

# VRFISH SURVEY OF FISHER PRIORITIES 2017

## Summary of results

### 1. EXECUTIVE SUMMARY

Over an eight week period from September to November 2017, VRFish conducted a comprehensive survey of recreational fishers on their priorities for improving recreational fishing in Victoria.

The survey was conducted with the primary objective of gathering the views of the recreational fishing community on where they would like to see their recreational fishing licence (RFL) fees invested to better protect and enhance the Victorian fishing experience.

VRFish anticipates that the survey results and an analysis of the findings will guide and contribute considerably to the strategic planning and prioritisation of funding, on-ground work and projects, advocacy and engagement for the benefit of the recreational fishing community and consistent with its needs and expectations.

### 2. METHODOLOGY

The survey was conducted using an online questionnaire. The questionnaire contained 19 questions, which included both closed and opened-ended questions. The questions collected information on fisher demographics and profile, together with data on fishing satisfaction and priorities for investment.

The survey was open for a total of 8 weeks between 12 September 2017 and 6 November 2017.

Survey respondents were framed using two key methods: (1) email invitation sent to Victorian recreational fishing licence holders; (2) survey link distributed via public media (including social media).

#### Sample size and confidence level

A total of 1,856 people completed the survey. This sample size is considered to be of statistical significance given both the sample population and the total population of Victorian recreational fishers<sup>1</sup>.

Therefore, given the sample size and number of surveys completed, the results can be considered with a high level of confidence as representative and providing a good indication of the opinions and priorities of the broader population of Victorian recreational fishers.

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<sup>1</sup> Ernst & Young (2015).

### 3. SURVEY RESULTS

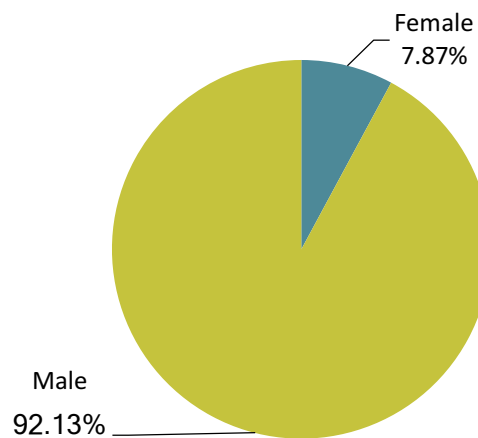
#### Demographics and fisher profile

A number of survey questions collected demographic information on the respondents. These questions were coupled with a range of question on fishing preferences in order to build a profile of the survey respondents and recreational fishers in general.

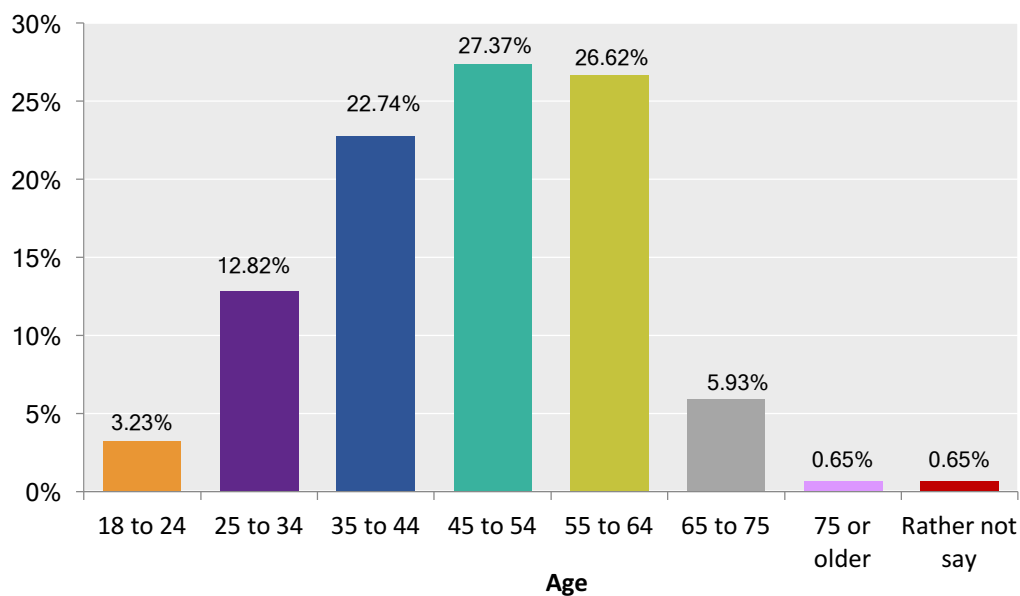
#### **Summary of results**

- 92% of respondents were male and 8% were female (Fig 1)
- The most dominant age group of fishers was 45 to 54 (Fig 2)
- Marine waters are fished most frequently
- Regionally, most fishing trips occur within the Port Phillip region, followed by Gippsland
- The majority of respondents could be classified as “active” and fish 6-10 times per year on average
- “To be outdoors”, “to relax” and “to be with friends and family” were the most cited motivations for pursuing recreational fishing
- Flathead followed by snapper were the marine species most targeted, with trout and redfin being the inland species targeted most
- The majority of respondents fish both boat and land-based

