ecological respondents are more likely to think that water pollution is the single most important environmental issue facing the Waikato region currently (50% compared to the regional average of 41%) and in five years' time (38% compared to the regional average of 33%). However, the group is no more or less likely than any other group to say that elements of the environment, i.e., water, air quality, litter, have become worse in the last few years, but are more likely to be concerned or very concerned about the following issues:

- Water pollution from industry (90% compared to the regional average of 86%)
- The state of the native bush (60% compared to the regional average of 49%)
- Water pollution from farmland (91% compared to the regional average of 81%)
- The loss of natural character of the region's beaches through development (77% compared to the regional average of 70%)
- Water pollution from towns and cities (87% compared to the regional average of 81%).

When looking at their knowledge of environmental issues, this group appears well informed as they are more likely to correctly disagree that water pollution comes mainly from industry (37% total disagreement compared to the regional average of 32%). Instead, this group is more likely to indicate that they feel water pollution comes mainly from farmland (67% agree compared to the regional average of 56%).

This group appears to look favourably on environmental regulation with an average environmental regulation score of 8.10 out a possible 9 (regional average 7.57). This group is more likely to agree with:

- the enforcement of council laws to look after the environment (94% total agreement compared to the regional average of 88%)
- the tightening of council rules and regulations to manage construction of homes and buildings in areas at risk of flooding and erosion (39% strongly agree compared to the regional average of 26%)
- necessary government restrictions to ensure the environment will not be harmed (76% total agreement compared to the regional average of 68%).

This group is also more likely to disagree that land owners should be allowed to do what they like on their own land (63% disagree with this statement compared to 47% for the regional average).

However pro-ecological respondents do see a place for economic development but not at the expense of the environment (96% total disagreement with the business aim of profit maximization at the expense of the environment); they have an average balancing the environment and the economy score of 14.15 out of a possible 15 (regional average 13.37). As such, this group is more likely to agree that the environment and economic development go hand in hand (96% total agreement compared to 92% for the regional average).

This group places the responsibilities for environmental issues firmly with businesses; 99 per cent of this group agree or strongly agree that businesses are obliged to treat the environment well (compared to 97% for the regional average), and 87 per cent agree or strongly agree that businesses should bear the brunt of meeting environmental obligations (compared to the regional average of 81%). In saying that, this group shows some empathy with business and is more likely to agree that businesses find it too expensive to be environmentally friendly (65% agree compared to the regional average of 61%), but some appear sceptical at the efforts business makes to support the environment (24% disagree that businesses take care to minimise negative impact to the environment; the regional average is 19% disagreement).

10.4.2 PROFILE OF MID-ECOLOGICAL RESPONDENTS

The mid-ecological grouping is the largest segment in the population and comprises 57 per cent of all respondents. Mid-ecological respondents are more likely to feel that their environment has not changed in the last few years (56% feel it is the same, compared to 53% for the regional average). Only 10 per cent of this group are involved in public environmental actions; the most common of these being joining a group (30%).

As with other groups mid-ecological respondents feel that the most important environmental issue facing the Waikato region is water pollution/quality (39%). Mid-ecological respondents also feel that this (water pollution/quality) will be the most important issue in five years' time (32%), but these respondents are also likely to mention climate change (6% compared to the regional average 4%) or the drought (3% compared to the regional average of 2%).

Mid-ecological respondents are no more or less likely than the regional average to be concerned about changes in specific environmental elements in the Waikato region (e.g., air quality, water quality, litter, etc.) and their responses to questions about changes in these elements are in line with the regional average. However, when looking at mid-ecological respondents' concerns about environmental issues facing the Waikato region, this group appears more likely to be concerned about the following issues, all of which relate to water:

- Water pollution from industry (39% compared to the regional average of 33%)
- Water pollution from farmland (39% compared to the regional average of 35%)
- Water pollution from towns and cities (40% compared to the regional average of 37%)
- The loss of natural character of the region's beaches through development (39% compared to the regional average of 35%).

It is interesting to note that the strength of concern for these issues amongst mid-ecological respondents is slightly lower than it is amongst the pro-ecological respondents, specifically mid-ecological respondents are *concerned* with these issues, whereas pro-ecological respondents are likely to be *very concerned*.

Looking across the responses for this group, it seems that mid-ecological respondents are supportive of environmental protection but to a lesser extent than their pro-ecological counterparts. They have an average environmental regulation score of 7.43 (compared to the regional average of 7.57) and agree that Council should enforce laws to make sure the environment is well looked after (60% agree compared to the regional average of 55%).

However, on some statements, mid-ecological respondents seem less sure of the degree to which government or Council should direct private citizens' actions. Specifically, mid-ecological respondents are more likely to agree that landowners should be able to do what they like on their own land (31% agree compared to the regional average of 28%). They are also more likely to neither agree nor disagree (depends) when asked if government restrictions on private property are necessary to ensure the environment will not be harmed (16% compared to the regional average of 14%).

