



2024

Priorities, Value and Performance



Vision Thinking

Fish & Game New Zealand 2024 Priorities, Value, and Performance

October 2024

A report prepared for the New Zealand Fish and Game Council
by Dr Humphrey Walker PhD



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Table of Contents

1	Structure and contents of this report	1
2	Executive summary	2
3	Introduction.....	5
3.1	<i>Purpose.....</i>	5
3.2	<i>Project definition</i>	5
3.2.1	<i>Aim</i>	5
3.2.2	<i>Objectives.....</i>	5
3.3	<i>Approach.....</i>	5
3.4	<i>Contribution</i>	5
4	Method and methodology	6
4.1	<i>Questionnaire development.....</i>	6
4.1.1	<i>Ranking importance</i>	6
4.1.2	<i>Rating scales.....</i>	8
4.1.3	<i>Thematic analysis of comments</i>	8
4.2	<i>Delivery and sampling</i>	8
5	Results	10
5.1	<i>Demographics: General and by usual licence type purchased.....</i>	10
5.1.1	<i>Age.....</i>	11
5.1.2	<i>Gender.....</i>	12
5.1.3	<i>Ethnicity.....</i>	12
5.1.4	<i>Education.....</i>	13
5.1.5	<i>Dependant children</i>	14
5.1.6	<i>Household income (before tax)</i>	14
5.1.7	<i>Fish & Game region</i>	16
5.1.8	<i>Understanding of Regional Fish & Game Council's role and activities</i>	17
5.2	<i>Priorities for service attributes</i>	18
5.2.1	<i>All respondents</i>	18
5.2.2	<i>Under 45yrs and 65+yrs</i>	19
5.2.3	<i>Non-Male</i>	20
5.2.4	<i>Non-European/Pakeha</i>	20
5.2.5	<i>Income.....</i>	20
5.2.6	<i>Education.....</i>	21
5.2.7	<i>Hunters and Anglers</i>	21
5.2.8	<i>Dependent children</i>	21
5.2.9	<i>Regions</i>	22
5.3	<i>Value</i>	23
5.3.1	<i>Fishing</i>	23
5.3.2	<i>Hunting</i>	26
5.4	<i>Performance</i>	28
5.4.1	<i>Performance rating.....</i>	28
5.4.2	<i>Thematic analysis of performance comments.....</i>	29
6	Conclusions	36
7	Points to consider	37

8	References	39
	Appendix	41

List of Tables

Table 1 Fish & Game Service Attributes and Definitions	7
Table 2 Fishing Licence Purchased by Licence Type.....	25
Table 3 Main Reason for Not Purchasing a 2023/24 Fishing Licence	26
Table 4 Main Reasons for Not Purchasing a 2024 Game Bird Licence	27
Table 5 Sub-themes to Negative Comments from Those Giving F&G a Good Performance Rating.....	35
Table 6 Probability-Scaled Utility Scores and Confidence Intervals: All Respondents, Under 45 Years Old, 65+ Years Old, and Non-Male	41
Table 7 Probability-Scaled Utility Scores and Confidence Intervals: Non-European, Income<\$100,000, Income>\$100,000, Education Bachelor's Degree or Higher	42
Table 8 Probability-Scaled Utility Scores and Confidence Intervals: Education Post-High School Certificate or Lower, Anglers, Hunters, Dependent Children=YES.....	43
Table 9 Probability-Scaled Utility Scores and Confidence Intervals: Dependent Children=NO, Northland & Auckland/Waikato, Eastern & Hawke's Bay, Wellington & Taranaki	44
Table 10 Probability-Scaled Utility Scores and Confidence Intervals: Nelson/Marlborough & West Coast, North Canterbury & Central South Island, and Otago & Southland	45

List of Figures

Figure 1 Example of a MaxDiff Choice-Set	6
Figure 2 Sample Breakdown by the Type of Licence Usually Purchased	10
Figure 3 Total Sample Age Profile.....	11
Figure 4 Usual Licence Purchasing Habit as a Proportion of Age Groups.....	11
Figure 5 Usual Licence Purchasing Habit as a Proportion of Gender	12
Figure 6 Total Sample Ethnicity Profile Compared to the 2023 NZ Census	12
Figure 7 Usual Licence Purchasing Habit as a Proportion of Ethnicity	13
Figure 8 Education Profile of the Total Sample	13
Figure 9 Usual Licence Purchasing Habit as a Proportion of Education Level.....	14
Figure 10 Usual Licence Purchasing habit as a Proportion of Dependent/No Dependent Children	14
Figure 11 Household Income of the Total Sample	15
Figure 12 Usual Licence Purchasing Habit as a Proportion of Household Income Brackets	15
Figure 13 Fish & Game Regions as a Proportion of the Total Sample	16
Figure 14 Usual Licence Purchasing Habit as a Proportion of Each Fish & Game Region	16
Figure 15 Understanding of Regional Fish & Game Council's Role and Activities.....	17
Figure 16 Usual Licence Purchasing Habit as a Proportion of the Level of Understanding of Regional Fish & Game Council's Role and Activities	17
Figure 17 Priorities for Service Attributes: All Respondents.....	19
Figure 18 Fishing Licence Tenure Over the Past 5 Years.....	23
Figure 19 Fishing Licence Tenure Over the Past 5 Years by Age.....	24
Figure 20 Fishing Licence Value for Money.....	24
Figure 21 Fishing Licence Value for Money by Licence Type	25
Figure 22 Hunting Licence Tenure Over the Past 5 years	26
Figure 23 Game Licence Value for Money	27
Figure 24 Customer Performance Ratings of Fish & Game	28
Figure 25 Fish & Game Performance Rating by Age Groups.....	29
Figure 26 The Proportion of Comments Relating to Unsure Performance Ratings	31
Figure 27 The Proportion of Comments Relating to Poor Performance Ratings.....	32
Figure 28 The Proportion of Comments Relating to Neutral Performance Ratings	33
Figure 29 The Proportion of Comments Relating to Good Performance Ratings	34

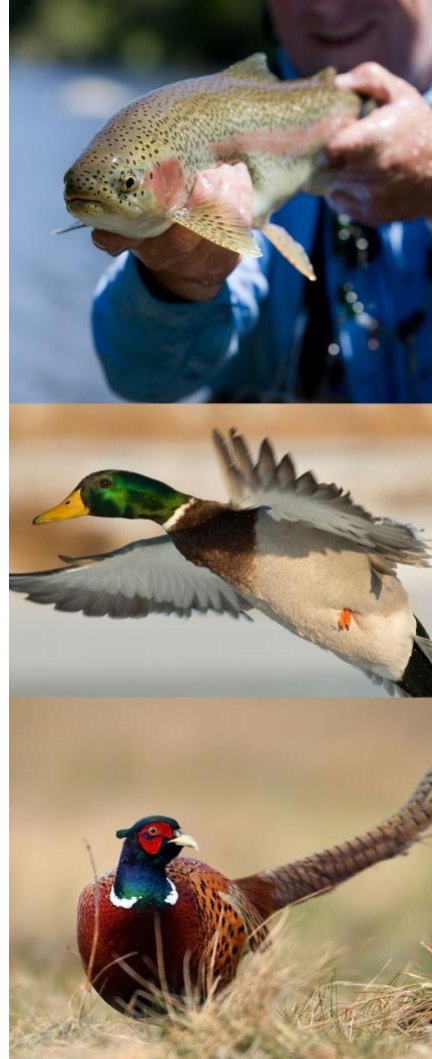
1 Structure and contents of this report

In pursuit of Fish & Game's strategic objective to attract and retain licence-holders, this report details a September 2024 survey of past and present purchasers of fish and game licences.

The survey used a proven economic methodology to measure and prioritise attributes of Fish & Game's operations according to the importance licence-holders placed upon them. In addition, it quantifies customer's perceptions of licence value and their ratings of Fish & Game's performance. Over eight hundred respondents offered comments regarding their choice of performance rating. These have been organised and analysed according to their themes.

The survey is structured to present key points from the research in a readable format, while containing enough technical detail to allow others to build on the work, should they choose to do so. The executive summary is followed by an introduction, method and methodology, and results.

The final sections contain a list of conclusions and some points for consideration.



2 Executive summary

In pursuit of the strategic objective to attract and retain licence-holders, a survey of past and present licence holders was conducted in September 2024. It aimed to quantify and characterise perceptions of licence value and service delivery. The survey employed a tried-and-true utility-based methodology (MaxDiff) to quantify and rank licence holder priorities for service delivery and used rating scales to quantify perceptions of licence value and F&G's performance. In addition, an analysis of licence holder comments was used to capture the motivations behind performance ratings.

Bayesian probability-scaled¹ utility scores ranked the importance of sixteen selected F&G service attributes (see [Table 1, p 7](#)) based on 1379 respondents completing this element. The top five most important service attributes, in descending order, were *Access* (13.31), *Conservation Orders* (11.47), *Ecology Monitoring* (10.64), *Fish Population Monitoring* (9.23), and *Advocacy* (8.51). The top five priorities have a resource protection focus. Although *Conservation Orders* may be considered the ultimate protection for a water body, it may also be that this attribute was chosen as the best vehicle to convey environmental concern.

In contrast, the bottom five in descending order were, *Habitat Improvement* (3.82%), *Kids-fish-out* (3.82%), *Bird Population Monitoring* (2.95%), *In-person Activities* (2.25%), and *Promoting Females* (1.48%). In general, attributes with a focus on community outreach and participation growth, were less important to licence holders than those focused on protecting and enhancing the recreational experience. Based on the scores, *Access—working to ensure access to waterways (rivers, lakes, and canals)* was nine-times more important to licence holders than *Promoting Females—Working to increase female participation in game bird hunting and fishing*. This does not mean that *Promoting Females* is unimportant, just that it was the least important of the available choices.

There were some variations in ranked priorities and utility scores between age groups, incomes, education levels, between those with dependent children and those without, between hunters and fishers, and across regions². Younger licence holders were more environmentally focused, and *Access* declined as a priority for the under 45yrs group decreasing its rank to 3rd. *Conservation Orders* and *Ecology Monitoring* were 1st and 2nd ranked respectively. Older licence holders were more *Access* focussed. For the 65+yrs age group, *Access* was elevated to 44% more important than the next most important attribute (*Conservation Orders*). *Kids-fish-out* increased in importance from 13th to 11th place for those 65+, which may reflect an interest in grandchildren.

Kids-fish-out was of increased relative importance to those with incomes below \$100,000pa and improved from 13th to 9th place, however 63% of those in that income

¹ Probability-scaled utility scores are ratio scaled, meaning a score of 9 is three times more important than a score of 3. They are expressed as percentages and sum to 100.

² Regions were combined to increase the precision of utility estimates. The combining of regions followed recommendations within the 2021 Ministerial Review (Clark & Mills, 2021).

bracket were also 65+yrs old. Priorities for the over \$100,000pa income bracket were largely the same as the total sample.

For hunters, the relative importance of *Access* was elevated and was 47% more important than the next most important attribute, *Conservation Orders*. *Maintaining Facilities* and *Habitat Improvement* both increased their rankings to 4th and 5th respectively, reflecting the utility hunters see in enhancing game bird habitat. *Bird Pop. Monitoring* increased from 14th to 8th, also reflecting its natural importance to hunters. *Fish Pop. Monitoring* still out ranked *Bird Pop. Monitoring* at 7th place. This was likely due to 60% of hunters also usually purchasing a fishing licence. Angler priorities were largely unchanged from the total sample.

Promoting Families was more important for those with dependent children than those without, however *Kids-fish-out* remained unchanged for both groups. Some variations were also observed across gender and ethnicity, however, the sample sizes for these sub-groups meant Bayesian estimates were low precision.

Priorities for Auckland/Waikato + Northland were largely unchanged from the total sample, although the relative importance of *Access* was elevated to 42% more important than *Conservation Orders*. *Maintaining Facilities* and *Habitat Improvement* increase in importance and may reflect the rates of game licence purchases in these regions. Eastern + Hawke's Bay priorities also followed those of the total sample with an increased relative importance of *Access* to 32% more important than *Conservation Orders*. A smaller sample size meant lower precision in utility estimates. Also with a smaller sample size, Wellington + Taranaki had the same top three priorities as the total sample, but with larger differences between attributes. *Habitat Improvement* was more important to this region than the wider sample.

The sample from Nelson/Marlborough + West Coast fell below the threshold for reporting and can be found in the [Appendix, Table 10](#). North Canterbury + Central South Island were the only combined region to prioritise *Conservation Orders* above *Access*. Attribute scores were top heavy in this combined region, meaning the importance of lower attributes fell away quickly. This places emphasis on the importance of waterway protection and fish stock management to these regions. The priorities of Otago + Southland largely reflected those of the total sample.

Most (69%) of those purchasing a 2023/24 Fishing licence had purchased at least four out of the last five years and the most loyal purchasers were the 'Loyal Seniors'. The highest rate of mixed licence tenure was in those under 35 years old. Most purchasers (63.6%) rated their fishing licence value positively³ at ≥ 6 out of 9, with 16.8% neutral (5 out of 9), and 19.6% rated the value poorly at ≤ 4 . The median rating was 7 out of 9. The highest proportion of 'Excellent value' ratings was among the *Whole Season Loyal Seniors*. Of those that did not purchase in 2023/24, a quarter had become too busy, 18.1% found it too expensive, and 49% were not captured by the choices available.

³ The rating scale, adopted from that of the Otago F&G Region, ranged from 1 (Very poor value) to 9 (Excellent Value).

Of those that purchased a 2024 Game Bird licence, most (79.3%) had purchased at least four out of the last five years. Most licence holders (52.1%) were positive and rated value for money as ≥ 6 . The median rating for fishing licences was 6 out of 9. Poor value ratings (1-4) were given by 28.5% of respondents. Overall, game licences were seen as being lower value for money than fishing licences. Expense accounted for 15% of those that did not purchase and 12.5% had become too busy. The motivation for 47.4% of non-purchasers was not captured by the choices available.

A rating scale was used to capture perceptions of F&G's performance and respondents were invited to comment on their rating choice. An 'unsure' option was also included. Overall, most licence holders (60.6%) gave F&G a good performance rating with just 7.1% giving a bad rating. A further 16.9% gave a neutral rating and 15.2% were unsure. In general, the level of satisfaction was highest in the 65+ age bracket and the proportion of uncertain responses increased among younger respondents.

In all, 862 respondents chose to leave a comment, and these were analysed according to themes. Comments often had more than one theme; therefore, percentages sum to more than 100. Those happy with F&G felt it provided the best vehicle for their political and legal representation (32%), appreciated F&G efforts to communicate (20%), and efforts to promote stocks of quarry (19%). Licence monitoring and enforcement (19%) was seen as an essential element of fairness and natural justice. Good raters were grateful of access points (18%) and efforts to gain more access, and of F&G's involvement in environmental protection (17%), especially water quality. Typical good comments were:

"Representing the people like myself to be able to go out and enjoy the sport of fishing and working to maintain our sport for the future."

"Regular and relevant communication with licence holders on F&G activities"

"Monitoring of fisherman. Issuing of licenses. Releasing fish into lakes. A voice on my behalf"

Poor ratings were mainly associated with perceptions of insufficient efforts to promote stocks of fish and game (31%), insufficient monitoring and enforcement (30%), high licence cost (21%), poor communication (12%), and mismanagement of funds (11%). Typical bad comments were:

"Never seen any sign of them or what they have done in over 40 years of buying licenses."

"I think there are too many personal agendas within [Region removed] fish and game being pursued using funds from licences. They are only interested in their own opinions"

"No where enough ranging/checking licences. Fail to return phone calls, inconsistency and lack [of] transparency, don't prosecute enough offenders."

3 Introduction

Facing falling participation, an ageing licence-holder base, cultural pressure on the social licence to hunt and fish, competition for the recreational use of public spaces, and underrepresentation in key demographics, Fish & Game (F&G) is an organisation under pressure to evolve. Following the 2021 Ministerial Review (Clark & Mills, 2021), F&G developed a five-year organisational strategy founded on a vision for its future, a defined purpose, and a set of core values (Fish & Game, 2022). Five objectives underpin efforts to meet the strategic vision. The objective relevant to this study is the '*attraction and retention of licence-holders*.' Providing the organisation with sustainable revenue through growth and retention of licence-holders has been identified as an essential goal if other programmes are to be funded.