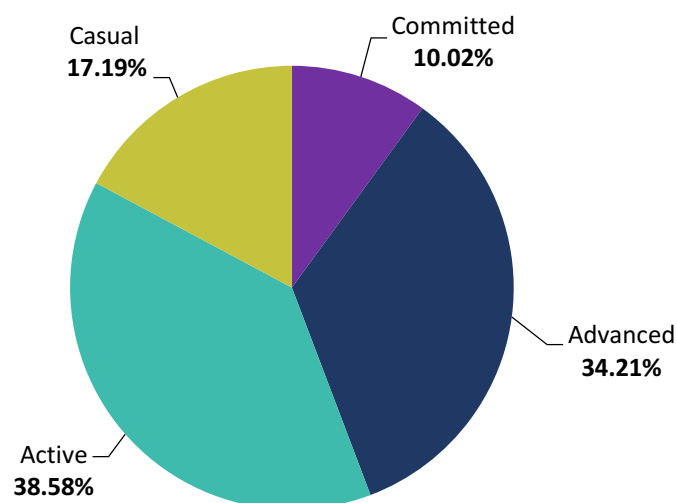
**Fig 1.** Gender of survey respondents (%)



**Fig 2. Age of survey respondents (%)**

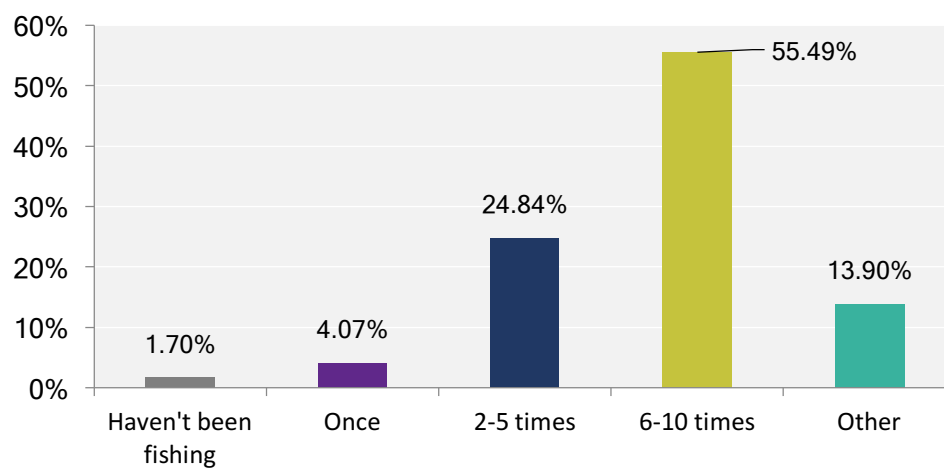


**Fig 3. Fisher type (%)<sup>2</sup>**

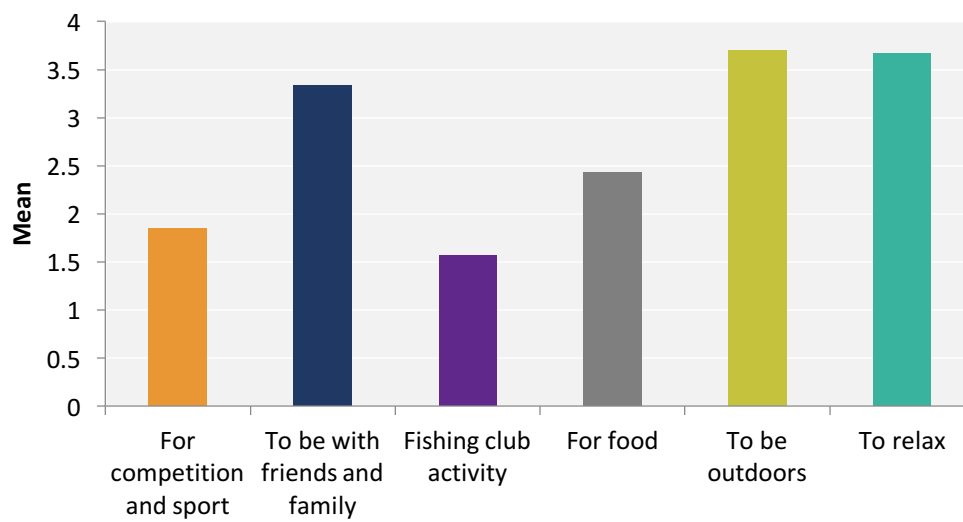


<sup>2</sup> The following descriptions apply to fisher types: “Casual fishers” consider fishing as being not the most important leisure activity and social events rarely revolve around fishing, using common tackle and targeting whatever is biting; “Active fishers” go fishing as one of many activities they enjoy, going fishing occasionally with friends and using common tackle and targeting specific species; “Advanced fishers” consider fishing as the most important activity with their circle of friends including fishers, they use quality tackle and target certain species when fishing; “Committed fishers” consider fishing as the center of their leisure and social life, using high quality, species-specific tackle and always targeting particular species.

