Department of **Agriculture, Fisheries and Forestry**
Fisheries Queensland

Do fishers with listed phone numbers fish differently to unlisted fishers?

Representative data

The 2010 Statewide Recreational Fishing Survey (SWRFS) aimed to collect representative information on how many Queenslanders fished recreationally, what they caught and where they fished. To achieve this, a sample of more than 11,000 Queenslanders (fishers and non-fishers) was randomly selected using the *Telstra White Pages*. From this, more than 3600 fishers were recruited into a 12-month diary survey.

Recognising that not every household in Queensland has a phone listed in the *White Pages,* Fisheries Queensland conducted on-site surveys of fishers at boat ramps to determine if unlisted fishers had different fishing habits to listed fishers. If they did fish differently, there would be potential for the SWRFS sample to be unrepresentative of Queenslanders and produce biased results.

The on-site survey

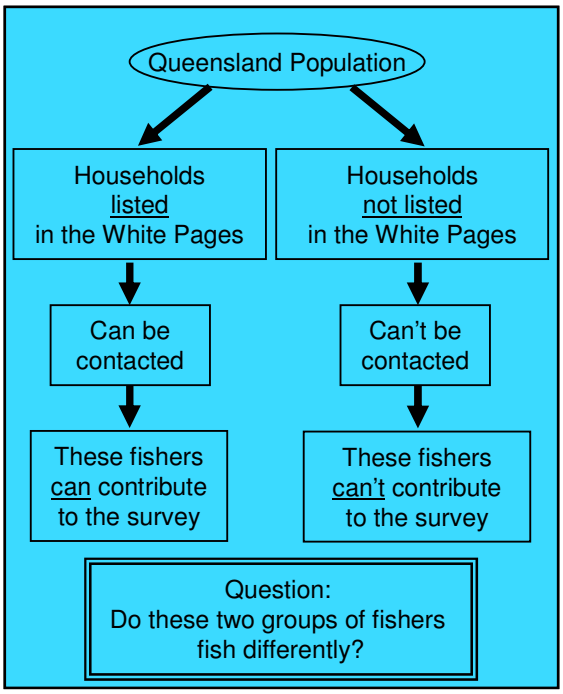
Recreational fishers were interviewed at boat ramps across Queensland as a part of Fisheries Queensland's already established recreational fishing monitoring program. This survey ran simultaneously with the diary phase of SWRFS, when diarists were logging their fishing activity and catches with SWRFS.

From each fishing party interviewed, a randomly selected fisher was asked:

- Are you a Queensland resident?
- Do you have a home phone or mobile listed in the *White Pages*?
- How many days did you go fishing in the last 12 months?

This last question measured their fishing activity, also known as 'fishing avidity'. Fishers were asked to report their avidity to one of the five categories shown in Table 1.

Figure 1: Only fishers from listed households contributed to the Statewide Recreational Fishing Survey, raising the question, "Do fishers from unlisted households fish differently?"



Results

Raw data

A total of 5893 Queensland resident fishers provided complete answers to the three questions. Of the fishers interviewed, 74% were from listed households. There was little difference between fishers from listed households and all those interviewed (Table 1, Figure 2).

Queensland Government

Table 1: Percentage of fishers within each avidity category (days per year) from houses with listed phones and all fishers interviewed.

Avidity category	Listed	All
Less than 10 days	20.1	21.5
10 to 19 days	26.0	25.7
20 to 29 days	19.1	19.2
30 to 39 days	9.6	9.7
40 days or more	25.2	23.9

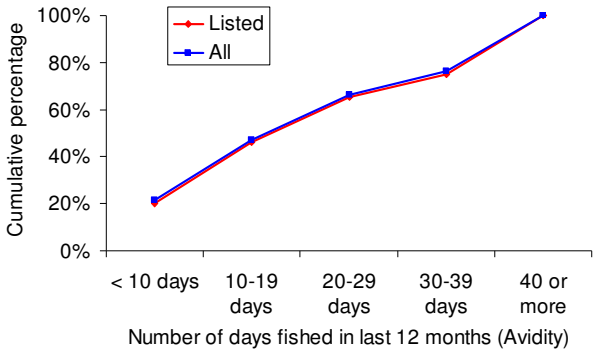


Figure 2: Cumulative fishing avidity profile of fishers from houses with listed phones and all fishers interviewed.

Listed vs. non-listed fishers

In SWRFS, the most avid category was set at 20 days of fishing or more in the last 12 months. In this on-site boat ramp survey, 53.9% of fishers from houses with a listed phone fished for 20 days or more, whereas 52.8% of all fishers interviewed at the ramps were in this category – a difference of only 1.1%.

Statistical tests

With 5 categories and almost 6000 samples, the power of the statistical analysis to detect even a small difference is very large, as is the case here.

A regression analysis showed a statistical difference in avidity profiles between listed and all fishers (*P=0.009*). However, this difference is very small, as shown in figure 2.

Summary

Although the 2010 SWRFS design has been successfully tried and tested elsewhere, this is the first Australian study that has investigated differences in fishing avidity between fishers from listed and non-listed households.

The raw data demonstrates that listed fishers (74% of interviews) are representative of all of the Queensland resident fishers interviewed at boat ramps. There is little reason to think that this would not be the case when applied to the broader Queensland population as sampled by SWRFS. These results suggest that using the White Pages to select a random sample of households provides a cost-effective way to recruit a representative statewide sample of fishers into the 12-month dairy survey and obtain an accurate estimate of the recreational fishing participation rate.

By working synergistically with the on-site recreational fishing monitoring program, considerable information about recreational fishing at boat ramps was collected for little cost. This information will be useful in developing future recreational fishing research programs using samples of fishers encountered at boat ramps across Queensland.

Acknowledgements

The fishers who voluntarily participated in this survey have made an important contribution to the sustainable management of recreational fishing by helping to answer questions about a key assumption of the Statewide Recreational Fishing Survey. The existing on-site recreational fishing monitoring program and its staff provided the means to collect these data over a 12-month period, both accurately and efficiently.