3.1 Purpose

This study was commissioned by the New Zealand Fish & Game Council (NZFGC) as part of their attitudinal research towards achieving the attraction and retention of licence-holders.

3.2 Project definition

3.2.1 Aim

To quantify and characterise perceptions of licence value and service delivery.

3.2.2 Objectives

To address the aim of the research, three main objectives have been identified:

- i. To quantify licence-holder prioritisation of services delivered by Fish & Game.
- ii. To quantify perceptions of fishing and game bird hunting licence value.
- iii. To quantify and characterise licence-holder perceptions of Fish & Game's performance.

3.3 Approach

The research surveyed licence-holders nationally. A mixture of quantitative methods was applied. These included a MaxDiff (Best-Worst) choice experiment, ordinal rating scales, and open-ended responses. The data was analysed using SPSS V30, NVivo15, and Empirical Bayesian probability modelling within the delivery platform.

3.4 Contribution

This research will help the NZFGC evaluate the impact of their governance from the perspective of anglers and game bird hunters. In particular, the information will provide a lens with which the NZFGC may contrast the organisations priorities with those of its licence-holders, focus efforts to attract and retain licence-holders, and report perceptions of value and performance to the Minister. Should the research be undertaken periodically, it would provide additional value as time-series data.

4 Method and methodology

4.1 Questionnaire development

The time from engagement to required delivery was short and did not allow for the usual approach to development or for pre-testing. Key elements from the 2023 Primary Purpose survey were identified by the NZFGC as the basis from which to form a survey focussed on licence-holder priorities, perceptions of licence value, and perceptions of organisational performance. The survey employed rating scales, open-ended responses, and a choice experiment. The choice experiment was designed to rank the importance of selected F&G service attributes to anglers and hunters.

4.1.1 Ranking importance

The choice experiment was conducted using the Maximum Difference (MaxDiff), also known as Best-Worst, scaling methodology (Chrzan & Orme, 2019). It is a tried and proven methodology grounded in economic utility theory and is particularly applicable when a payment occurs (Thurstone, 1927; McFadden, 1974). It is a paired comparison choice task that identifies both the utility maximising and utility minimising choice in each set of alternatives. It provides much richer data than rating tasks such as Likert scales or ranking exercises (Flynn & Marley, 2014; Louviere et al., 2015).

Respondents faced a series of fifteen choice-sets, each containing four F&G service attributes. For each choice-set they had to choose the attribute that was most important to them and the attribute that was least important to them. There were 16 attributes in total. Service attribute selection was informed by previous studies, regional manager feedback, and discussion with NZFGC staff. With some refinement, sixteen attributes were selected which represented a combination of services delivered at both a regional and national level. Attributes and their definitions are shown in [Table 1](#) and an example of a choice set is shown in [Figure 1](#).

* Consider all of the following activities conducted by Fish & Game. Select the one you think is most important and the one you think is least important. Repeat this each time you see a list of items.

Set 1 of 15 ○

Most important		Least important
☐	Having rangers out checking licences.	☐
☐	Monitoring the ecology of rivers, lakes, and wetlands.	☐
☐	Working to ensure access to waterways (rivers, lakes, and canals).	☐
☐	Monitoring game bird populations.	☐

< Prev set Set 1 of 15 ○ Next set >

Figure 1 Example of a MaxDiff Choice-Set

Table 1 Fish & Game Service Attributes and Definitions

Attribute category	Respondent-facing description used in the survey
1. Access	Working to ensure access to waterways (rivers, lakes, and canals).
2. Advocacy	Participating in legal processes to provide for healthy freshwater habitats.
3. Biosecurity	Biosecurity education and monitoring.
4. Bird Pop. Monitoring	Monitoring game bird populations.
5. Compliance Checks	Having rangers out checking licences.
6. Conducting Research	Conducting relevant research.
7. Conservation Orders	Establishing water conservation orders that legally preserve the natural values of outstanding lakes and rivers.
8. Ecology Monitoring	Monitoring the ecology of rivers, lakes, and wetlands.
9. Fish Pop. Monitoring	Monitoring fish populations and spawning sites.
10. Habitat Improvement	Developing and enhancing game bird habitat.
11. In-person Activities	Developing public outreach through in-person events like field days.
12. Kids-fish-out	Kids-fish-out days where children have a chance to catch their first fish.
13. Maintaining Facilities	Maintaining and investing in Fish & Game owned and managed wetlands and waterbodies.
14. Promoting Families	Working to increase family participation in game bird hunting and fishing.
15. Promoting Females	Working to increase female participation in game bird hunting and fishing.
16. Regulation	Setting regulations, season length, and bag limits.

A complex mathematical design ensured the proportional representation of attributes in varying combinations with the optimal number of choice sets faced by each respondent. Thirty different versions of the choice experiment were generated and randomly assigned to respondents. A Bayesian mathematical engine converted these choices into an aggregated raw utility score for each service attribute. This in turn was converted into probability scaled scores that summed to 100. The probability scores are ratio-scaled, meaning that a score of 9 is three times more important than a score of 3.

Best worst scaling assumes an individual's choice will be firstly utility maximising (best) followed by a choice that is utility minimising (worst). Applying the multinomial logit equation (McFadden, 1974), the weighted utility of the item is derived from a maximum likelihood fit to each individual's choice set responses. The equation for the best item (utility maximising) where the probability of choosing the i^{th} item as best (utility maximising) from a choice set of $i=1...,k$ items is shown in Equation 1.

(1)

$$P_i = \frac{e^{U_i}}{\sum_1^k (e^{U_i})}$$

Where

P_i is the probability that item i is chosen from the set of k items

e is the exponential function

U_i is the utility of the i^{th} item in a set of $i=1...,k$ items

Utility estimation for the worst item (utility minimisation) is shown in Equation 2.

$$P_i = \frac{e^{-U_i}}{\sum_1^k (e^{-U_i})} \quad (2)$$

(Chrzan & Orme, 2019, p. 41)

Where

e^{-U_i} is equivalent to taking the negative antilog of the utility for item i .

4.1.1.1 Rescaling best-worst utilities

Zero-centred raw utility scores have both positive and negative values and can be rescaled on a 0-100 ratio scale to make for easier interpretation where a score of 9 is three times as preferred as a score of 3. The transformation is shown in Equation 3.

$$P_i = \frac{e^{U_i}}{(e^{U_i} + a - 1)} \quad (3)$$

Where

e is the exponential function

U_i is the zero centred raw logit weight for item i

a is the number of items shown per set

(Chrzan & Orme, 2019, p. 56)

4.1.2 Rating scales

A 5-point rating scale for performance was adopted from Primary Purpose (2023) to enable a comparison with the 2024 results. A 9-point scale for licence value was adopted at the request of the Otago Fish and Game Council to allow comparison with their independent yearly studies.

4.1.3 Thematic analysis of comments

Respondent's comments relating to their F&G performance rating were coded and grouped using NVivo15. Each comment was coded for one or more lower-level themes, and these were grouped into a smaller number of higher-level themes.

4.2 Delivery and sampling

The sample was comprised of a random extraction of 11,500 current (2023/24) and 4,500 lapsed licence-holders from the previous year. This construct captured views of the most current licence-holders while also representing the views of lapsed licence-holders, based on the best-known estimate of a 30% lapse rate in licence purchase.

The sample was further stratified to represent age, gender, region, and the fishing /game bird licence sales. Following Primary Purpose (2023), all juniors (under 18years) were

removed, where more than one licence was held, the highest value licence was retained ensuring one record per licence holder, all non-resident-licence purchasers were removed, and where one email address was used for multiple licence-holders they were reviewed for the most appropriate match and the others removed. Where multiple emails were going to a fishing and hunting guide all were removed. Only those consenting to being contacted by Fish & Game were eligible for selection. Refining a sample proved challenging with high rates of duplicate records.

The survey was fielded from 2-22 of September 2024. Invitations containing a survey link were emailed directly to the sample licence-holders and two reminder emails were sent targeting those who had not already replied. The sample size in this survey is $n=1379$ for the MaxDiff element and $n=1362$ for the value and performance sections. Based on this, the sample margin of error at the 95% confidence level for a 50% figure is $\pm 2.6\%$ for the value and performance sections. Confidence intervals for the MaxDiff priorities section are computed within the Bayesian probability engine and are shown in full in the [Appendix](#).

Statistical analysis was conducted using SPSS V30 and the thematic analysis using NVivo 15. Empirical Bayes utility estimation was undertaken within the survey delivery platform.

5 Results

This section details the survey results. First it covers the demographic profile of the sample [section 5.1](#), this is followed by the ranked priorities for service delivery [section 5.2](#), perceptions of licence value-for-money [section 5.3](#), and perceptions of F&G's performance in [section 5.4](#).

The survey was started by 1909 respondents, 58 dropped off at the household-income question and 1826 made it to the choice experiment. The choice experiment was completed by 1379 respondents for a completion rate of 76%. There is some uncertainty surrounding the high drop-off at this element. While choice tasks are more taxing and require more thought than simple rating questions (Chrzan & Orme, 2019), there was feedback from some frustrated respondents that found the survey 'froze' at this point. Some respondents also struggled to move on in the survey after completing the choice task. While tried-and-true the MaxDiff element is very new to the survey platform used. Despite reassurances from the company, there remains some suspicion around the survey-taker experience and a different platform could be used in future, dependent on funding. Analysis of the results is not in question. Including performance rating questions, 1362 respondents fully completed the survey.

5.1 Demographics: General and by usual licence type purchased

To provide deeper insight, demographic reporting also includes a breakdown based on those who usually purchase both fishing and game licenses, those who usually purchase just a game, and those usually purchasing just a fishing licence. The total sample breakdown by usual licence type purchased is shown in [Figure 2](#). It shows more than half of the sample that usually purchase a game licence also usually purchase a fishing licence. This rate of dual purchase is higher than the background rate for F&G and suggests an avidity bias⁴ in the sample.

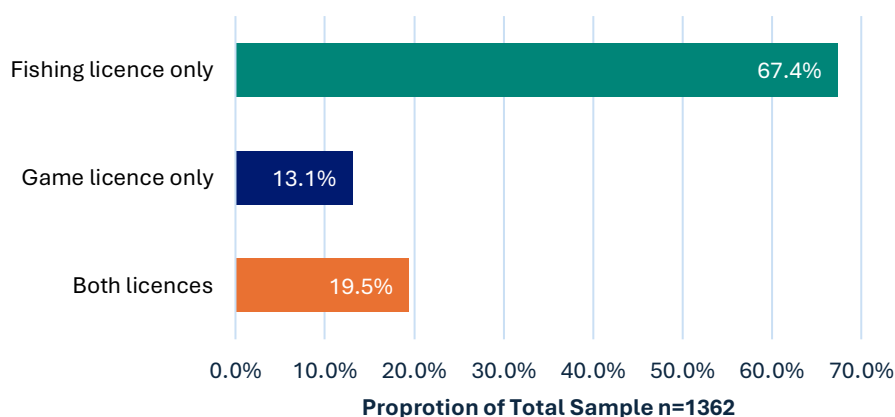


Figure 2 Sample Breakdown by the Type of Licence Usually Purchased

⁴ An avidity bias is a type of self-selection bias, often occurring in recreational samples, where the most avid (keen) participants are more likely to respond to a survey.

5.1.1 Age

The age profile of the sample reflects the older age skew of its customer base, however, there was still an over-representation in the 65+ age bracket.

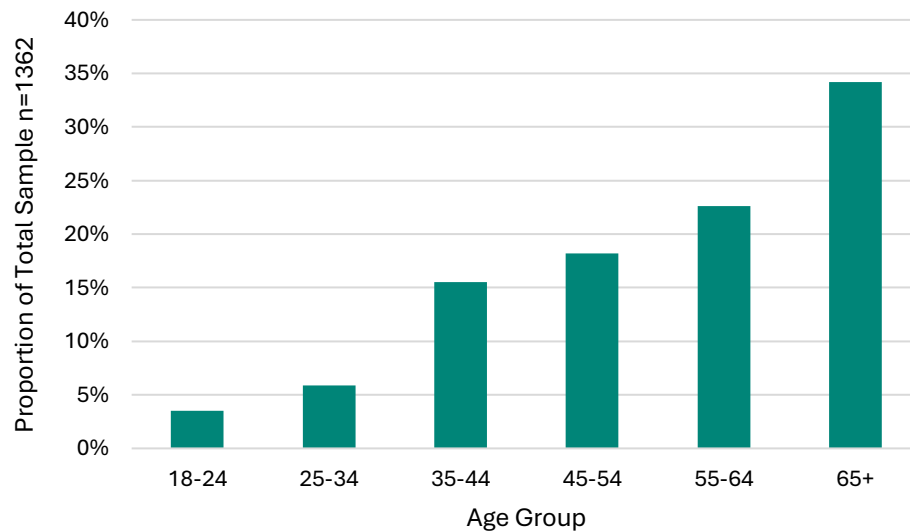


Figure 3 Total Sample Age Profile

A breakdown of usual licence type purchased by age groups is shown in Figure 4. It demonstrates lower rates of game licence purchase in the 25-34 age bracket compared to the adjacent age groups. The usual purchasing behaviour of that group is very similar to that of the 65+ age bracket. It is possible career and family pressures impact the 25-34 bracket in the same way fixed income and physical ability may impact the 65+ group.

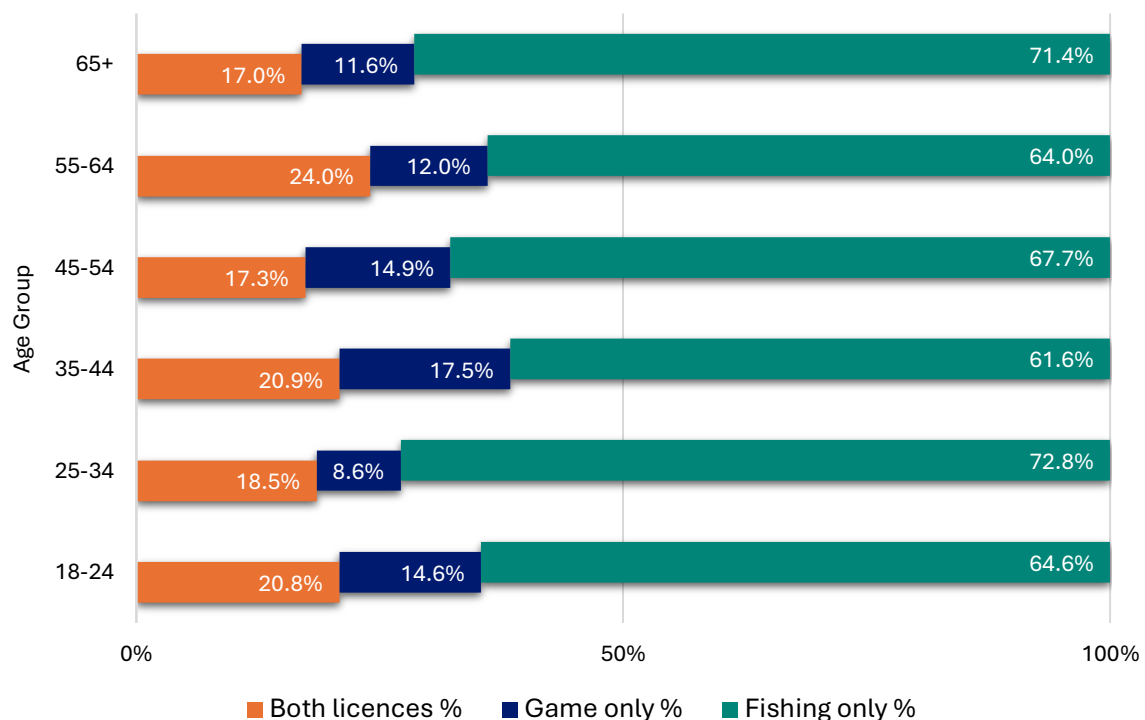


Figure 4 Usual Licence Purchasing Habit as a Proportion of Age Groups

5.1.2 Gender

The gender proportions of the sample were 92.1% male, 7.8% female, 0.1% non-binary/third gender, and 0.1% prefer-not-to-say. These proportions closely reflected those of the F&G database. Figure 5 shows licence purchasing habit as a proportion of gender⁵ and shows angling attracts 95% of female participants in the survey.