**Fig 4.** Fishing incidence (previous 12 months) (% respondents)

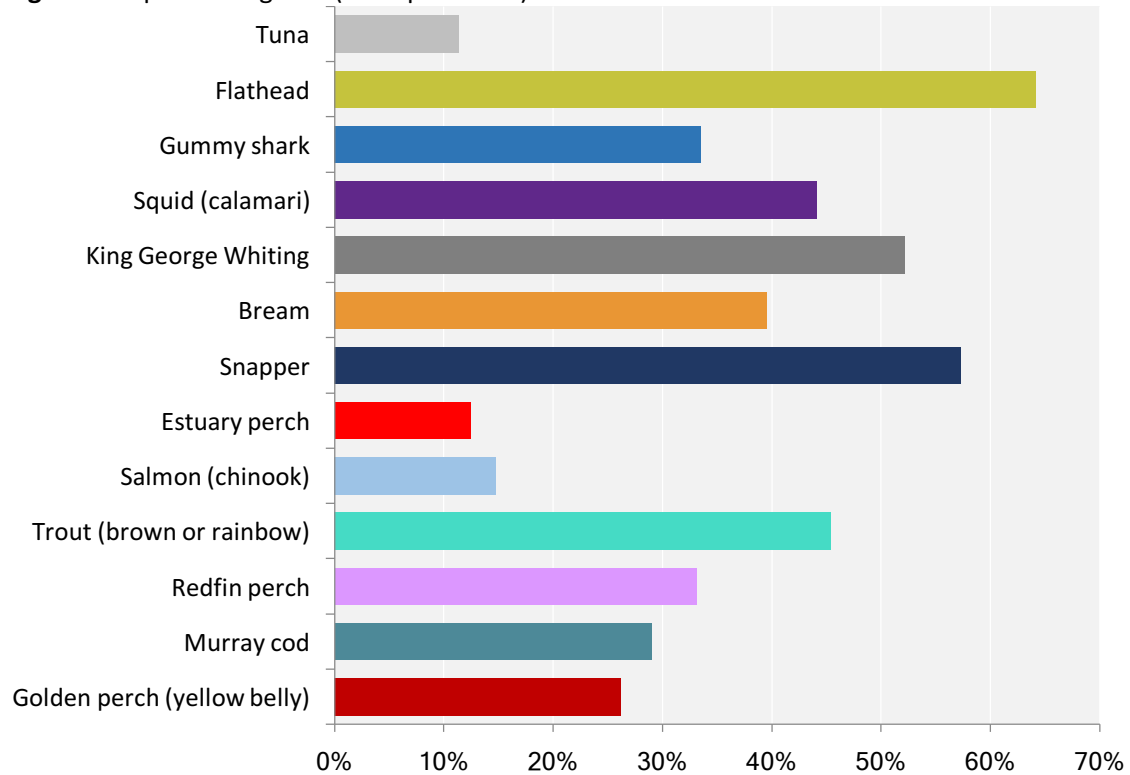


**Fig 5.** Fishing motivation (mean)

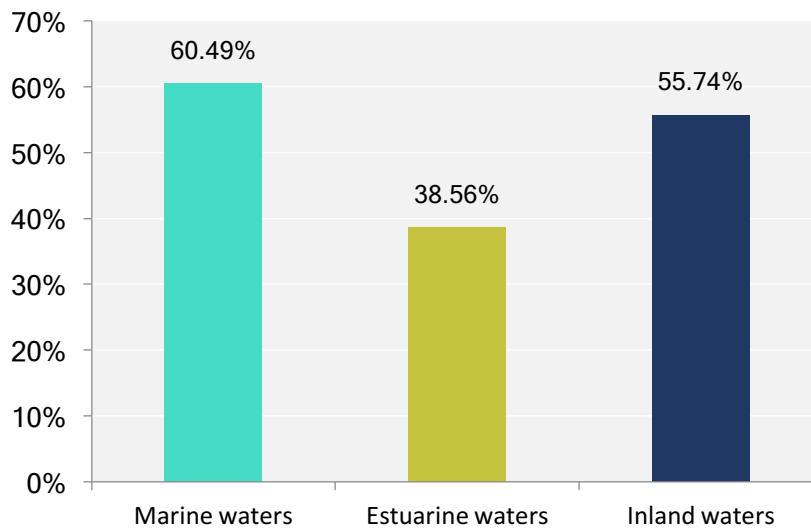


*(Scale: 1= not important at all, 2 = somewhat