

# Survey types and methods

This factsheet provides information about the different surveys we use at the Department of Primary Industries and Regional Development (DPIRD) to learn more about our fish resources and ensure they remain sustainable for the future.

## On-site surveys

Our on-site surveys collect data via interviews with fishers during a fishing event or after the completion of their fishing activity while at the location where fishing occurs.

The benefit of these surveys is that our researchers can verify species identifications and numbers caught on-site.

## Access point surveys

We interview recreational fishers in-person via access point surveys (also known as boat ramp surveys). These surveys have been conducted since the 1980s. Using this method, researchers spend a fixed amount of time at one location, often a public boat ramp, and interview fishers right after their fishing trip has finished. During interviews, fishers are asked about where and when they fished, and what species they caught. Researchers may measure and weigh the catch.

## Roving creel surveys

Similar to access point surveys, roving creel surveys (also known as shore-based surveys) involve on-site interviews with fishers.

However, roving survey interviews are conducted while the fishing activity is still occurring (for example, while people are fishing from the shore). Researchers may also complete counts of fishers at each location and generally travel to multiple locations within a single day. Roving surveys often require researchers to follow a fixed schedule which allows only a certain amount of time to be spent completing interviews at each location before moving to the next.

## Off-site surveys

Off-site surveys collect interview data after a fishing activity has finished. Fishers are often asked about the species they caught and how many were kept and released. They may also be asked about the frequency and location of their fishing activity as well as other social and economic questions.

Many of our off-site survey methods require a database of participants. This database often consists of people who hold a recreational fishing licence, such as a recreational boat fishing licence. Using databases is the most cost-effective way of collecting a large and diverse array of information on recreational fishing.

## Phone diary surveys

Phone diary surveys involve multiple phone calls to fishers to collect data after fishing has occurred. Participants may keep a diary of

their fishing activity, which is used to help them remember their fishing activity when asked during the phone interviews.

A phone diary survey is used in the statewide recreational fishing survey, whereby fishers agree to receive regular phone calls over a 12-month period to answer questions about their fishing activity. Questions include how often participants went fishing, how many fish they caught, the species caught, and the time spent fishing.

The phone diary survey component of our statewide recreational fishing survey is conducted by the ECU Survey Research Centre on behalf of the DPIRD.

### Phone recall surveys

Phone recall surveys involve a single call to a fisher at the end of a fishing season to find out about their fishing activity during that time.

### Email and online surveys

We send email invitations to fishers, inviting them to participate in online surveys. Email is a cost-effective way of surveying many people throughout the state. A variety of questions may be asked, including:

- the type of fishing activity
- the locations they fished
- demographic information about the fishers.

### Remote camera monitoring

Permanent cameras are positioned at many boat ramps along the WA coastline to record recreational boat launches and retrievals 24/7. Researchers take a random sample of dates from each boat ramp and record the time and type of boat being launched or retrieved using a computer program. This data is used to complement other methods of collecting recreational fishing data.

### Aerial surveys

Flying over an area using manned aircraft is a cost-effective way of counting how many people are fishing on a given day or time over large geographic areas. This is the best way

for our scientists to count abalone fishers during the very short season. Aerial surveys using manned aircraft have also been used in remote regions such as the Freycinet Estuary near Shark Bay.

### Charter fishing logbooks

It is mandatory for charter fishers to record fishing data in their charter logbooks (Tour Operator Returns). These logbooks are used to record catch and effort information including the number of all species kept and released during the tour.

### Research angler program

Research angler diaries, or logbooks, have been completed by fishers voluntarily since the late 1970s. Fishers can record information about their catch in logbooks over time, or in 'catch cards' and questionnaires after a single fishing trip. They record information such as the species of fish caught, their length, and the time, date and location of the fishing activity.

### Send Us Your Skeletons Program

Recreational fishers are encouraged to donate the filleted skeletons (known as 'fish frames') of fish they catch to the Send Us Your Skeletons citizen science program. Biological information is collected from the frames, and is then analysed in a lab by our research staff. Find out more about the program on our website.

### FishCatchWA™

FishCatchWA™ is a digital tool on the ServiceWA app that allows fishers to record and self-report their fishing data and contribute to science. Find out more about the tool on our website.

It is important to test this new reporting method against traditional survey methods to make sure biases aren't occurring while this research is underway.

## More information about surveys

### Participation

Improving our understanding of recreational fishing relies on collaborative work with the community and by collecting a variety of data from fishers. Participation in research surveys conducted by the department is voluntary, except for charter fishing operators where reporting is a mandatory requirement.

### Technology

DPIRD is always looking to explore new technology to improve the efficiency of our data collection. For some surveys, researchers use mobile devices to electronically record data from interviews with fishers.

### Privacy and confidentiality

DPIRD researchers and interviewers at the Edith Cowan University Survey Research Centre abide by the Australian Privacy Principles. All information collected from our surveys is treated as confidential and will never be used or published in any personal way. Survey data is used to produce population estimates. The results of these surveys may be presented at workshops and are published in departmental reports and professional journals.

## Importance of randomisation

It is important that we include information from recreational fishers across all of WA. If only the most popular boat ramps were sampled and only the largest fish measured, then the data would be biased and wouldn't be a full, comprehensive picture of WA's fished resources. This is why we 'randomise' many parts of our surveys to make sure they are scientifically sound.

A great example is the way we use randomisation in the roving creel survey as part of our metropolitan monitoring program. To effectively interview fishers along the shoreline, we randomise the time of day that we arrive at a beach. In doing so, researchers have a random chance of arriving when the beach is empty or crowded. The day type (weekday, weekend or public holidays), locations surveyed, and the starting point of each survey are also randomised.

Some surveys aim to discover very specific information. Not all data collection in such surveys is randomised. It's important though that we understand that the ways we collect information can affect how we interpret the data and use it to inform management decisions.

### Contact us

DPIRD's fishing surveys team can be contacted at  
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### Important Disclaimer

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