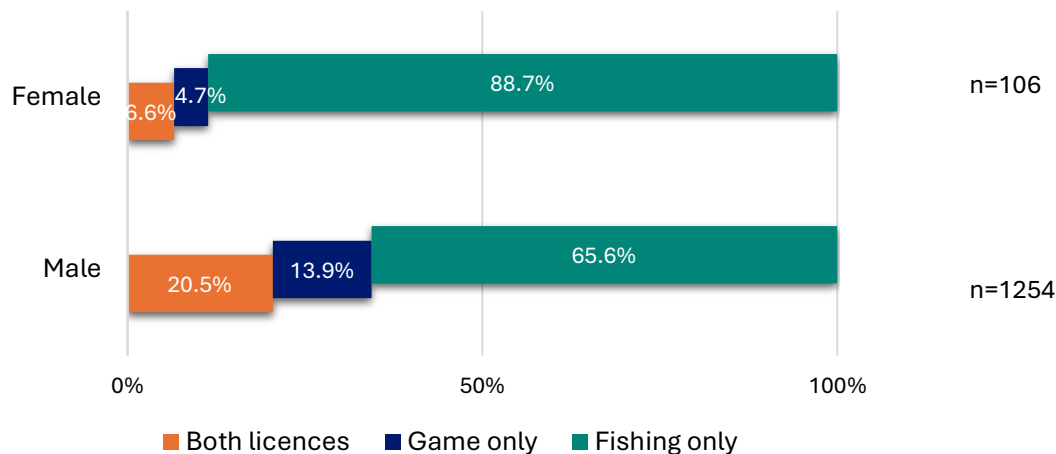
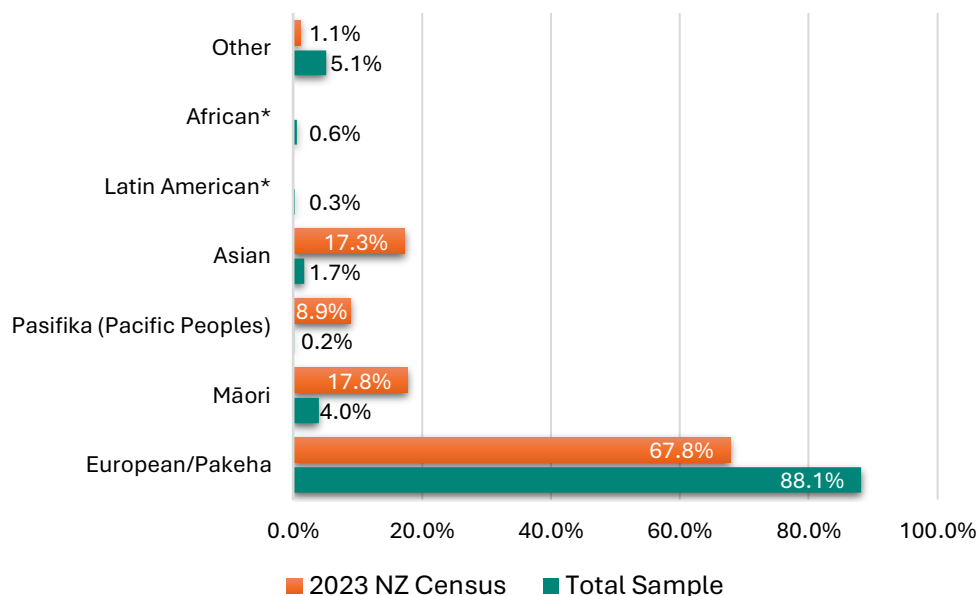


Figure 5 Usual Licence Purchasing Habit as a Proportion of Gender

5.1.3 Ethnicity

Figure 6 shows the sample largely identified as European/Pakeha and demonstrates an underrepresentation of Māori and other ethnic minorities.



*Note: African, Latin American, and Middle Eastern are a combined group in NZ Census reporting and this was 1.9% of the population (Stats NZ, 2024). Middle Eastern was inadvertently omitted from the survey choices and may account for some of the 'Other' category.

Figure 6 Total Sample Ethnicity Profile Compared to the 2023 NZ Census

⁵ Only the two main genders are shown, as the proportion of the remaining two respondents does not lend itself to graphical representation.

Usual licence purchasing behaviour for the sample as a proportion of each ethnicity is shown in Figure 7. Māori appear more engaged with game bird hunting than European/Pakeha and ‘Other’ had a profile more like Māori and European/Pakeha than any other group. Any inference taken from the results for ethnic minorities should be approached cautiously given their small sample size.

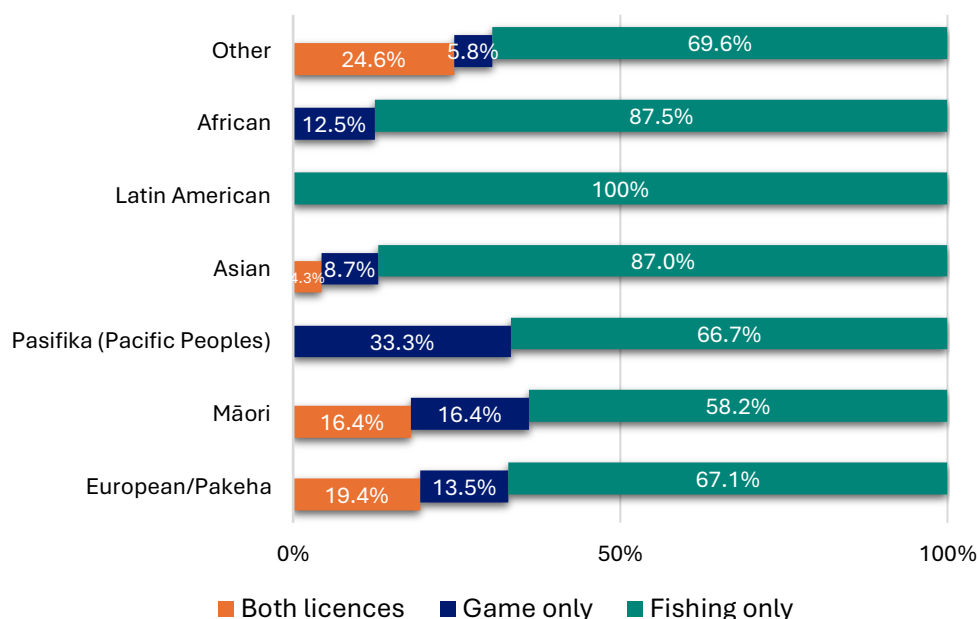
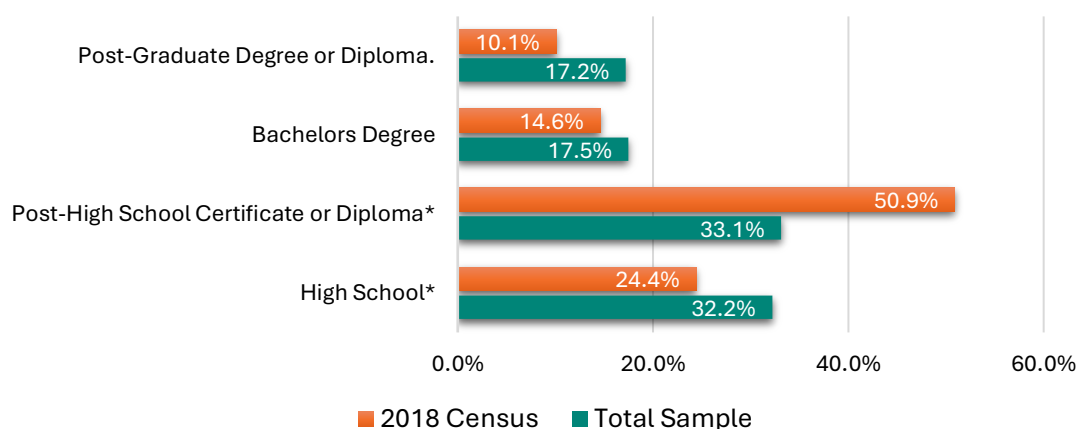


Figure 7 Usual Licence Purchasing Habit as a Proportion of Ethnicity

5.1.4 Education

Figure 8 shows the proportions of the total sample across four education brackets. Against the 2018 NZ Census⁶ data (Figure.nz, 2024) the sample is over-represented in the higher education bracket.



*Note: Post-high school certificates are from levels 1-4 and may apply from school leaving age upward. Diplomas are level 5 and 6.

Figure 8 Education Profile of the Total Sample

⁶ The 2018 NZ Census has been used as the 2023 Census data for education was not released at the time of writing.

A direct comparison at lower education levels is more difficult due to NZ Census data gathering strategies⁷. Based on best available data, the sample appears underrepresented in post-high school qualifications and overrepresented in high school only.

Usual licence purchasing habits by education level are shown in Figure 9. The proportion of those usually purchasing game licences looks to reduce as the level of education increases.

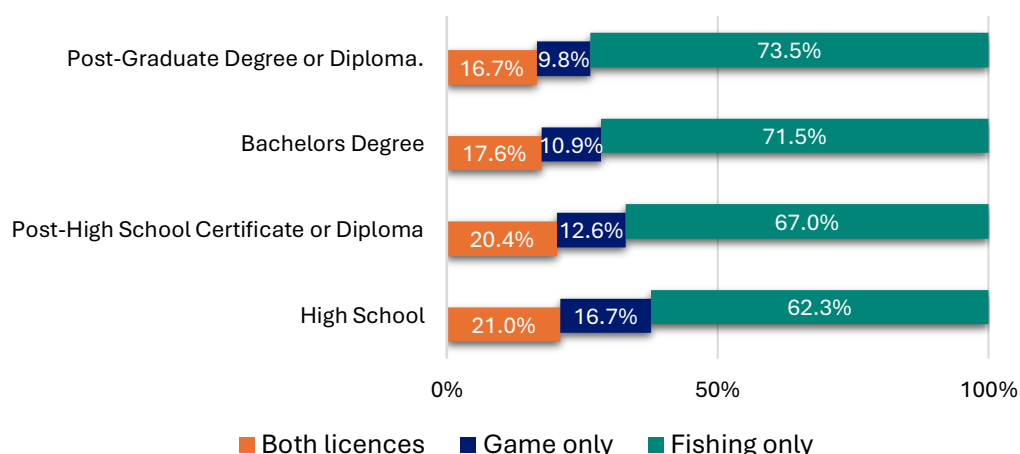


Figure 9 Usual Licence Purchasing Habit as a Proportion of Education Level

5.1.5 Dependent children

Of the total sample, 23% had dependent children. The usual licence purchasing habit for those with and without dependent children is shown in Figure 10. Those without dependent children were a little more angling focussed.

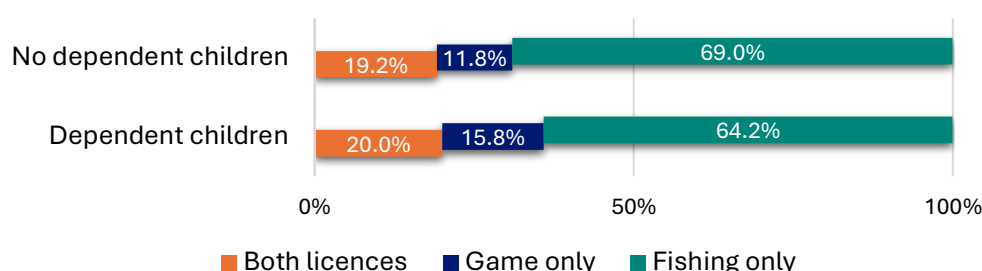


Figure 10 Usual Licence Purchasing habit as a Proportion of Dependent/No Dependent Children

5.1.6 Household income (before tax)

In 2024, the median New Zealand household income was \$122,500 (MBIE, 2024a). In the absence of yet-to-be-released 2023 household-income NZ census data, a comparison of household income distribution is challenging. In 2018, 34% of households had an income over \$100,000 (MBIE, 2024b). Given the 2024 median income, it is likely the proportion of households with income over \$100,000 has increased markedly. In comparison, 54% of the total sample had a household income above \$100,000. It is likely

⁷ NZ Census education data is taken across all residents over the age of 15 years.

the proportion over \$200,000 is over-represented in the sample, however, this may be indicative of the F&G customer base.

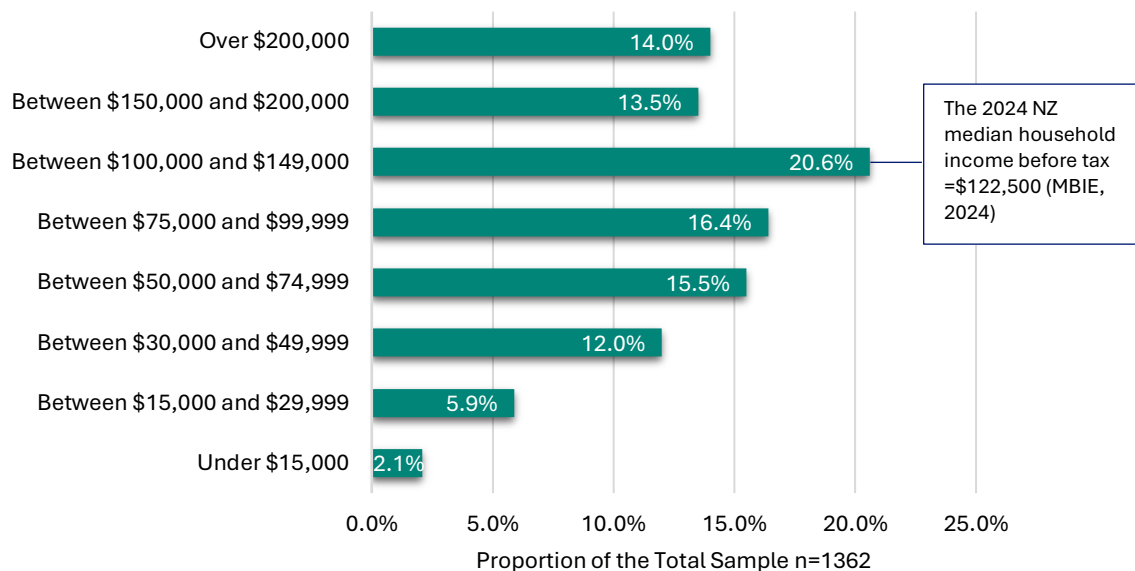


Figure 11 Household Income of the Total Sample

Usual licence purchasing habits by income bracket are shown in Figure 12. Lowest income bracket aside, the proportion of game licences purchased tends to increase with income. The proportion of dual purchases remains steady with household incomes between \$50,000 and \$200,000, with a slight increase for the highest bracket. The profile of the lowest bracket is open to interpretation. The bracket is very low and may have been interpreted as income above the retirement benefit by some and misreported by others.

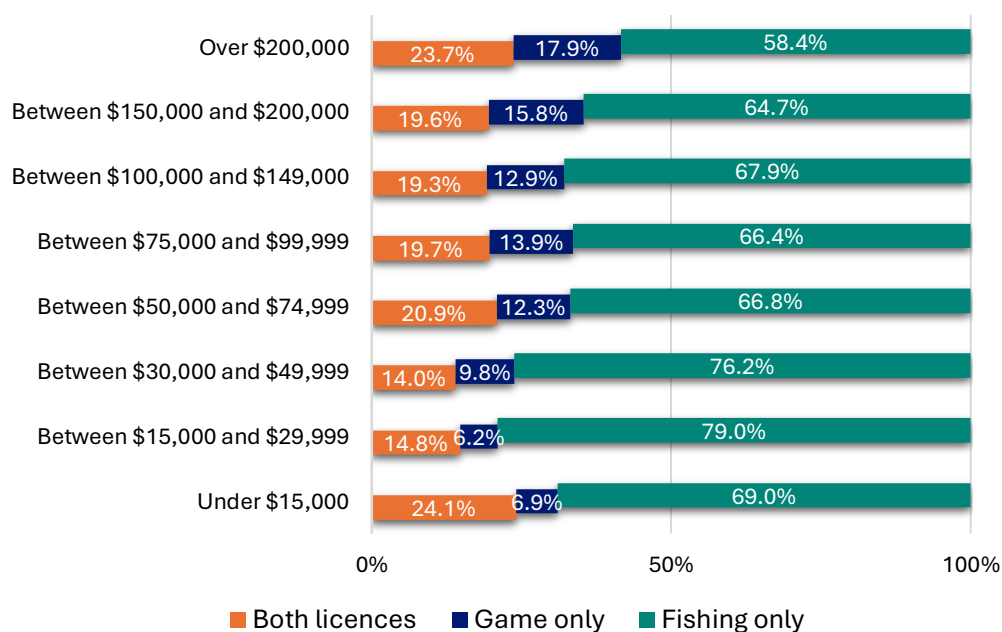


Figure 12 Usual Licence Purchasing Habit as a Proportion of Household Income Brackets

5.1.7 Fish & Game region

The proportions of the total sample from each of the F&G regions is shown in Figure 13.