important, 3= important, 4=very important)*

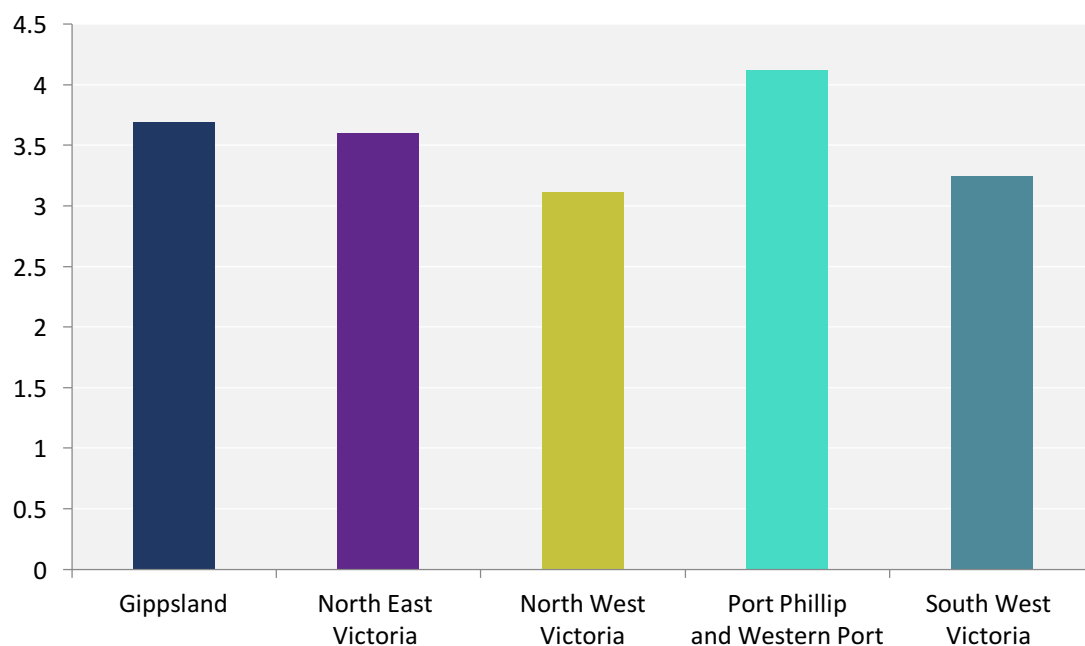
**Fig 6. Fish species targeted (% respondents)**



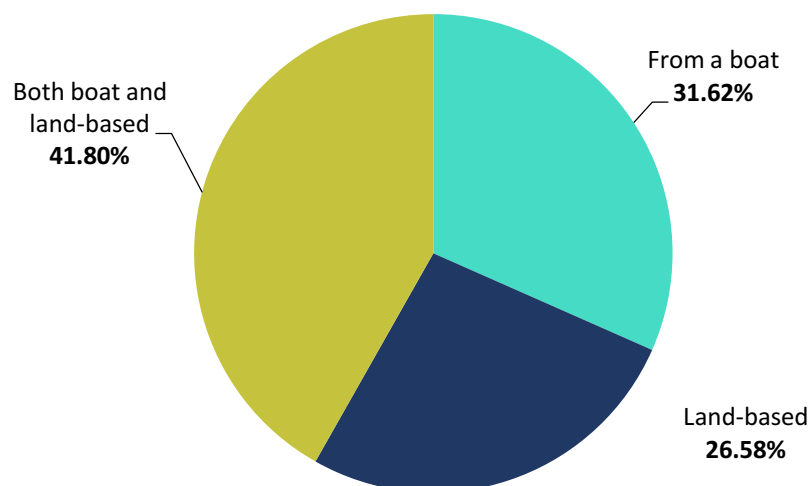
**Fig 7. Ecosystem type fished (% respondents)**



