



# Recreational fishing monitoring

## How recreational fishing catch and effort data are collected in WA

The Department of Primary Industries and Regional Development (DPIRD) uses a range of different methods and survey types to keep track of recreational fishing and ensure Western Australia's (WA) aquatic resources are utilised sustainably.



### On-site surveys

DPIRD's on-site surveys collect data through interviews with fishers during a fishing event or after the completion of their fishing activity. This either takes place at the location where fishing occurs, or at an access point to the fishing area. These surveys allow researchers to verify species identification and numbers of fish caught.

### Access point surveys

Researchers 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 their fishing trip and what species they caught. Researchers often measure and weigh the catch.



A researcher measures a yellowtail kingfish

## 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 DPIRD's 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

These 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, what species they caught, and the time they spent fishing.

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

## Phone recall surveys

Phone recall surveys involve a single call to a fisher at the end of a fishing season to collect data on their fishing activities over a given period of time. A variety of questions may be asked, such as the type and range fishing activity, locations fished and demographic information about fishers.

## Email and online surveys

We may also send email invitations to fishers, inviting them to participate in online surveys. This is a cost-effective way of surveying fishers throughout the state. 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.



## Remote camera network

Permanent cameras are positioned at many boat ramps along the WA coastline to record all recreational boat launches and retrievals at those locations. Researchers take a random sample of dates from each boat ramp and record the time and type of boat being launched or retrieved. This monitoring complements data collected from other recreational fishing surveys, such as the [statewide recreational fishing survey](#) and [metropolitan monitoring program](#).



## Aerial surveys

Flying over an area using manned aircraft is a cost-effective way of counting fishers on a given day or time over large geographic areas. This is the best way for DPIRD researchers to count abalone fishers during the very short season. These surveys have also been used in remote regions such as the Freycinet Estuary in Shark Bay.



## 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

Recreational fishers are encouraged to donate the filleted skeletons (known as 'fish

frames') of fish they keep to the Send Us Your Skeletons citizen science program. Biological information is collected from the frames and then analysed in a lab by our research staff. Frames of certain fish species may be sought by researchers at different times.

To find out which species are currently being requested by researchers, and more about the program, visit the [Send Us Your Skeletons page](#) on the DPIRD website.



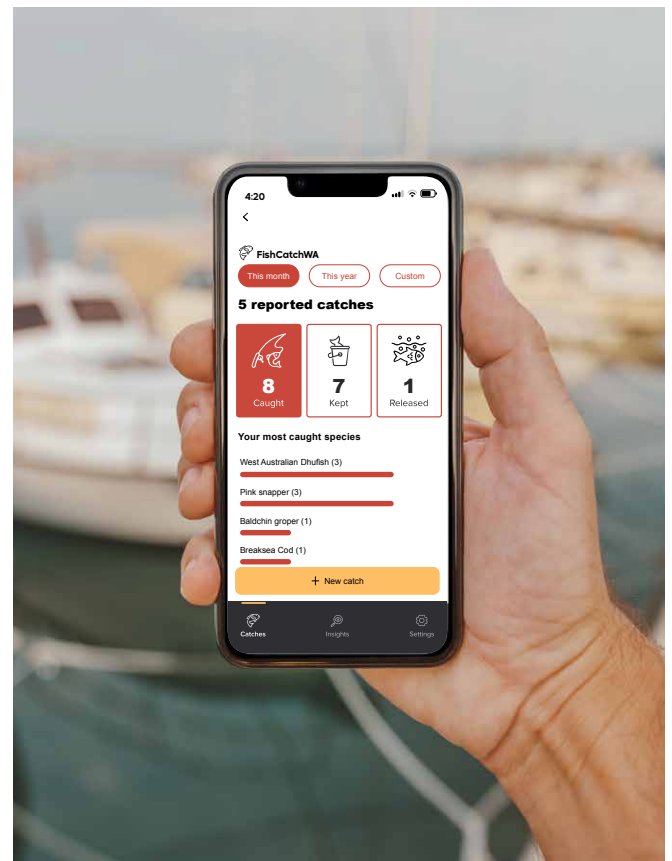
## FishCatchWA™

FishCatchWA™ is a digital tool on the ServiceWA app, which allows recreational fishers to record and self-report their catch and contribute to science. To find out which species are currently being requested by researchers, and more about the tool, visit the [FishCatchWA™ page](#) on the DPIRD 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.



A researcher extracting otoliths from a recreationally caught pink snapper



Recreational fishers can contribute to science by reporting catches through the FishCatchWA™ tool



# More information about surveys

## Participation

Improving our understanding of recreational fishing relies on collaborative work with the community and collecting a variety of data from fishers. Participation in recreational fishing surveys conducted by DPIRD is voluntary.

## 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 ECU Survey Research Centre abide by the Australian Privacy Principles. All information collected from DPIRD's 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 to 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 produce a comprehensive picture of WA's aquatic resources. This is why DPIRD 'randomises' many parts of our surveys to make sure they are scientifically sound.

DPIRD's [metropolitan monitoring program](#), for example, applies randomisation to effectively interview fishers along the shoreline and at boat ramps across day type (weekday, weekend or public holidays), locations, and the starting point of each survey. Understanding the ways information is collected not only influences how data are interpreted, but also how data is used to inform management decisions.

## Contact us

DPIRD's research survey team can be contacted at [research.survey@dpird.wa.gov.au](mailto:research.survey@dpird.wa.gov.au).

## Important disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

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