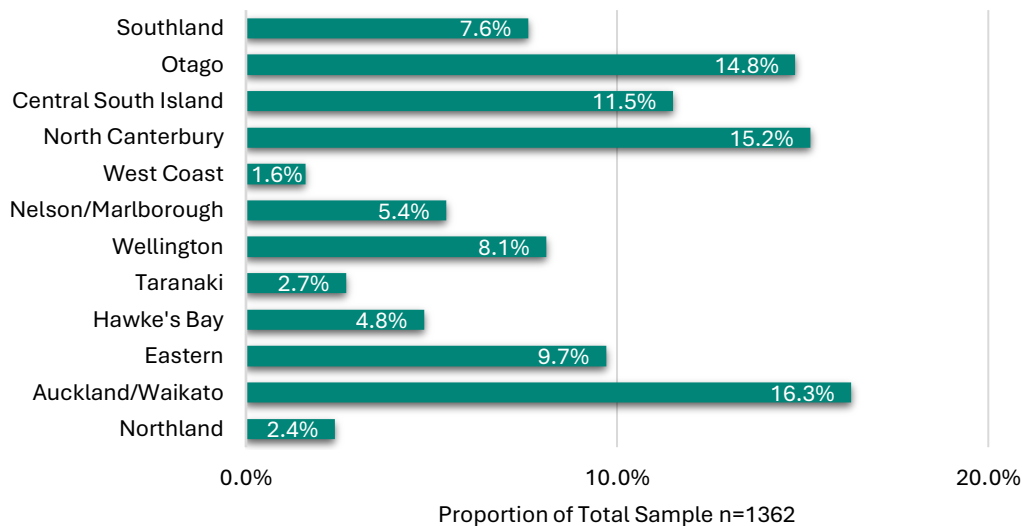


Figure 13 Fish & Game Regions as a Proportion of the Total Sample

When compared against the F&G database, Auckland/Waikato and North Canterbury are somewhat overrepresented while Central South Island, Otago, and Eastern are somewhat underrepresented. Minor variation occurs across the remaining regions.

Figure 14 details the usual licence purchasing behaviour of respondents in each F&G region.

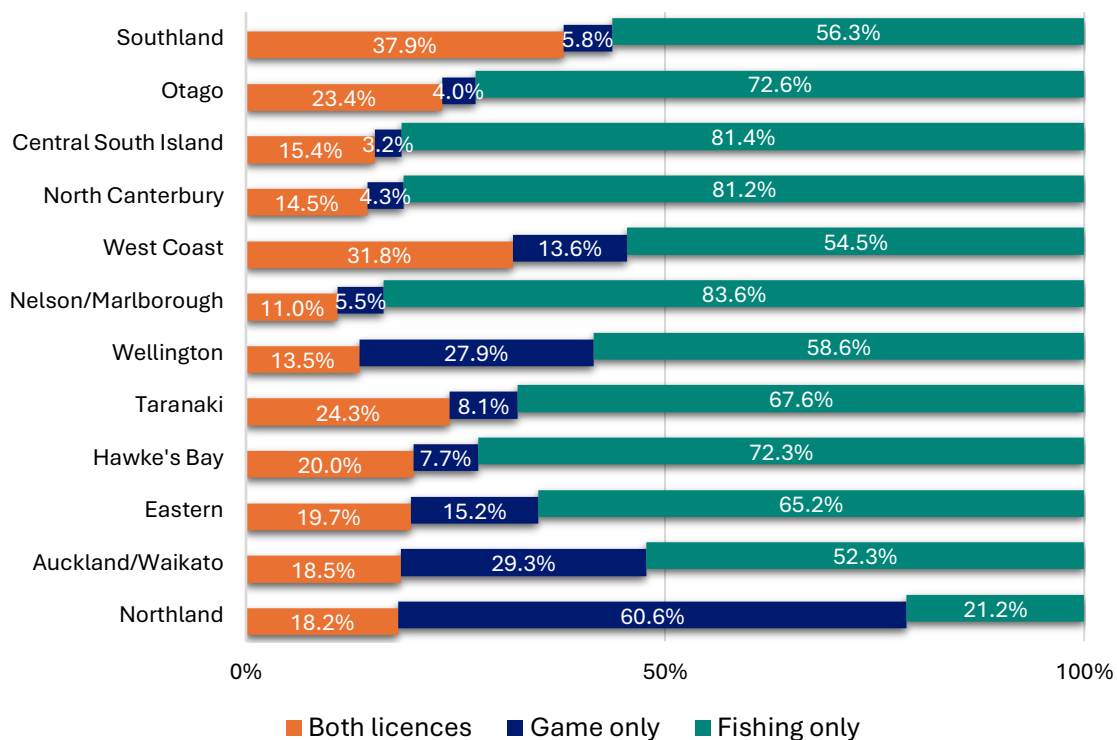


Figure 14 Usual Licence Purchasing Habit as a Proportion of Each Fish & Game Region

The Northland sample stands apart as predominantly game oriented with close to half of respondents in Auckland/Waikato and West Coast usually purchasing game licences. While all regions other than Northland were characterised by a high proportion of angling, the Central South Island, North Canterbury, and Nelson/Marlborough held the highest proportions of those usually purchasing only fishing licences.

5.1.8 Understanding of Regional Fish & Game Council's role and activities

Respondent's self-assessed understanding of the role and activities of their regional F&G Council is shown in Figure 15, and the proportion of usual licence purchasing habit for each level of understanding is shown in Figure 16. Eighty-seven percent of respondents felt they had at least some understanding of their regional F&G Council. The proportion of those that usually purchase both fishing and game licences tends to increase with self-assessed understanding. Those with 'Excellent understanding' had twice the proportion of dual licence purchasers compared to those with 'Some understanding.'

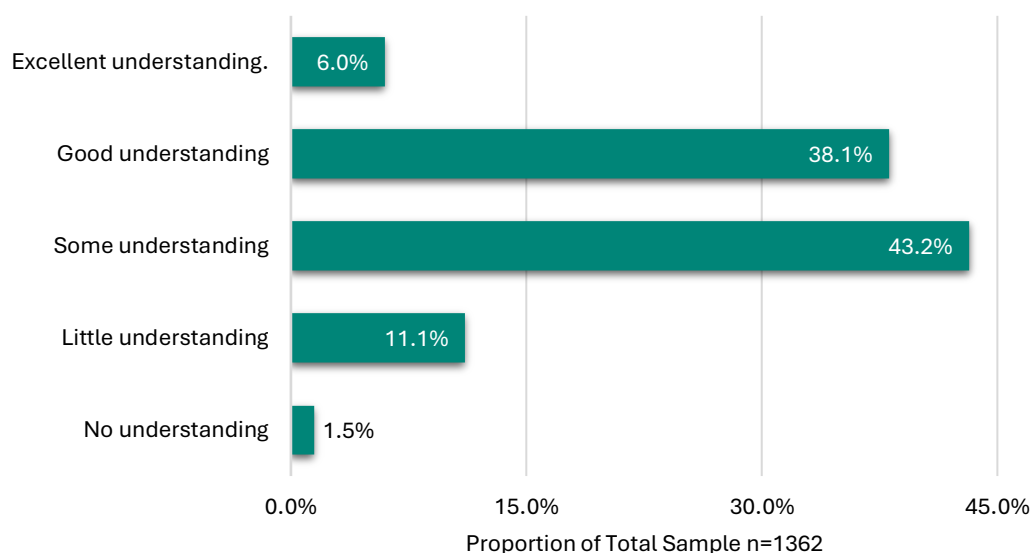


Figure 15 Understanding of Regional Fish & Game Council's Role and Activities

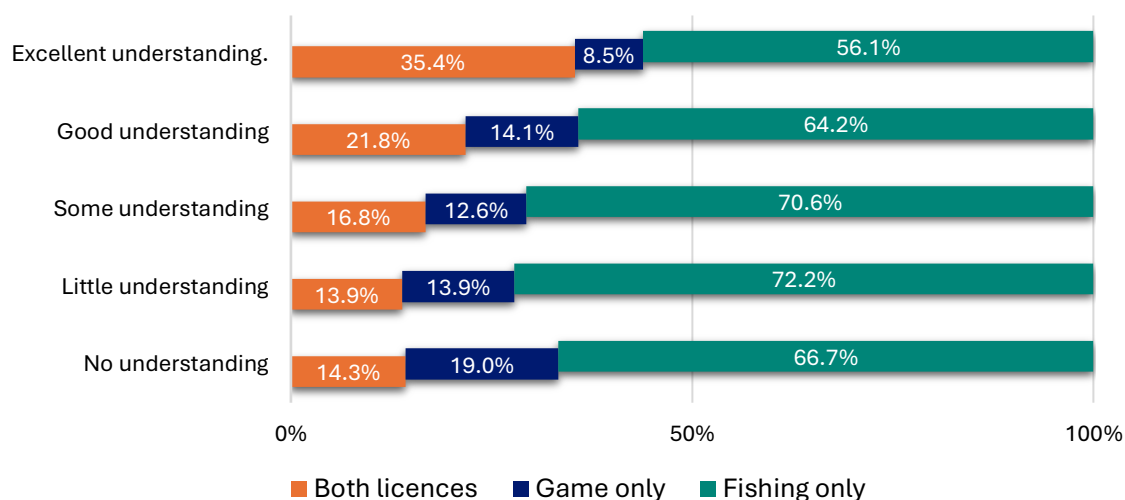


Figure 16 Usual Licence Purchasing Habit as a Proportion of the Level of Understanding of Regional Fish & Game Council's Role and Activities

5.2 Priorities for service attributes

This section details respondent's perspectives on the importance of selected F&G service attributes. It applies the tried-and-true MaxDiff (Best-Worst) methodology (Chrzan & Orme, 2019). The priorities are also explored using selected demographic variables. The ranked service priorities for the total MaxDiff sample of 1379 are based on a complex mathematical engine. It creates utility scores and then converts them to a probability-scaled score. These scores are ratio-scaled. This means that a score of 9 is three-times more important to respondents than a score of 3. If approached in a meaningful way, the choice-sets required thought, and some respondents will have found it taxing. This was demonstrated by respondent comments such as:

“On each of the most/least important questions it is difficult to answer them because everything f&g does seems to be a good thing.”

“It was a hard set of questions to answer. They are all important.”

This uneasiness in decision-making more closely resembles the reality of allocating finite resources across an organisation, whereas simple importance rating questions place no burden on the respondent. When using rating scales, often everything becomes important. This section explores ranked priorities for the full sample and then explores changes in priorities across sub-groups based on age, gender, ethnicity, income, education, hunters and fishers, dependent children, and F&G Region.

While the utility computations will run with as few as 40 responses, larger samples give more precise estimates. Following the rule-of-thumb calculations by Lipovetsky & Conklin (2014) for 16 attributes shown in 15 sets of 4 items, a sample of $n \geq 107$ would yield low precision utilities, $n \geq 213$ medium precision, and $n \geq 426$ high precision. To this end, regions have been combined to improve precision of utility estimates. Regional amalgamations recommended in the Ministerial Review (Clark & Mills, 2021) were used to guide how regions were combined. Reported results for sub-groups should be viewed with the number of respondents and the above calculations in mind. Service attribute definitions can be found in [Table 1, p 7](#). Probability-scaled utility scores and confidence intervals for all sub-groups are shown in [Appendix A](#).

5.2.1 All respondents

Ranked service priorities for all respondents $n=1379$ are shown in [Figure 17](#). It is important to remember that a low score does not mean respondents think the attribute is unimportant, just that it is of low importance among those they had to choose from.

The results reveal the most important attribute was *Access* (13.31) and the least important was *Promoting Females* (1.48). *Access* was nine-times more important to respondents than *Promoting Females* and 13% more important than the next most important attribute (*Conservation Orders*). The ten most important attributes may be characterised chiefly as i) activities that protect waterbodies and the ability of licence holders to use them, and ii) activities that manage sportfish and game as a recreational resource.

Conservation Orders (11.74) may be unexpected as second most important. However, it is possible respondents viewed this as both the highest form of waterbody protection and the most appropriate vehicle to convey an environmental protection stance. *Ecology Monitoring* (10.64) also reflects the environment as a priority and links into water quality.

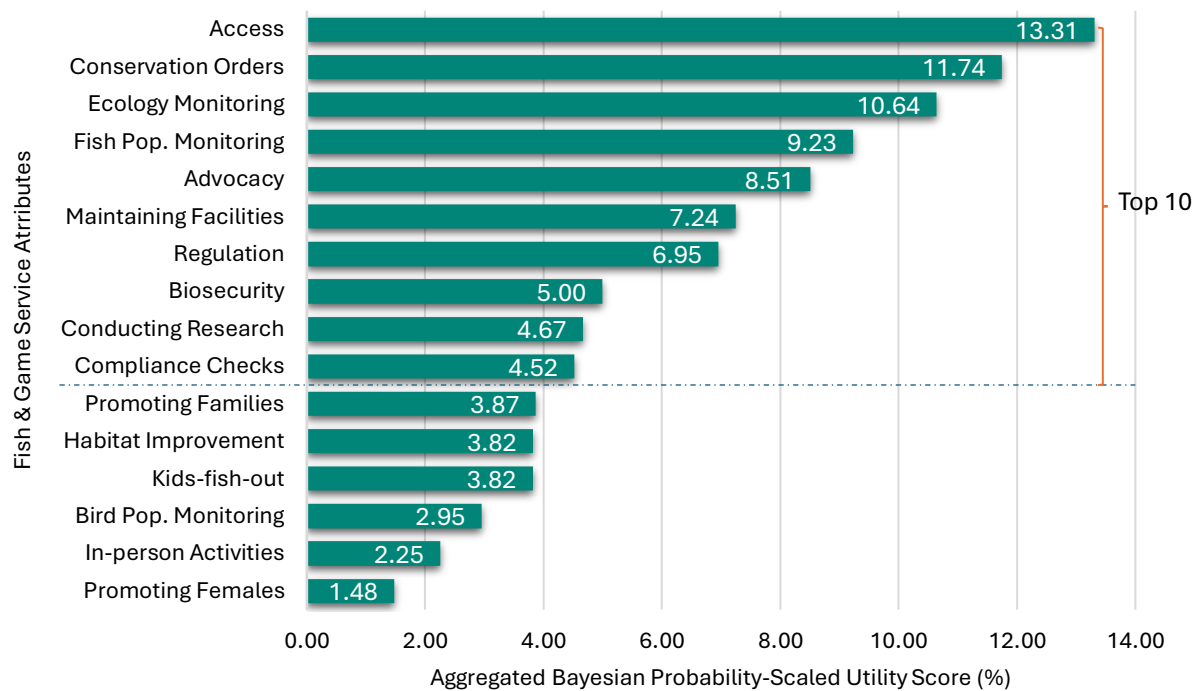


Figure 17 Priorities for Service Attributes: All Respondents

The high rating of *Fish Pop. Monitoring* (9.23) compared to *Bird Pop. Monitoring* (2.95) likely reflects licence sales and the subsequent sample skew towards anglers. A comparison to hunter priorities is covered in [section 5.2.7](#).