**Fig 8. Regional distribution of fishing trips (mean score)**



**Fig 10. Fishing access method (% respondents)**



### Fishing satisfaction and priorities

#### **Summary of results**

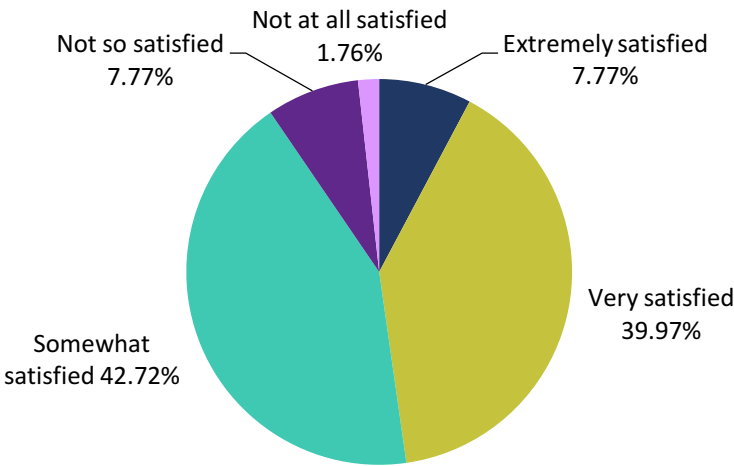
- A large majority (approx. 90%) of respondents sat somewhere on the spectrum of being satisfied with the quality of their fishing (being either somewhat, very or extremely satisfied) (Figure 11)
- Increasing fish numbers and restoring fish habitat were ranked as the highest priorities for improving recreational fishing in Victoria (Figure 12)
- Actions specific to each priority area rated as very important included: control of pest species; research into declining fish populations; restoring and protecting fish habitat; improving water condition, flow and supply; education children about fishing and sustainable fishing practices.

Fishers were asked to rate how satisfied they were with the quality of the Victorian recreational fishing experience. Respondents were also asked to rank (from highest to lowest priority) priority areas for improvement and investment in recreational fishing in Victoria. Following on from this, respondents were asked to rate a range of actions under each priority area. The rating scale used to score the survey responses is outlined in Table 1 below.

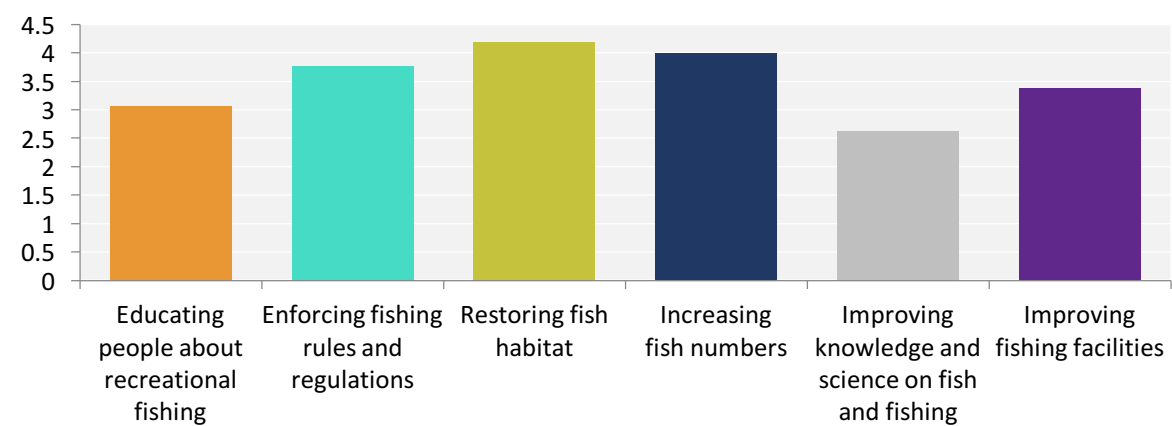
**Table 1.** Rating scale.

Rating	Value
Most important	5
Very important	4
Important	3
Somewhat important	2
Least important	1