This group also tends to agree with statements that support individuals and are less supportive of those who will persecute individual practices, specifically those related to farmers. For example, mid-ecological respondents are more likely to neither agree nor disagree (depends) when asked if pollution in rivers and streams comes mainly from farmers (13% compared to the regional average of 11%) but are likely to support Council tightening its rules to manage the construction of (private) homes and buildings in areas at risk from flooding and erosion (58% agree compared to the regional average of 52%).

Thus, it appears that this group supports a more balanced approach where the needs of the environment are balanced in consideration with all other aspects. The group has an average balancing the environment and the economy score of 13.25 out of a possible 15 (regional average 13.37), suggesting a neutral stance in this area (neither strongly pro-economy nor strongly pro-environment).

As such, this group seems to agree (but not strongly agree) that businesses have responsibility towards the environment. Sixty-five per cent agree that businesses are obligated to treat the environment well (compared to the regional average of 56%) and 55 per cent agree that businesses should bear the brunt of meeting environmental standards to protect water quality in streams and rivers (compared to the regional average of 49%). However, over half of mid-ecological respondents feel that businesses do take care to minimise the negative impacts on the environment (55% agree compared to the regional average of 50%).

10.4.3 PROFILE OF ANTI-ECOLOGICAL RESPONDENTS

Anti-ecological respondents are the smallest group of respondents and comprise only 12 per cent of the sample. This group is more likely to feel that their local environment has improved in the last few years (38% feel it is better or much better, compared to the regional average of 29%) however only 8 per cent of this group are involved in some sort of public action to protect the environment. The most common actions amongst those involved in a public action are joining a group (23%), attending a committee meeting (25%), or attending a public hearing or meeting (29%).

When looking at the immediate environmental issues facing the Waikato region, anti-ecological respondents are less likely to state water pollution/quality as a key issue (29% compared to the regional average of 41%) and are more likely to mention issues relating to waste, specifically general waste (3% compared to the regional average of 2%) and littering (8% compared to the regional average of 5%).

Looking ahead, anti-ecological respondents are more likely to mention that land use (5% compared to the regional average of 1%) and preserving native environment/maintaining biodiversity (4% compared to the regional average of 2%) are amongst the most important issues facing the Waikato region in the next five years.

Anti-ecological respondents are no more or less likely than the regional average to be concerned about changes in specific environmental elements in the Waikato region (e.g., air quality, water quality, litter, etc.) and their responses to questions about changes in these elements are in line with the regional average. However, they are less likely to be concerned about the following environmental issues:

- the state of native bush and wetlands on private property (46% total not concerned⁹ compared to the regional average of 34%)
- water pollution from farmland (22% total not concerned compared to the regional average of 14%)
- loss of natural character of the region's beaches through development (29% total not concerned compared to the regional average of 19%)
- water pollution from towns and cities (21% total not concerned compared to the regional average of 12%).

Interestingly, this group appears less informed than other groups and respondents are likely to answer 'don't know' to several questions. For example, 14 per cent are unsure if pollution in rivers and streams comes mainly from industry (compared to the regional average of 7%) and 9 per cent are unsure if this pollution comes mainly from farmland (compared to the regional average of 4%). A further 12 per cent are unsure if the public have enough say in environmental issues (compared to the regional average of 5%).

Anti-ecological respondents appear unwelcoming of restrictions that limit private use of land or restrict business practices. In particular, this group is more likely to disagree that:

- Businesses are obligated to treat the environment well (4% disagree or strongly disagree compared to the regional average of 1%).
- Council should tighten rules to manage the construction of homes and buildings in areas at risk of flooding and erosion (16% disagree or strongly disagree compared to the regional average of 11%).
- Urban sprawl and subdivisions threaten the natural environment (32% disagree or strongly disagree compared to the regional average of 22%).
- Government restrictions are necessary so that the environment will not be harmed (23% disagree or strongly disagree compared to the regional average of 15%).

Furthermore, anti-ecological respondents are more likely to agree that:

- Land owners should be able to do what they like on their own property (49% agree or strongly agree compared to the regional average of 28%).
- The most important objective of any business is to maximise profit (25% agree or strongly agree compared to the regional average of 9%).
- There is enough protection given to significant natural sites (67% agree or strongly agree compared to the regional average of 55%).
- Farming agricultural land at maximum productivity is acceptable even if it results in polluted waterways (13% agree or strongly agree compared to the regional average of 5%).
- It is ok to sacrifice environmental quality for economic growth (34% agree or strongly agree compared to the regional average of 12%).

Given these results, it is unsurprising that this group has the lowest average environmental regulation score (6.82 out of a possible 9) and the lowest balancing environment and economy score (11.89 out of a possible 15). These scores suggest that anti-ecological respondents will generally favour the economy over the environment and are likely to be anti-regulation for environmental quality.

⁹ Includes not very concerned and not at all concerned.