Advocacy (8.51), *Maintaining Facilities* (7.24), and *Biosecurity* (5.00) also reflect an environmental stance among the top ten attributes. Notably, *Biosecurity* was seen as only half as important as ecological monitoring. It may be that respondents didn't feel especially threatened by the spread of unwanted organisms, or that they felt *Ecology Monitoring* might cover biosecurity monitoring and some substitution of attributes took place. It should also be noted that the survey definition of *Biosecurity* was presumptive of an understanding of what biosecurity was. *Regulation* (6.95), *Conducting Research* (4.67), and *Compliance Checks* (4.52) round out the top ten most important attributes.

Setting aside the sample-effect on *Bird Pop. Monitoring*, four out of the five lowest importance attributes were activities aimed at community outreach and participation growth.

5.2.2 Under 45yrs and 65+yrs

A comparison of importance ratings from those under the age of 45yrs (n=346) and those 65+yrs (n=472) was conducted. The sample sizes indicate a mixture of medium and high

precision respectively. The split was designed to represent the priorities of those with 25+yrs of future licence purchase ahead of them and those of Seniors/Loyal Seniors.

Access (11.09) declined as a priority for the under 45yrs group and decreased its rank to 3rd. *Conservation Orders* (13.56) and *Ecology Monitoring* (11.84) were 1st and 2nd ranked respectively, and *Habitat Improvement* (3.91) increased from 12th to 10th place. Together these changes indicate a more environmental focus in this age bracket.

Priorities for the 65+yrs group largely follow those of the total sample, however the relative importance of *Access* (19.27) was elevated to 44% more important than the next most important attribute (*Conservation Orders*). This may indicate the need for easier access and access by vehicle as strength and mobility declines. *Regulation* and *Maintaining Facilities* swap places with *Regulation* moving upwards to 6th place.

Kids-fish-out increases in importance from 13th to 11th place for the 65+yrs group and this may reflect an interest and involvement with grandchildren. *Promoting Families* drops from 11th to 12th place and *Habitat Improvement* drops one place to 13th. *Promoting Females* remained lowest ranked for both age brackets, which rules out an age bias for this attribute.

5.2.3 Non-Male

Only n=110 respondents did not identify as male, and the sample size indicates low precision. Importance rankings were largely like the total sample. *Access* (10.79) dropped from first to third with *Ecology Monitoring* (13.68) being most important, and *Conservation Orders* (13.65) remaining in second place. *Kids-fish-out* (2.92) increased its place from 13th to 11th, however *Promoting Females* (1.08) unexpectedly remained in last place. This suggests that the low ranking is not related to a gender bias.

5.2.4 Non-European/Pakeha

As part of F&G's responsibilities under Te Tiriti o Waitangi, understanding the importance of service attributes to Māori is important. In this sample only 55 respondents identified as Māori. To meet at least the lowest threshold for precision, all Non-European/Pakeha respondents were combined for a sample of n=164. The top four ranking attributes for this group remained the same as those for the total sample. *Access* (14.40) had an increased relative importance of 23% over *Conservation Orders* (11.71). *Promoting Families* was more important to Non-European/Pakeha respondents and moved up two places to 9th. *Compliance Checks* were of reduced relative importance and dropped four places from 9th to 13th.

5.2.5 Income

In a comparison of household incomes above \$100,000pa n=661 and below \$100,000pa n=718 there was very little difference between groups and compared to the total sample. The sample sizes indicate high precision for both samples. *Kids-fish-out* (3.38) was of increased relative importance to those with incomes below \$100,000pa and improved from 13th to 9th place at the expense of *Promoting Families* (3.31) and *Habitat Improvement* (2.98). This apparent income effect may reflect the 63% of respondents in this bracket that are also in the 65+yrs age bracket. The only difference between those

with household incomes over \$100,000 and the importance rankings of the total sample was that *Habitat Improvement* (3.44) improved one place to 11th at the expense of *Promoting Families* (3.18).

5.2.6 Education

Education was separated into two groups, i) those with a bachelor's degree or higher n=447 and ii) those with High School or a post High School certificate n=902, indicating high precision for both groups. The rank order importance for those with High School or Post-High School certificate was largely the same as that for the total sample, with some movement in the mid to lower ranks. *Compliance Checks* (4.19) improved one place to 9th at the expense of *Conducting Research* (3.89), and Kids-fish-out improved two places to 11th at the expense of *Promoting Families* (3.43) and *Habitat Improvement* (3.33).

When compared to the total sample, those with a bachelor's degree or higher rated *Advocacy* (10.16) as more important than *Fish Pop. Monitoring* (9.55), and *Regulation* (6.79) as more important than *Maintaining Facilities* (6.24). They also rated *Habitat Improvement* (2.93) as more important than *Promoting Families* (2.92).

5.2.7 Hunters and Anglers

The hunter sample had n=451 respondents indicating high precision. The top three attributes were the same for hunters as the total sample. Notably, *Access* (16.56) had an elevated relative importance and was 47% more important than the next most important attribute (*Conservation Orders*, 11.29). *Maintaining Facilities* (8.07) and *Habitat Improvement* (7.49) both increased their rankings to 4th and 5th respectively. This demonstrates the utility hunters see in 'developing and enhancing game bird habitat' and a degree of overlap with 'maintaining and investing in Fish & Game owned and managed wetlands and waterbodies.'

Bird Pop. Monitoring (4.38) increased from 14th to 8th, reflecting its natural importance to hunters. *Fish Pop. Monitoring* (6.69) still out ranked *Bird Pop. Monitoring* at 7th place. This is likely due to the fact 60% of those that usually purchase a game bird licence also usually purchase a fishing licence. It is also possible hunters understand that managing fisheries is an essential part of F&G's role.

The Angler sample had n=1197 respondents of which, 22% were also usual purchasers of game licences. The importance rankings of anglers held little or no change from that of the total sample and this likely reflects their greater proportion of the total sample.

5.2.8 Dependent children

The sample sizes for those with dependent children was n=453 and those without was n=928 both indicating high precision. The rank order importance for both groups was largely the same as the total sample. Of most interest with this group is the importance of *Promoting Families* and *Kids-fish-out*. *Promoting Families* ranked 12th for those without dependents but increased importance two places to 10th for those with dependents. *Kids-fish-out* remained unchanged for both groups at 13th place.

5.2.9 Regions

5.2.9.1 Auckland/Waikato + Northland

Northland had only n=33 respondents and was combined with Auckland/Waikato to give a sample size of n=259, which indicates moderate precision. For Auckland/Waikato/Northland the top three attributes were the same as for the total sample with the relative importance of *Access* (17.03) being 42% more than that of *Conservation Orders* (11.98). *Fish Pop. Monitoring* (7.66) drops from 4th to 6th priority for this combined region and *Maintaining Facilities* (8.55) and *Habitat Improvement* (4.81) increase to 5th and 8th place respectively. These movements may reflect the high rates of game licence purchase among Northland (79%) and Auckland/Waikato (49%) respondents.

5.2.9.2 Eastern + Hawke's Bay

Hawke's Bay had a sample of n=66 and was combined with the Eastern sample to give n=199 respondents, indicating low precision approaching medium precision. The rank order of attributes for Eastern/Hawke's Bay largely mirrored that of the total sample. *Promoting families* (3.59) and *Compliance Checks* (3.56) swapped rankings but had near identical utility scores. The relative importance of *Access* (16.17) in this sample was elevated above the total sample at 32% more important than the second placed *Conservation Orders* (12.29). This may reflect the effects of cyclone damage to the Hawke's Bay region in 2023.

5.2.9.3 Wellington + Taranaki

Taranaki had a sample of n=37 and was combined with Wellington for a sample of n=148, which indicates low precision. For Wellington/Taranaki the top three attributes remained unchanged from the total sample. The relative gap in importance between *Access* (18.56) and *Conservation Orders* (13.91) was more than double that of the total sample and the gap between *Conservation Orders* and *Ecology Monitoring* (10.20) more than three times that of the total sample. *Fish Pop. Monitoring* (7.97) dropped two places to 6th, and *Habitat Improvement* (3.71) increased two places to 10th at the expense of *Compliance Checks* (3.12) and *Promoting Families* (2.89). The increased relative importance of *Habitat Improvement* may have been due to 41% of Wellington region's respondents being usual purchasers of a game licence.

5.2.9.4 Nelson/Marlborough + West Coast

The combined sample of Nelson/Marlborough & West Coast was n=97. This falls below the threshold for low precision and so the results are not reported other than in [Appendix A, Table 10](#).

5.2.9.5 North Canterbury + Central South Island

The combined sample for these regions was n=366 which indicates medium precision approaching high precision. Notably for North Canterbury/Central South Island, *Conservation Orders* (15.55) overtook *Access* (14.12) as the most important attribute. *Ecology Monitoring* (11.39), *Fish Pop. Monitoring* (11.07), and *Advocacy* (9.52) remained in 2nd, 3rd, and 4th places respectively and all had elevated relative importance compared

to the total sample. This ‘top heavy’ distribution of importance means that the utility scores of the lower ranked attributes fall away quickly. It also underscores the importance of waterway protection and fish stock management to these regions.

5.2.9.6 Otago + Southland

The sample for these combined regions was n=310 indicating medium precision. The rank order of importance for Otago/Southland was very similar to those of the total sample. *Access* (16.60) remained the most important attribute with the gap between *Access* and *Conservation Orders* (12.43) being more than double that of the total sample. The gap in importance between *Fish Pop. Monitoring* (9.50) and *Advocacy* (7.42) was nearly three times that of the total sample. *Regulation* (6.97) improved to 6th at the expense of *Maintaining Facilities* (6.51) and *Kids-fish-out* (3.78) improved to 12th at the expense of *Habitat Improvement* (2.88).

5.3 Value

This section details respondents licence tenure over the past five years, perceptions of their licence’s value-for-money, and reasons for not purchasing in the 2023/24 fishing and 2024 game seasons. The results have been weighted for Age and F&G Region, no weighting for Gender was required.

5.3.1 Fishing

Of those respondents that usually purchase a fishing licence (88.5% of the sample), 86.9% purchased a licence in 2023/24.

5.3.1.1 Fishing licence tenure over the past five years

The licence tenure of those that purchased a 2023/24 fishing licence is shown in [Figure 18](#). Most (69%) had purchased a licence at least four out of the past five years with the median being five out of five.

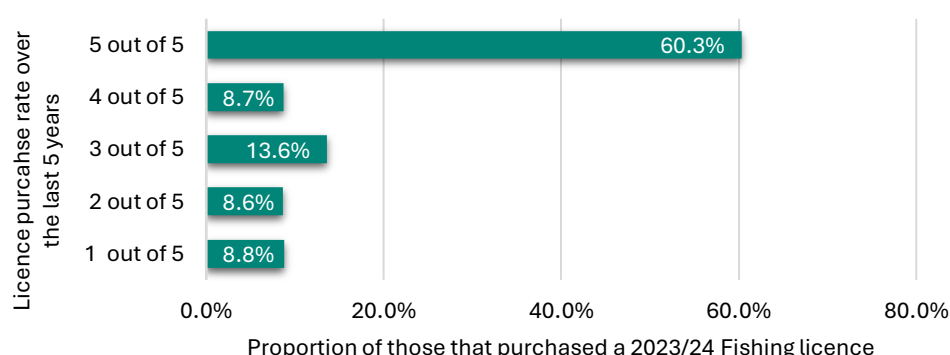


Figure 18 Fishing Licence Tenure Over the Past 5 Years

[Figure 19](#) shows fishing licence tenure by age group. The proportion of loyal year-on-year licence purchasers increases with age and the most loyal purchasers were in the 65+ yrs age group, all of which were ‘Loyal Seniors.’ The highest rate of mixed licence tenure was in those between 18- and 34 yrs of age. The proportion of those between 18 and 34 yrs that are recent to the sport or irregular purchasers is unknown.

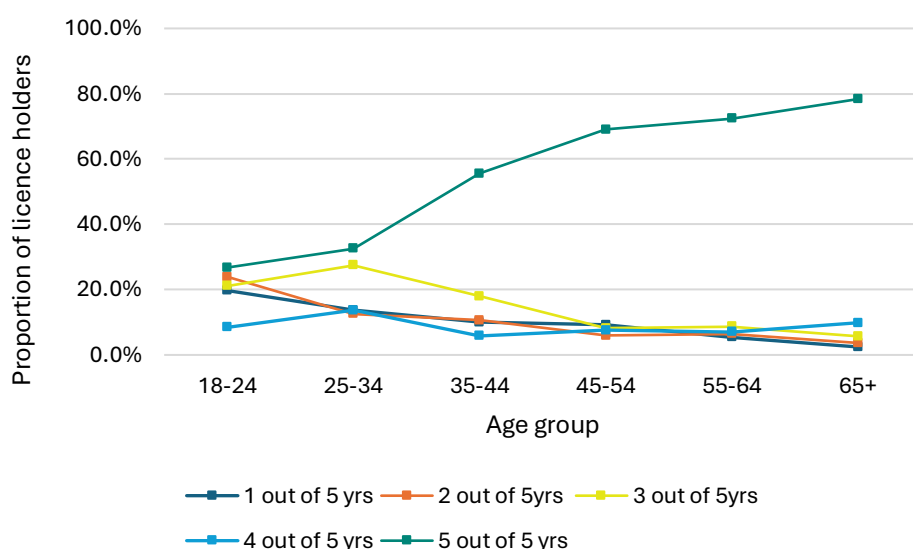


Figure 19 Fishing Licence Tenure Over the Past 5 Years by Age

5.3.1.2 Fishing licence value-for-money rating

The distribution of fishing licence value ratings is shown in Figure 20. Most licence holders (63.6%) were positive and rated value for money as ≥ 6 . The median rating for fishing licences was 7 out of 9. Poor value ratings (1-4) were given by 19.7% of respondents.

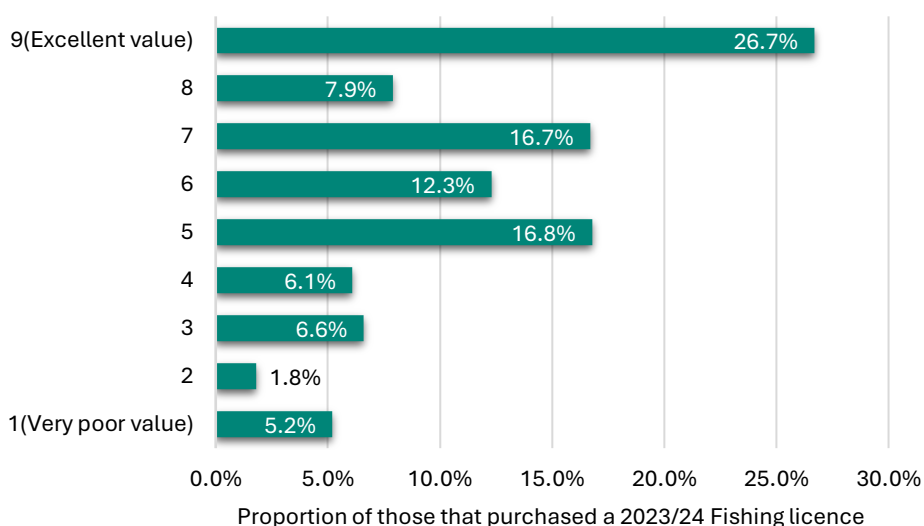


Figure 20 Fishing Licence Value for Money

5.3.1.3 Fishing licence value for money by licence type

The proportion of respondents purchasing each fishing licence type are shown in Table 2 and the perceived value for money by licence type is shown in Figure 21. Whole season fishing licence types represent 92.3% of purchases. Stoffels & Unwin (2023) define these licence types as 'Tier-1' and the proportion of tier-1 is higher in this sample than the

background rate for F&G licence holders. Although these anglers are responsible for a very high proportion of angler effort (Stoffles & Unwin, 2023), this means the views of these anglers are overrepresented.