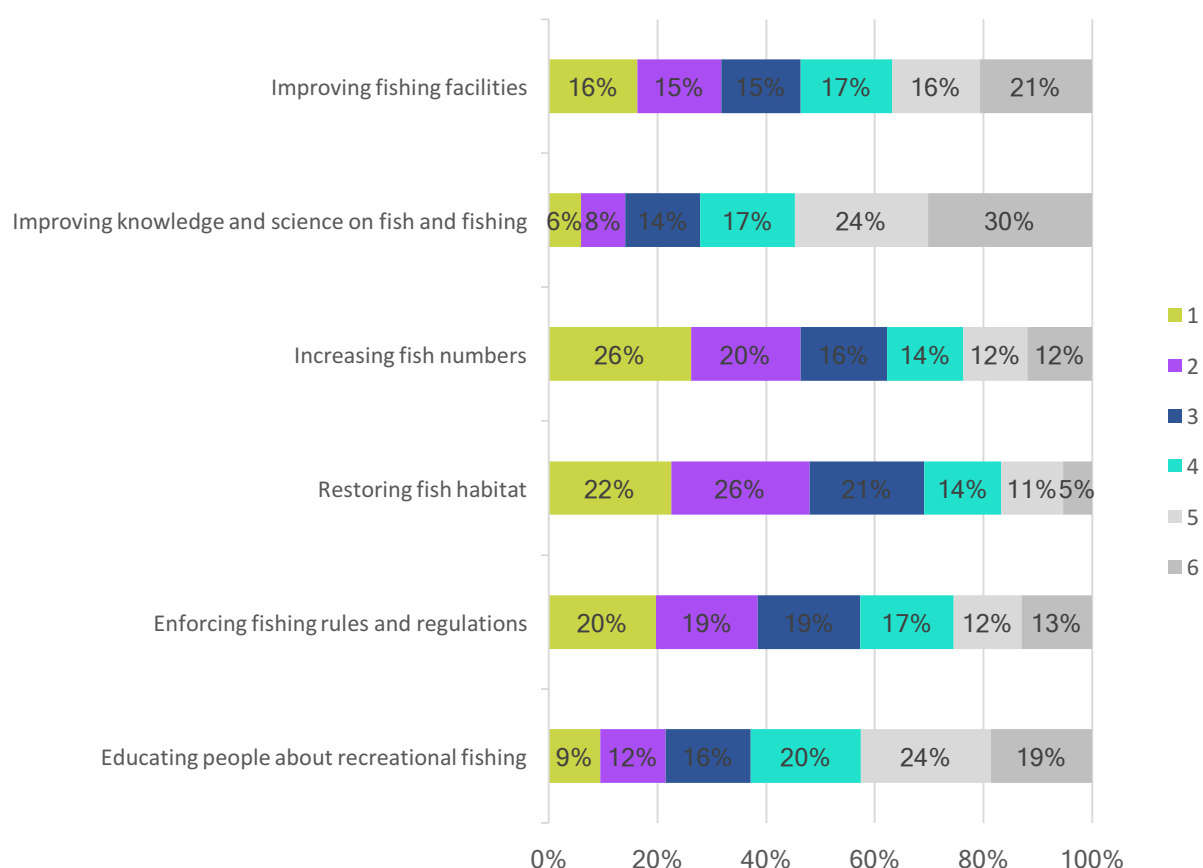
**Fig 11.** Fishing satisfaction



**Fig 12.** High level priority areas for improving recreational fishing (mean)



**Fig 13. Priority areas (% of respondents who selected rating)**



*Scale: 1 to 6, Highest to lowest priority.*

### **Actions under priority areas**

In addition to ranking priority areas for improving recreational fishing, respondents were asked to rate how important specific actions were to them for improving recreational fishing. Respondents were asked to rank the actions from most to least important, the key actions.

The overall mean scores for each of the rated actions is presented in the table below. The higher the mean score, the higher it rates in terms of importance. For example, controlling pest and plant species is the highest ranking action with a mean score of 4.22, which is equivalent to a rating of very important.



**Table 2. Priority action scores**

	Priority action	Mean score
1	Controlling pest and plant species	4.22
2	Research on how to rebuild declining fish populations	4.17
3	Restoring and improving fish habitat	4.16
4	Improving water condition, flows and levels	4.07
5	Teaching children about how to fish and good fishing practices	4.03
6	Improving education and knowledge of fishing rules and regulations	3.95
7	Deploying fish habitat structures (such as logs, boulders, fish havens and reefs)	3.93
8	Research to understand and prioritise where fish habitat is most needed	3.88
9	Use of fish length stickers and fishing guides to convey information about fishing rules and regulations	3.83
10	Knowledge of conditions fish need to live and thrive (including water flows, condition and habitat)	3.83
11	Deploying additional fisheries officers during peak fishing times at key locations	3.78
12	Ensuring fish habitat works are better coordinated at a State level	3.76
13	Informing fishers about safe fishing practices and weather conditions	3.74
14	Providing offence reporting systems (such as the 13FISH offence reporting service)	3.74
15	Improving riparian condition (through planting trees, removing weeds, fencing and river bank stabilisation)	3.73
16	Building and deploying fishing enhancement devices (such as artificial reefs and fish aggregation devices)	3.73
17	Understanding the biology of fish (including how they breed, their diet, distribution and range)	3.71
18	Research on improving fish stocking outcomes	3.71
19	Stocking more fish	3.7
20	More research on reproduction, range and distribution of fish populations	3.65
21	Increasing signage at key fishing spots	3.6
22	Improving boat based fishing facilities	3.55
23	Building knowledge about what fishers want and what can be done to improve the fishing experience	3.5
24	Understanding how fish species respond to changing climate conditions	3.49
25	Improving fishing safety	3.49
26	Programs which involve the community and fishers in fish habitat works	3.48
27	Constructing more fishing platforms, jetties and piers	3.43
28	Using technology and innovative methods to provide information about fishing and regulations	3.4
29	Increasing all-ability fishing locations	3.29
30	Improving the condition of roads, parking, paths and tracks to make fishing spots more accessible	3.28
31	Improving technology (such as cameras) for offence detection	3.22
32	On-site infrastructure such as toilets, shelters and BBQ facilities	3.22
33	Understanding the social aspects of fishing and the importance of fishing to communities	3.15
34	Creating new fishing spots in population centres and urban growth areas	3.11
35	Providing information about where fish are moving in response to changing climate	2.99
36	Conveying information about the social, health and welfare benefits of fishing	2.97
37	Building more fish cleaning tables	2.95
38	Informing fishers about fishing locations and where fishing is good	2.79
39	Engaging culturally and linguistically diverse communities in fishing	2.75
40	Educating people about good fishing spots	2.68
41	Conducting workshops to get more people fishing	2.38

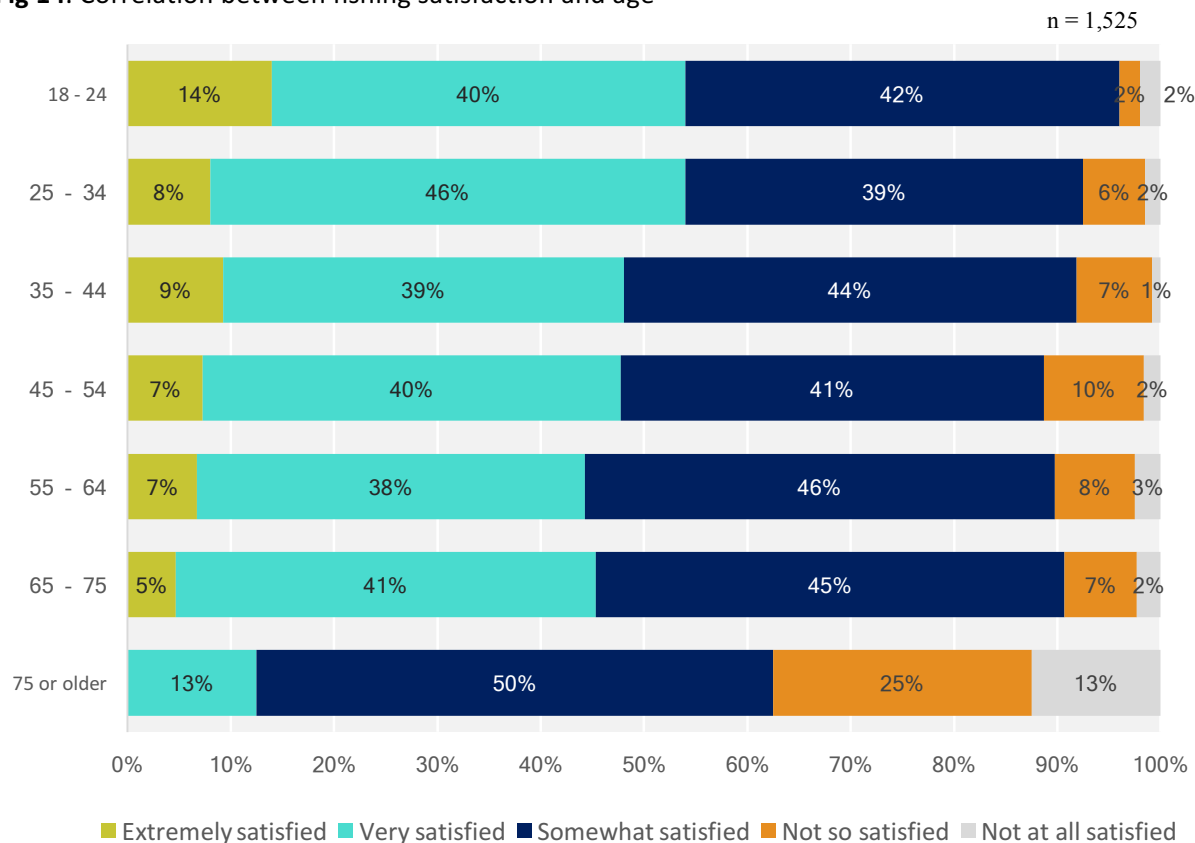
## FINDINGS AND ANALYSIS: FISHER SATISFACTION AND PRIORITIES

### Data correlations

#### Correlation between age and fishing satisfaction

There did not appear to be any significant relationship between age and fishing satisfaction, though there did appear to be a negative correlation with satisfaction slightly decreasing with age.