Table 2 Fishing Licence Purchased by Licence Type

Type of 2023/24 fishing licence purchased	Proportion(%) of purchasers
Whole Season Adult	50.9
Whole Season Adult Local Area	4.4
Whole Season Family	27.2
Whole Season Loyal Senior	9.8
Winter Season Adult	1.7
One Day Adult	4.1
Long Break Adult	0.6
Short Break Adult	1.3
Total	100

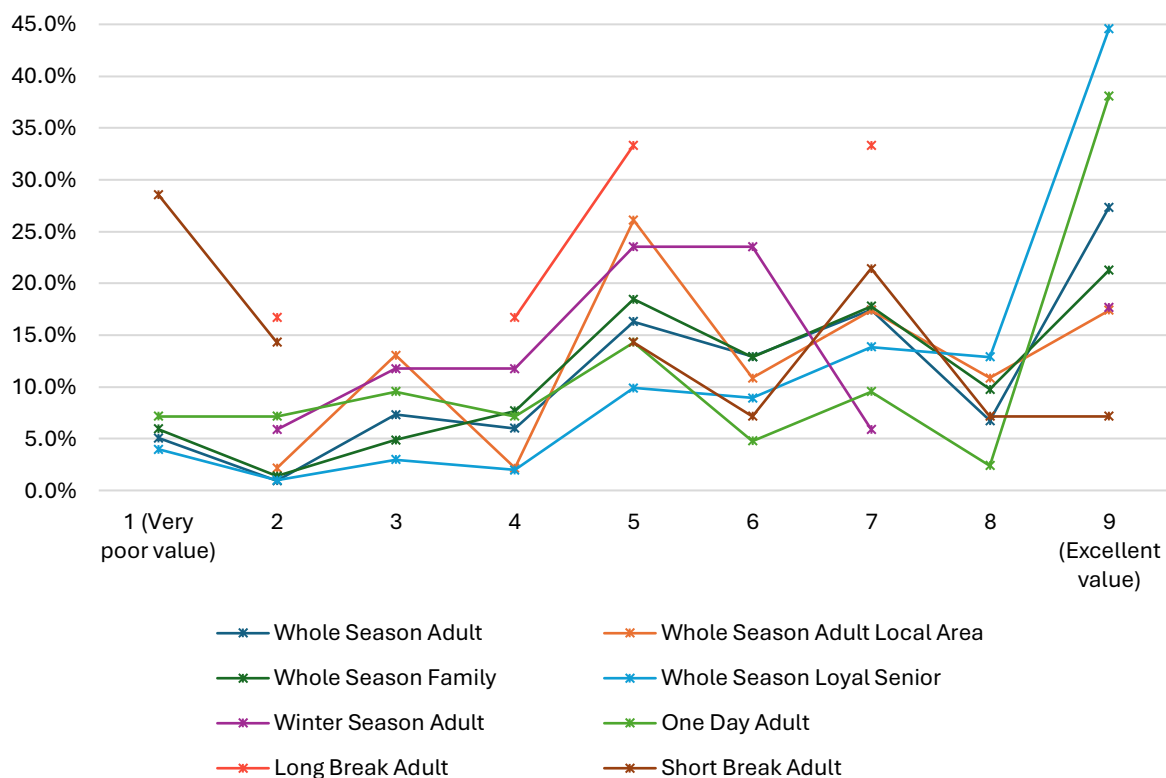


Figure 21 Fishing Licence Value for Money by Licence Type

Although a 9-point scale was applied, peaks are evident at five points in the scale. The highest proportion of 'Excellent value' ratings were among *Whole Season Loyal Seniors* (44.6%), *One Day Adult* (38.1%), and *Whole Season Adult* (27.3%). *Short Break Adult* (n=14) had the lowest proportion of 'Excellent value' ratings (7.1%) and the highest proportion of 'Very poor value' ratings (28.6%).

5.3.1.4 Reason for non-purchase of a 2023/24 fishing licence

The main reason for not purchasing a 2023/24 fishing licence is shown in Table 3. An increasingly busy life accounted for a quarter of those not purchasing, followed by expense (18.1%). The question choices for this element were adopted from the Primary Purpose (2023) study, with the addition of a weather-based choice. Although the available choices seem thoughtful and reasonable, they failed to capture the motivation behind 39.5% of non-purchasers.

Table 3 Main Reason for Not Purchasing a 2023/24 Fishing Licence

Main reason for not purchasing	Proportion of non-purchasers
I am becoming too busy to find time	24.8
The sport is becoming too expensive	18.1
There are less easily accessible fishing locations around where I live	2.2
I plan to focus on other hobbies	2.2
I am becoming less physically able	2.9
Concerns about personal safety	0.8
Weather impacted my area and I decided not to fish	9.4
Other	39.5
Total	100

5.3.2 Hunting

Of those with a usual habit of purchasing a Game Bird licence (31.8% of the sample), 82.9% purchased a 2024 Game Bird licence and 97% of those were whole season licences.

5.3.2.1 Game licence tenure over the past five years

The licence tenure of those that purchased a 2024 game bird licence is shown in Figure 22. Most (79.3%) had purchased a licence at least four out of the past five years with the median being five out of five.

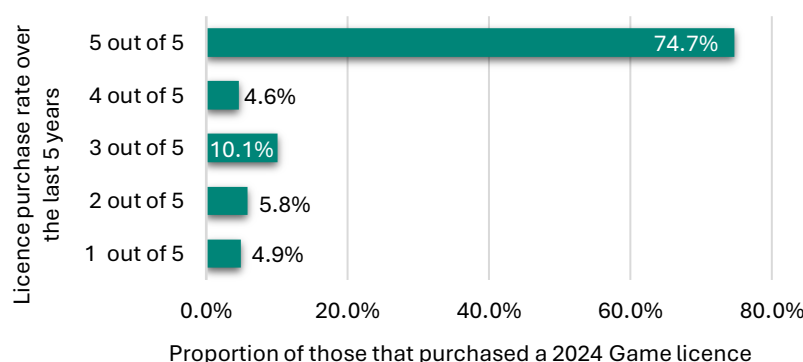


Figure 22 Hunting Licence Tenure Over the Past 5 years

5.3.2.2 Game licence value-for-money rating

The distribution of game licence value ratings is shown in Figure 23. Most licence-holders (52.1%) were positive and rated value for money as ≥ 6 . The median rating for game licences was 6 out of 9. Poor value ratings (1-4) were given by 28.5% of respondents. Overall, game licences were seen as being lower value for money than fishing licences.

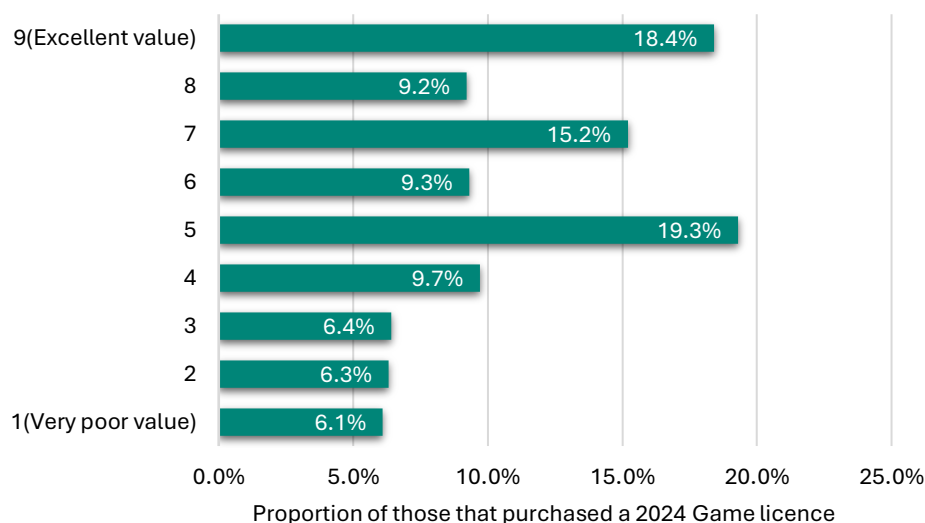


Figure 23 Game Licence Value for Money

5.3.2.3 Reason for non-purchase of a 2024 game licence

The main reason for not purchasing a 2024 game licence is shown in Table 1. Reduced accessibility of hunting locations (16.5%) and the expense associated with hunting (15%) accounted for a third of those choosing not to purchase in 2024. As with fishing non-purchasers, a large proportion (47.4%) of game non-purchasers did not have their motivation captured by the available choices.

Table 4 Main Reasons for Not Purchasing a 2024 Game Bird Licence

Main Reason for not purchasing	Proportion(%) of non-purchaser
I am becoming too busy to find time	12.5
The sport is becoming too expensive	15.0
There are less easily accessible hunting locations around where I live	16.5
I plan to focus on other hobbies	3.2
I am becoming less physically able	3.0
Concerns about personal safety	-
Weather impacted my area and I decided not to fish	2.4
Other	47.4
Total	100

5.4 Performance

This section details fisher's and hunter's perceptions of F&G's performance. Respondents were asked to use a simple rating scale and were given the option to be unsure. They were then given the opportunity to offer a comment regarding the performance rating they gave. The comments were analysed according to themes and are shown in [section 5.4.2](#). Performance ratings have been weighted for Age and F&G Region.

5.4.1 Performance rating

Q: 'How good or bad a job would you say Fish & Game does on your behalf?'

The performance ratings are weighted for Age and F&G Region and are shown in [Figure 24](#). No weighting for Gender was required. Overall, most licence-holders (60.6%) gave F&G a good performance rating with just 7.1% bad ratings.

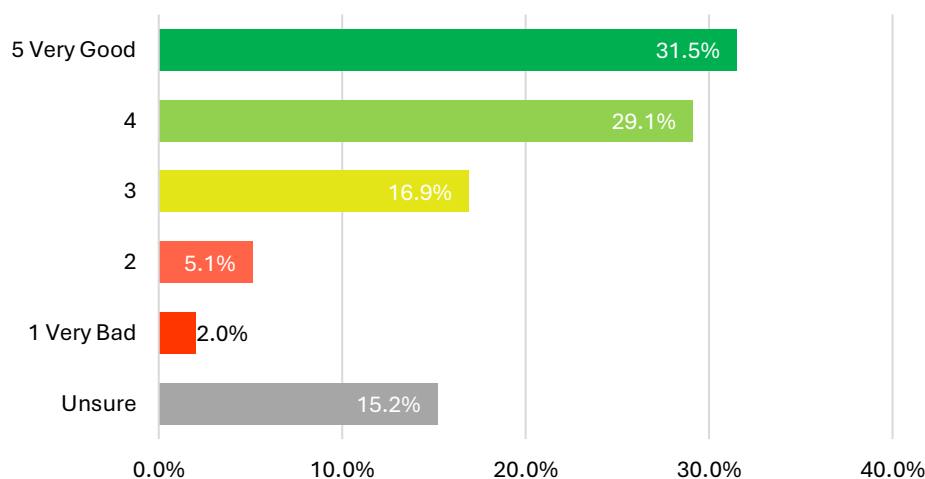


Figure 24 Customer Performance Ratings of Fish & Game

5.4.1.1 Performance rating by groups

Respondent performance ratings by age group are shown in [Figure 25](#). The proportion of uncertainty is highest among the 18-24yrs group and diminishes as age increases. The proportion of neutral ratings are highest among the 25-34yrs group and diminished as age increases. The proportion of 'Very Good' ratings increases as age increases and is highest (47.4%) among the 65+ age group. There was no statistical difference in ratings distribution between those with fishing licences and those with game licences ($z = -.686$, $p = .493$).

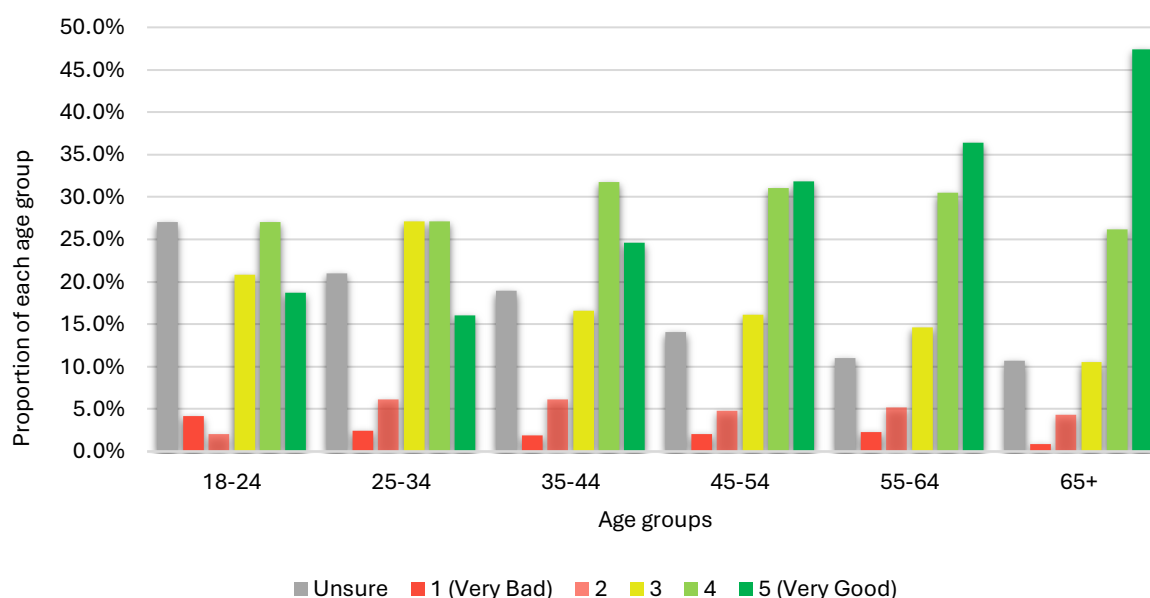


Figure 25 Fish & Game Performance Rating by Age Groups

5.4.2 Thematic analysis of performance comments

In all, 862 respondents chose to leave a comment, and these were analysed according to themes. These are detailed in [Figure 26](#), [Figure 27](#), [Figure 28](#), and [Figure 29](#). Comments often had more than one theme; therefore, percentages sum to more than 100. Those happy with F&G felt it provided the best vehicle for their political and legal representation (32%), appreciated F&G efforts to communicate (20%), and efforts to promote stocks of quarry (19%). Licence monitoring and enforcement (19%) was seen as an essential element of fairness and natural justice. Good raters were also grateful of access points (18%) and efforts to gain more access, and of F&G's involvement in environmental protection (17%), especially water quality. Typical good rating comments are:

“Representing the people like myself to be able to go out and enjoy the sport of fishing and working to maintain our sport for the future.”

“Regular and relevant communication with licence holders on F&G activities”

“Monitoring of fisherman. Issuing of licenses. Releasing fish into lakes. A voice on my behalf”

“They do their best with limited resources and no Government funding.”

“F&G are the voice for the everyday people who like to go out fishing and game bird hunting, they maintain access points for everyone, control limits by monitoring numbers, share knowledge.”

“I appreciate their booklet of fishing sites, bag limits, season etc and signposted access points.”

“I'm new to fly fishing... it's good to have it available for me and family.”

“Looking after our waters for New Zealanders.”

“Generally smooth management of the great freshwater fishing and game bird shooting assets we have in NZ.”

“Good access signs, license information is very good.”

Poor ratings were mainly associated with perceptions of insufficient efforts to promote stocks of fish and game (31%), insufficient monitoring and enforcement (30%), high licence cost (21%), poor communication (12%), and mismanagement of funds (11%). Typical bad comments were:

“Never seen any sign of them or what they have done in over 40 years of buying licenses.”

“I think there are too many personal agendas within [Region removed] fish and game being pursued using funds from licences. They are only interested in their own opinions”

“No where enough ranging/checking licences. Fail to return phone calls, inconsistency and lack [of] transparency, don't prosecute enough offenders.”

“Under [their] tenure I have seen a salmon fishery go from world class to near extinction!”

“A very expensive license and there appears to be a lot fewer birds. Why?”

“I feel like the price goes up every year and we pay more and get less. I also don't feel like there is enough enforcement of rules and regulations.”

“Spend far too much time wasting money in the legal battles instead of looking after whanau who just want to go out and enjoy the outdoors.”

“Not stocking rivers in [Region removed]. Not interested in fishing, concerned more with game birds.”

“[Region removed] F&G has been poorly run for several years and many on the council have used it to enhance their own agender and gaining profit from their position of power.”

5.4.2.1 Unsure ratings

Fifteen percent of respondents were unsure of what performance rating to give F&G. Of those n=100 chose to leave a comment as to why they were unsure.

Despite stating they were unsure, nearly half of these respondents held critical views of the organisation. These were mainly about a perceived lack of licence monitoring and enforcement, or a feeling that there were no outcomes that demonstrated any work had been done. Most that were unsure felt they did not know enough about F&G to make a judgement. As shown in Figure 25, the relative proportion of uncertainty was highest among younger age groups.

The chart shows the proportion (%) of those 100 comments that contained a reference to each theme. A comment may have contained more than one theme, therefore, the percentages sum to more than 100%.

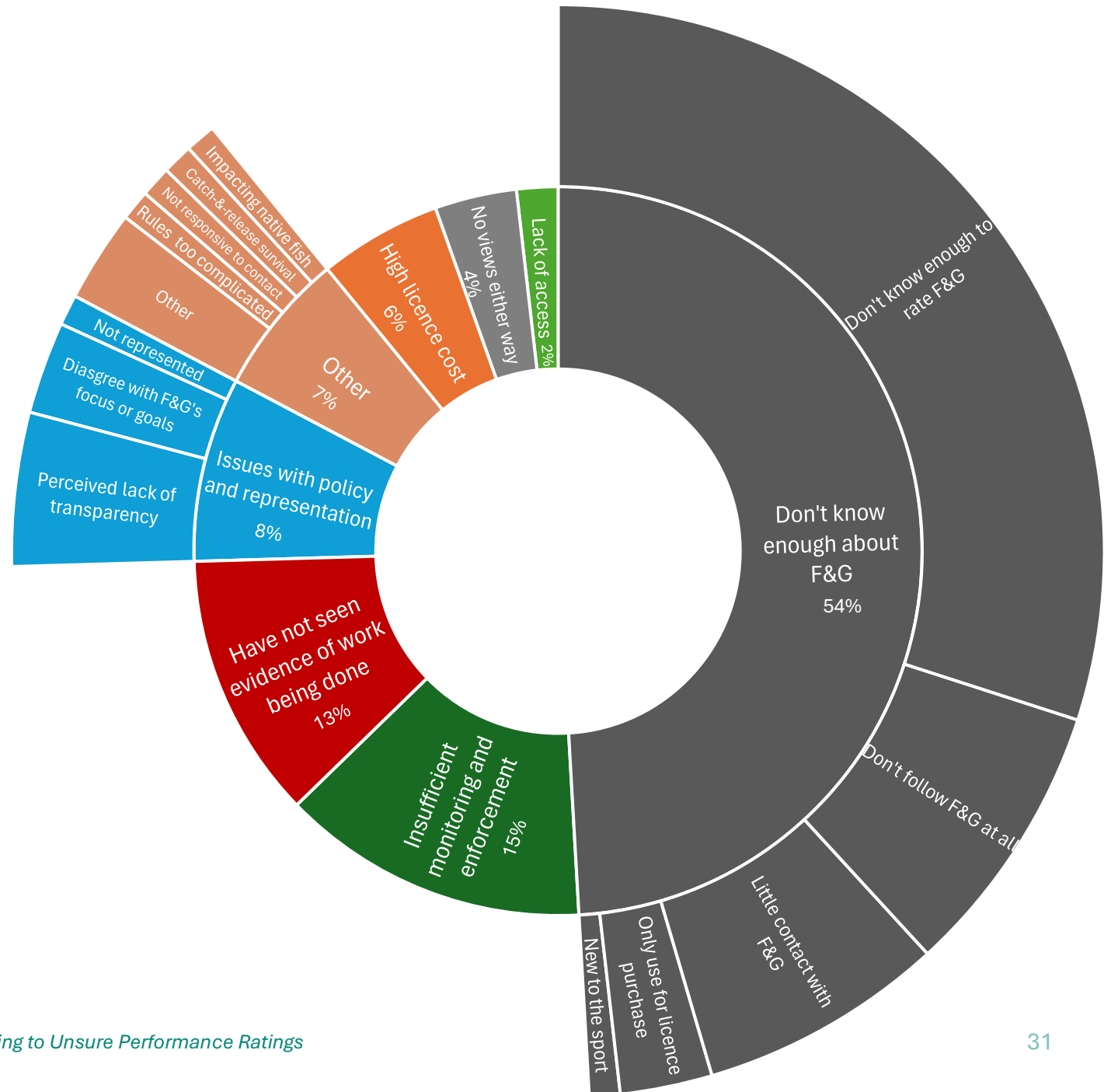


Figure 26 The Proportion of Comments Relating to Unsure Performance Ratings

5.4.2.2 Bad ratings

Seven percent of respondents gave F&G a bad performance rating (1 or 2 out of 5). Of those, n=84 chose to leave a comment about why they gave a bad rating.

A perceived lack of effort to promote stocks of fish and game, and insufficient licence monitoring dominated reasons for poor ratings. Suspicions of poaching featured in the call for more licence checks. A perception of high licence fees also featured. Issues with poor communication and leadership were regionally focused, with just 5% of comments taking issue with policy and representation.

Some comments disagreed with how funds were spent, and it was often unclear if they referenced local or national level projects. Not doing enough for polluted waterways or to clean-up site specific problems was a feature for a few.

The chart shows the proportion (%) of the 84 comments that contained a reference to each theme. A comment may have more than one theme, therefore, the percentages sum to more than 100%.



Figure 27 The Proportion of Comments Relating to Poor Performance Ratings

5.4.2.3 Neutral ratings

Seventeen percent of respondents gave F&G a neutral performance rating (3 out of 5). Of those, n=134 chose to leave a comment about why they gave a neutral rating.

Like those that were unsure, despite seeming to be ‘on the fence’ neutral commentators had clear negative views behind their rating choice. Comment themes largely followed those of poor raters. However, issues with policy and representation, and with access, were present in double the proportion of comments for neutral raters. Neutral ratings were the only comments with a theme regarding *Conflict with Farmers*.

Comments from poor and neutral ratings had a lot in common. This suggests that the neutral scale point is best interpreted as the lowest degree of poor rating.

The chart shows the proportion (%) of the 201 comments that contained a reference to each theme. A comment may have more than one theme, therefore, the percentages sum to more than 100%.

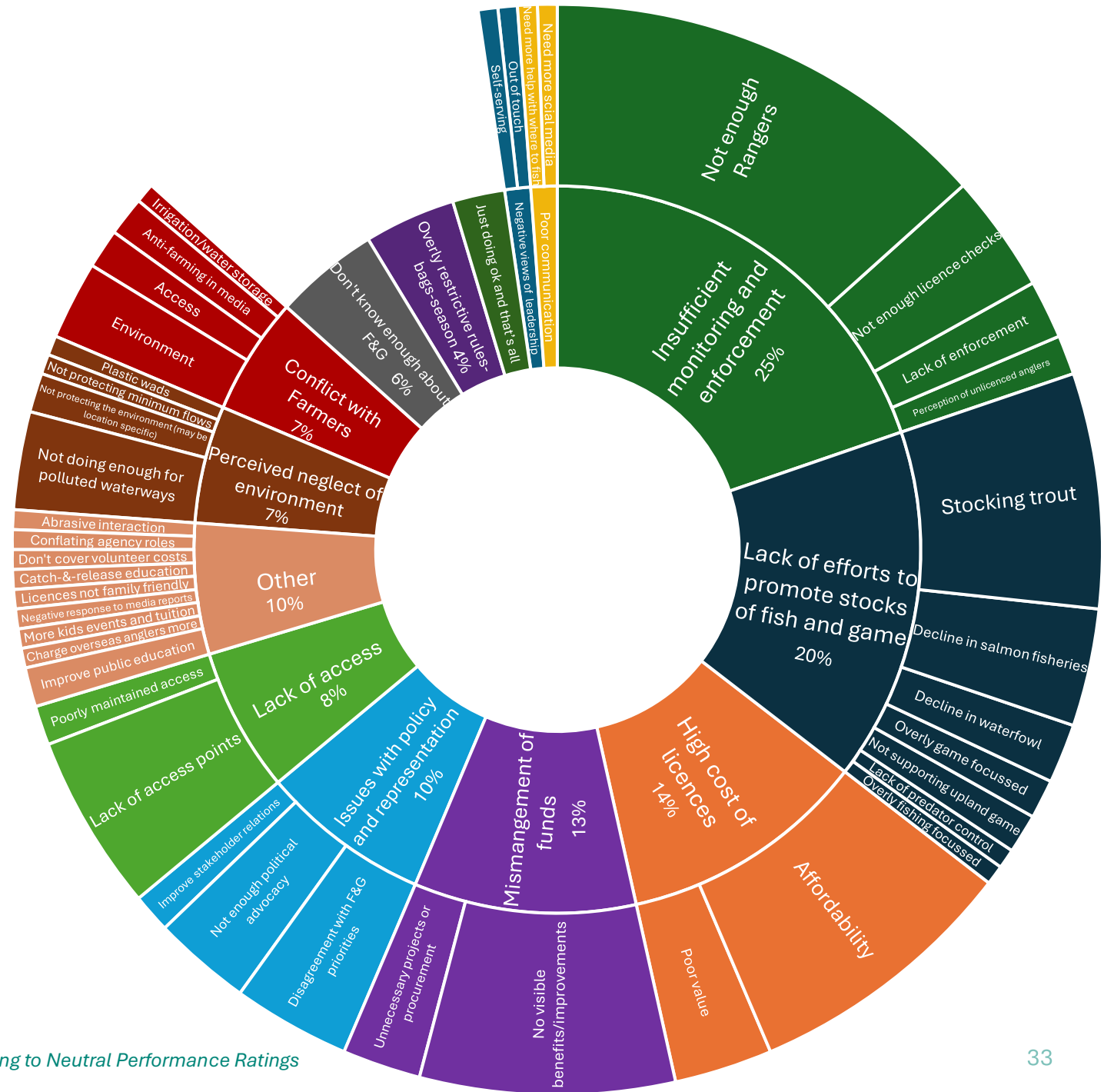


Figure 28 The Proportion of Comments Relating to Neutral Performance Ratings

5.4.2.4 Good ratings

Sixty-one percent of respondents (n=881) gave F&G a good performance rating (4 or 5 out of 5). Of those 544 chose to leave a comment as to why they gave a good rating.

Based on analysis of comments, those happy with F&G felt it provided the best conduit for their political and legal representation and enjoyed communication efforts, and especially information on where and how to fish and hunt. Efforts to promote socks of quarry were also appreciated. Licence monitoring and enforcement was seen as an essential element of fairness and natural justice. Commentors were grateful of access points and efforts to gain more access and of F&G's involvement in environmental protection, especially water quality.

The chart shows the proportion (%) of the 544 comments that contained a reference to each theme. A comment may have more than one theme, therefore, the percentages sum to more than 100%.

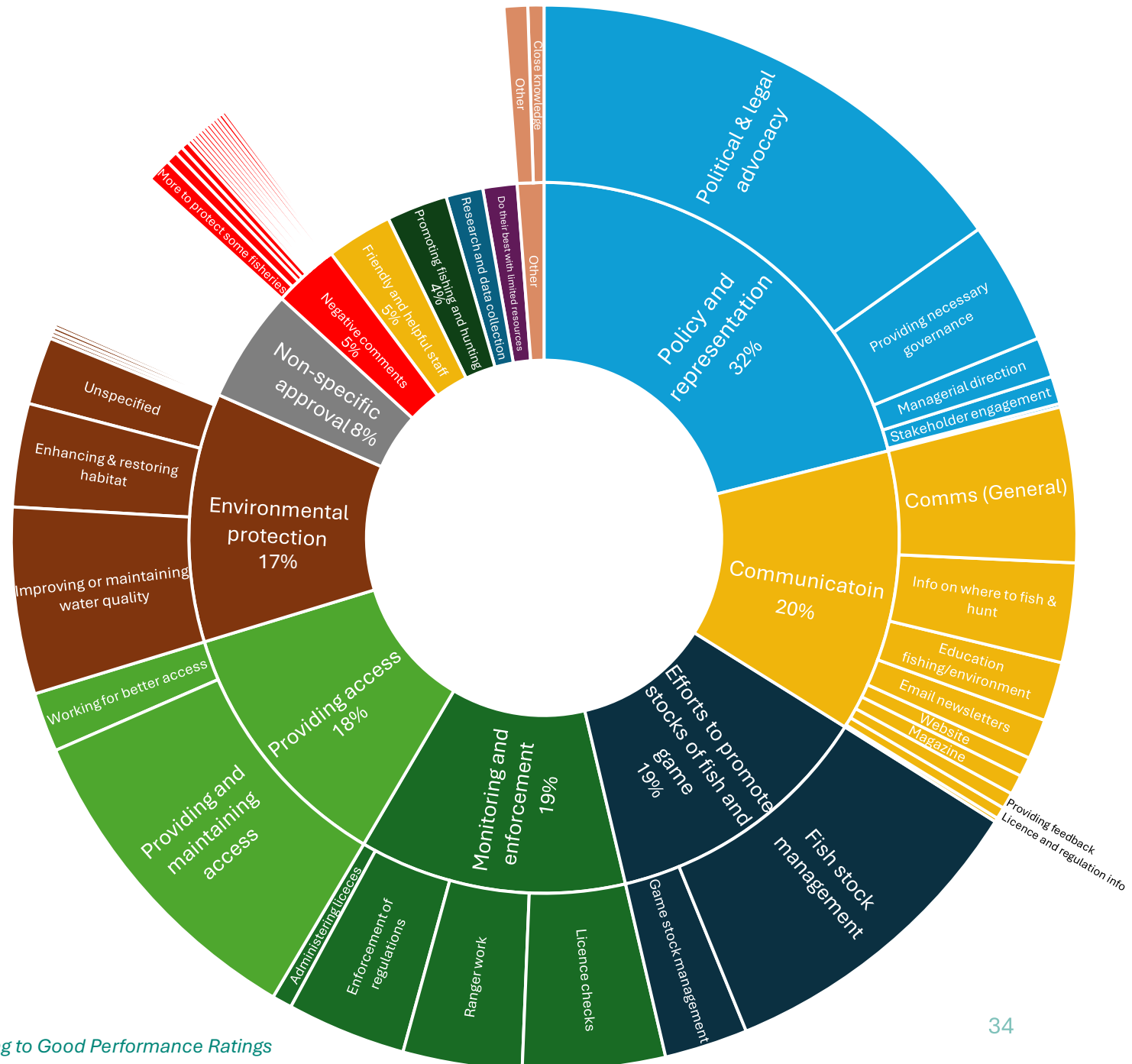
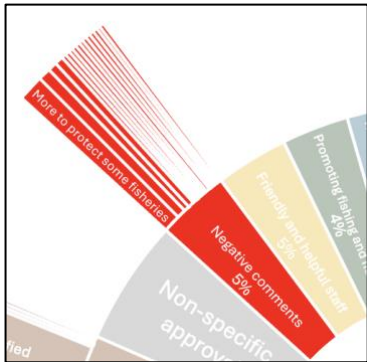


Figure 29 The Proportion of Comments Relating to Good Performance Ratings

There were several on-off negative comments within the *Good* performance ratings and these are detailed in [Table 5](#).