**Fig 14.** Correlation between fishing satisfaction and age



#### Correlation between age and fishing motivation

Graphs showing the correlation between age and fishing motivation are presented in Appendix 1.

#### Correlations with fishing access method

Data was analyzed for correlations between fishing access method (whether land or boat-based) and other variables. As shown in Figure 10, 31.62% of respondents fish boat-based, 26.58% were land-based, with the remaining majority fishing both land and boat-based.

The following correlations and findings were made:

- Boat fishers were predominantly of the more experienced, advanced and committed fisher type profile (55.61% as opposed to 29.22% for land-based fishers) and likely to fish more frequently;
- Fishers of all access methods were most highly motivated by non-catch, experiential type motivations (i.e. to relax, to be outdoors and to be with family/friends);
- The largest proportion of boat-based fishers fish in marine waters (73.91%) while land-based fishers mostly fish inland waters (59.52%). Restoring habitat, increasing fish numbers and improving facilities ranked highest for boat-based fishers in Port Phillip and Western Port.

- Highest ranked priorities for improvement and investment in recreational fishing were consistent across access methods, with restoring habitat, increasing fish numbers and enforcing rules and regulations being the most highly ranked;
- When segregating the data on priority areas by fishing access method and region, improving fishing facilities was highest ranked priority for boat-based fishers in the South-West.

### **Correlation between targeted species and fisher profile**

#### *Murray cod vs tuna fishers*

When comparing fishers targeting tuna vis-a-vis those who target Murray cod there is a clear relationship between the fisher type characterisation<sup>3</sup> and species targeted. Generally, those that target tuna can be characterised by more advanced and committed fisher types (~78%) as opposed to Murray cod fishers (~50%) with an equal percentage of fishers being casual or active.

When analysing data for relationships between target species and fishing motivation, there was even distribution across almost all motivations, however, those targeting tuna were overwhelmingly motivated by fishing “for food” (33.52% of respondents) as opposed to Murray cod fishers (12.62%).

In terms of fishing satisfaction, Murray cod fishers were generally more satisfied with the quality of recreational fishing in Victoria (54%) than tuna fishers (44%).

Restoring fish habitat (followed by increasing fish numbers) was the highest priority for Murray cod fishers whereas improving fishing facilities along with enforcing rules and regulations ranked highest in terms of priorities for tuna fishers.

#### Comparison with 2009 Recreational Fishing Survey

The last survey to gather views of recreational fishers on their priorities was conducted by Fisheries Victoria in 2009.<sup>4</sup> Conducting a similar survey provided an opportunity to examine whether fisher’s attitudes and priorities have shifted over almost a decade. To facilitate this, the 2017 VRFish survey was designed to be consistent with the 2009 survey in order to build a time series of information, and to enable cross-comparison to be made and shift in priorities to be measured.

### **Key findings and changes**

Overall, there is a high degree of consistency between the 2009 and 2017 survey results. A detailed comparative analysis has revealed the following:

- Consistent across the surveys, restoring fish habitat (equivalent to “repairing where fish live”) was ranked as the highest overarching priority area for improving recreational fishing. The second highest priority in the 2017 survey was increasing fish numbers, having marginally of higher importance since the 2009 survey. Enforcing fishing rules was the third highest priority for fishers in 2017, downgraded from the being second highest importance in 2009.
- Overall, mean satisfaction scores for priority actions for the 2017 and 2009 have a largely consistent. Control of pest species remains the highest ranked priority action, followed by research on how to build declining fish populations. Using technology to detect illegal fishing is no longer a high priority, with a shift in mean score from 4.2 to 3.22. This priority action

<sup>3</sup> See note 3.

<sup>4</sup> Department of Primary Industries Fisheries Victoria (2010) Recreational Fishing Survey 2009.

has been replaced by restoring and improving fish habitat as the third most important priority for fishers. Other priority actions which have shifted to become very important to respondents (with a mean score above 4.0) include improving water condition, flows and levels (with a mean score of 4.07), teaching children about how to fish and good fishing practices (4.03). Improved education and information around fishing rules and regulations also continues to be of a high priority (3.95 in 2017 compared with 4.0 in 2009).

## Appendix A: Correlation between age and fishing motivation