Table 5 Sub-themes to Negative Comments from Those Giving F&G a Good Performance Rating

	Comment theme	Frequency
	More needed to protect some fisheries	6
	More Rangers needed	3
	More restocking needed	2
	More game access and information needed	2
	Game season too short	1
	Room for improvement	1
	Lack of enforcement	1
	Lack of monitoring the canals	1
	More support of upland game	1
	Need to reduce negative agriculture stance	1
	Not banding enough birds	1
	More printed comms needed	1
	Spend money on core activities only	1
	Poor response to 'fast-track' legislation	1
	Prioritising guides over individuals	1
	More general support required	1

6 Conclusions

1. Overall, anglers and hunters held the provision of *Access* to hunting and fishing locations as the highest priority for F&G, followed by *Conservation Orders* and *Ecology Monitoring*.
2. *Access* was proportionally more important to fishers and hunters over 65 years of age.
3. Those under the age of 45yrs were more environmentally focussed and considered *Conservation Orders* and *Ecological Monitoring* as more important than *Access*.
4. Three out of the top five most important service attributes were oriented towards protecting water quality.
5. Four out of the five lowest priority attributes were oriented towards community outreach and participant growth.
6. Service priorities can vary across regions.
7. The most loyal purchasers of fishing licences were age 65+ and those under 35yrs had the highest rates of mixed licence tenure.
8. Although both groups mostly felt their licence represented good value, 2024 Game Bird licence purchasers gave lower value ratings than those that purchased a 2023/24 Fishing licence.
9. Most licence holders feel F&G does a good job.
10. Based on analysis of respondent's comments, neutral performance ratings should be viewed as the mildest form of negative rating.
11. Based on analysis of comments, many of those unsure of what performance rating to give F&G were withholding negative sentiment.
12. Older licence holders were more positive about F&G's performance and younger age groups were more uncertain.
13. As a proportion of comments, key themes were policy and representation, communication, promoting stocks of fish and game, licence cost, licence monitoring, enforcement, access points, and environmental protection.

7 Points to consider

1. As the top priority for licence holders, *Access* was mentioned in 2% of *Unsure* comments, 4% of *Bad* comments, 8% of *Neutral* comments, and 18% of *Good* comments. The relatively low rate of negative and neutral comments suggests F&G are delivering on *Access* but with room for improvement.
2. The high importance of ecological monitoring suggests a lack of trust in the ability of regional authority's to effectively manage water quality. All things being equal, licence-holders should feel no need for the organisation to spend its resources on ecological monitoring.
3. While initiatives to grow participation were of low importance, and this poses a challenge for the future of F&G, there is some natural logic to the importance hierarchy. It is reasonable to assume that if the resource is not protected and managed towards providing a good quality recreational experience, efforts to grow participation are unlikely to succeed.
4. The priority ranking of *Promoting Females* is problematic considering the current gender imbalance and F&G's strategic objective to attract and retain licence-holders. It is possible that current participants perceive no barriers to women and attribute low female participation to a gender-wide disinterest. It is also possible the skewed age profile of current participants means many may hold a traditional image of a family that includes a woman and, therefore, felt females were already represented in the *Promoting Families* attribute. Another option grounded in utility theory, is that growth initiatives were seen as dollars spent on marketing that do not directly serve the recreational experience and so provides little utility at the individual level.
5. It may be that providing access, protecting, stocking, and monitoring are core services and relatively intractable in their overall importance, regardless of participant's profiles. This may mean that affirmative action and growth initiatives should not be compared to these core items.
6. Achieving a larger sample of smaller sub-groups is important for high precision Bayesian analysis. This may require the oversampling of females and some regions, if regional reporting of service priorities is considered valuable to F&G.
7. While *Compliance Checks* was the 10th most important service attribute, monitoring and enforcement was a theme of 15% of *Unsure* comments, 30% of *Bad* comments, 25% of *Neutral* comments, and 19% of *Good* comments. This means that although it was less important than many other service attributes, it is contentious and drives sentiment.
8. The rate of lapsed licence-holders in this survey is much less than the estimated 30%. This means the views of lapsed licence-holders are underrepresented.

9. Motivations for the largest proportion of non-purchasers for both fishing and game licences were not captured by the choices available to them. On review, the choices, adapted largely from Primary Purpose (2023), still seem reasonable and logical. It is hoped that work on barriers to participation, currently under analysis by Heather Garrick, may help inform future work.
10. The sample likely has an avidity bias. This is a self-selection bias in which the most avid recreational participants are overrepresented.
11. The survey and reporting should be reviewed by the NZF&G executive with a view to creating the most efficient instrument for yearly reporting. Some thought should be given to which elements provide the most direct value to decision-making, which are useful on a yearly basis, and which may be employed at longer intervals. Employing some elements at longer intervals would provide survey space for 'special projects' on alternate years.



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Appendix – Probability-scaled utility scores and confidence intervals

Table 6 Probability-Scaled Utility Scores and Confidence Intervals: All Respondents, Under 45 Years Old, 65+ Years Old, and Non-Male

Attribute categories in descending order of utility rated by 'All respondents'	All Respondents n=1379			Under 45yrs n=346			65+yrs n=472			Non-Male n=110		
	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI
Access	13.31	12.80	13.85	11.09	9.48	12.99	19.27	16.69	22.25	10.79	8.10	14.37
Conservation Orders	11.74	11.32	12.21	13.56	11.49	16.01	13.37	11.57	15.45	13.65	10.10	18.43
Ecology Monitoring	10.64	10.30	10.99	11.84	10.16	13.81	10.55	9.27	12.02	13.68	10.47	17.88
Fish Pop. Monitoring	9.23	8.92	9.53	10.40	9.02	11.99	8.99	7.98	10.13	10.45	8.18	13.35
Advocacy	8.51	8.25	8.82	9.31	8.02	10.81	7.49	7.49	9.73	9.33	7.13	12.21
Maintaining Facilities	7.24	7.01	7.50	7.78	6.74	8.99	6.65	5.88	7.51	7.38	5.68	9.58
Regulation	6.95	6.71	7.21	6.94	6.01	8.01	6.91	6.07	7.88	7.46	5.71	9.75
Biosecurity	5.00	4.84	5.16	5.51	4.82	6.29	3.93	3.49	4.41	5.76	4.49	7.40
Conducting Research	4.67	4.51	4.81	4.66	4.10	5.30	3.83	3.45	4.25	4.29	3.48	5.29
Compliance Checks	4.52	4.37	4.70	3.67	3.16	4.25	3.91	3.46	4.42	3.77	2.91	4.88
Promoting Families	3.87	3.74	4.01	3.00	2.56	3.52	3.37	2.95	3.84	2.72	2.04	3.64
Habitat Improvement	3.82	3.69	3.95	3.91	3.37	4.54	2.69	2.37	3.05	2.74	2.11	3.57
Kids-fish-out	3.82	3.68	3.97	2.93	2.51	3.42	3.42	3.03	3.85	2.92	2.25	3.77
Bird Pop. Monitoring	2.95	2.85	3.06	2.95	2.56	3.39	1.97	1.74	2.25	2.37	1.85	3.03
In-person Activities	2.25	2.17	2.34	1.59	1.35	1.88	1.65	1.43	1.90	1.61	1.18	2.18
Promoting Females	1.48	1.41	1.55	0.85	0.71	1.01	0.95	0.82	1.11	1.08	0.79	1.49

Table 7 Probability-Scaled Utility Scores and Confidence Intervals: Non-European, Income<\$100,000, Income>\$100,000, Education Bachelor's Degree or Higher

Attribute categories in descending order of utility rated by 'All respondents'	Non-European n=164			Income<\$100,000 n=718			Income>\$100,000 n=661			Education Bachelor's Degree or Higher n=477		
	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI
Access	14.40	11.34	18.28	16.60	14.80	18.62	15.86	14.10	17.83	15.37	13.36	17.68
Conservation Orders	11.71	9.24	14.84	13.00	11.59	14.58	12.27	12.27	15.68	14.42	12.46	16.68
Ecology Monitoring	11.15	8.95	13.88	10.90	9.81	12.11	10.42	10.42	12.99	11.61	10.17	13.25
Fish Pop. Monitoring	10.57	8.53	13.08	9.38	8.50	10.35	9.50	8.59	10.52	9.55	8.50	10.73
Advocacy	7.52	6.03	9.37	8.52	7.66	9.48	9.01	8.08	10.04	10.16	8.91	11.59
Maintaining Facilities	7.66	6.18	9.48	7.09	6.42	7.82	7.12	6.42	7.90	6.24	5.54	7.03
Regulation	6.28	5.08	7.77	6.98	6.29	7.76	6.58	5.92	7.31	6.79	6.00	7.70
Biosecurity	4.88	3.96	6.02	4.47	4.06	4.93	4.49	4.07	4.94	4.73	4.19	5.34
Conducting Research	4.17	3.42	5.08	4.14	3.79	4.52	4.10	3.75	4.48	4.58	4.13	5.08
Compliance Checks	3.54	2.83	4.42	4.26	3.85	4.72	3.54	3.19	3.92	3.39	3.01	3.82
Promoting Families	4.29	3.41	5.41	3.31	2.97	3.69	3.18	2.84	3.56	2.92	2.56	3.33
Habitat Improvement	4.08	3.29	5.07	2.98	2.68	3.30	3.44	3.08	3.83	2.93	2.57	3.33
Kids-fish-out	3.81	3.05	4.76	3.38	3.06	3.73	2.95	2.65	3.28	2.71	2.39	3.06
Bird Pop. Monitoring	2.83	2.31	3.47	2.25	2.03	2.49	2.38	2.14	2.64	2.16	1.91	2.45
In-person Activities	2.08	1.63	2.65	1.77	1.58	1.99	1.55	1.37	1.75	1.62	1.40	1.86
Promoting Females	1.04	0.81	1.34	0.97	0.86	1.09	0.80	0.71	0.91	0.82	0.71	0.95

Table 8 Probability-Scaled Utility Scores and Confidence Intervals: Education Post-High School Certificate or Lower, Anglers, Hunters, Dependent Children=YES

Attribute categories in descending order of utility rated by 'All respondents'	Education Post-High School Certificate or Lower n=902			Anglers n=1197			Hunters n=451			Dependent Children=YES n=453		
	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI
Access	16.69	15.08	18.47	16.46	15.07	17.98	16.56	14.40	19.04	14.52	12.61	16.73
Conservation Orders	12.88	11.63	14.27	13.74	12.56	15.02	11.29	9.77	13.05	13.02	11.27	15.05
Ecology Monitoring	11.03	10.05	12.11	11.45	10.54	12.43	9.62	8.46	10.94	9.93	9.93	12.94
Fish Pop. Monitoring	9.37	8.57	10.23	10.30	9.54	11.12	6.69	5.95	7.52	9.70	8.59	10.96
Advocacy	8.07	7.35	8.86	8.93	8.22	9.70	7.45	6.53	8.51	8.94	7.82	10.21
Maintaining Facilities	7.59	6.94	8.30	6.62	6.13	7.14	8.07	7.12	9.16	7.53	6.62	8.56
Regulation	6.77	6.17	7.43	6.56	6.06	7.10	6.93	6.06	7.93	6.60	5.80	7.51
Biosecurity	4.34	4.00	4.72	4.56	4.24	4.90	3.73	3.29	4.22	4.58	4.06	5.17
Conducting Research	3.89	3.59	4.20	4.04	3.77	4.31	4.17	3.72	4.69	4.06	3.62	4.54
Compliance Checks	4.19	3.82	4.59	3.97	3.67	4.29	3.20	2.81	3.65	3.74	3.30	4.24
Promoting Families	3.43	3.11	3.78	3.06	2.81	3.32	4.38	3.82	5.03	3.81	3.32	4.37
Habitat Improvement	3.33	3.04	3.66	2.64	2.43	2.86	7.49	6.56	8.56	3.60	3.15	4.11
Kids-fish-out	3.44	3.14	3.76	3.21	2.97	3.47	3.25	2.85	3.71	3.59	3.15	4.09
Bird Pop. Monitoring	2.39	2.18	2.61	1.99	2.43	2.86	4.38	3.88	4.95	2.43	2.14	2.75
In-person Activities	1.68	1.52	1.87	1.62	1.48	1.77	1.86	1.61	2.15	1.67	1.44	1.93
Promoting Females	0.92	0.82	1.02	0.88	0.80	0.97	0.92	0.78	1.07	0.87	0.74	1.01

Table 9 Probability-Scaled Utility Scores and Confidence Intervals: Dependent Children=NO, Northland & Auckland/Waikato, Eastern & Hawke's Bay, Wellington & Taranaki

Attribute categories in descending order of utility rated by 'All respondents'	Dependent Children=NO n=926			Northland & Auckland/Waikato n=259			Eastern & Hawke's Bay n=199			Wellington & Taranaki n=148		
	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI
Access	17.14	15.50	18.96	17.03	14.02	20.67	16.17	12.95	20.18	18.56	14.40	23.93
Conservation Orders	13.59	12.27	15.06	11.98	9.85	14.58	12.29	9.88	15.29	13.91	10.77	17.98
Ecology Monitoring	11.19	10.20	12.29	10.38	8.75	12.31	12.27	9.95	15.14	10.20	8.10	12.84
Fish Pop. Monitoring	9.31	8.54	10.15	7.66	6.54	8.97	9.54	7.92	11.49	6.46	6.46	9.83
Advocacy	8.66	7.89	9.50	8.96	7.54	10.63	8.78	7.14	10.80	9.18	7.26	11.62
Maintaining Facilities	6.90	6.33	7.52	8.55	7.23	10.12	7.30	6.06	8.78	8.04	6.41	10.08
Regulation	6.88	6.28	7.53	7.07	5.95	8.41	6.12	5.06	7.41	6.86	5.42	8.68
Biosecurity	4.43	4.07	4.81	4.43	3.76	5.22	4.59	3.79	5.54	4.33	3.52	5.32
Conducting Research	4.15	3.85	4.47	4.46	3.85	5.15	4.14	3.49	4.91	4.14	3.46	4.96
Compliance Checks	3.97	3.63	4.34	3.39	2.87	4.00	3.56	2.93	4.32	3.12	2.48	3.92
Promoting Families	3.00	2.73	3.30	3.16	2.64	3.78	3.59	2.94	4.39	2.89	2.30	3.63
Habitat Improvement	3.00	2.74	3.29	4.81	4.03	5.74	3.47	2.86	4.21	3.71	2.91	4.74
Kids-fish-out	2.98	2.73	3.25	2.42	2.03	2.89	3.18	2.64	3.84	2.42	1.94	3.01
Bird Pop. Monitoring	2.25	2.06	2.46	3.09	2.61	3.64	2.41	1.98	2.93	2.35	1.86	2.97
In-person Activities	1.66	1.50	1.83	1.67	1.37	2.04	1.72	1.38	2.14	1.48	1.14	1.92
Promoting Females	0.89	0.80	0.99	0.94	0.77	1.15	0.87	0.69	1.10	0.83	0.64	1.08

Table 10 Probability-Scaled Utility Scores and Confidence Intervals: Nelson/Marlborough & West Coast, North Canterbury & Central South Island, and Otago & Southland

Attribute categories in descending order of utility rated by 'All respondents'	Nelson/Marlborough & West Coast n=97			North Canterbury & Central South Island n=366			Otago & Southland n=310		
	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI	Prob- Scaled Utility Score	Lower 95% CI	Upper 95% CI
Access	17.16	12.44	23.68	14.12	12.08	16.50	16.60	14.00	19.68
Conservation Orders	13.68	10.06	18.60	15.55	13.19	18.35	12.43	10.42	14.82
Ecology Monitoring	10.13	7.67	13.38	11.39	9.82	13.22	11.81	10.03	13.90
Fish Pop. Monitoring	10.30	7.66	13.85	11.07	9.64	12.73	9.50	8.19	11.02
Advocacy	8.60	6.40	11.55	9.52	8.21	11.03	7.42	6.32	8.72
Maintaining Facilities	6.88	5.35	8.85	6.20	5.41	7.11	6.51	5.57	7.61
Regulation	5.91	4.58	7.63	6.89	5.98	7.94	6.97	5.91	8.22
Biosecurity	3.84	2.94	5.02	4.12	3.62	4.70	5.10	4.43	5.88
Conducting Research	3.95	3.09	5.05	3.88	3.45	4.36	4.06	3.54	4.66
Compliance Checks	3.72	2.79	4.96	4.82	4.17	5.56	3.98	3.42	4.62
Promoting Families	3.59	2.58	5.00	2.68	2.31	3.11	3.90	3.29	4.62
Habitat Improvement	2.99	2.29	3.91	2.32	2.00	2.70	2.88	2.48	3.36
Kids-fish-out	4.10	3.11	5.39	3.35	2.91	3.85	3.78	3.23	4.42
Bird Pop. Monitoring	2.12	1.61	2.78	1.85	1.60	2.14	2.27	1.96	2.64
In-person Activities	2.13	1.57	2.90	1.43	1.21	1.68	1.84	1.54	2.20
Promoting Females	0.90	0.65	1.24	0.81	0.68	0.96	0.95	0.79	1.14