

Western Australian Salmon Resource

Fisheries Science Update – September 2023

Key points: 2023 stock assessment outcomes

- The latest weight of evidence stock assessment for Western Australian salmon indicates the status of the stock is **adequate** and the risk to the stock is **low**. This means that there are no sustainability concerns for the stock.
- The Department of Primary Industries and Regional Development (DPIRD) tracks our aquatic resources by undertaking weight of evidence stock assessments on a regular basis.
- This science update follows on from the previous Western Australian salmon update in 2017.
- Detailed information on the latest stock assessment is available in [Fisheries Research Report No. 336](#).

Western Australian Salmon Resource Management

There is a long history of commercial and recreational fishing for Western Australian salmon. Historically, this species was landed in large quantities with a peak of about 5,000 t in the mid to late 1960s. Commercial catches over the last decade have been significantly lower, at less than 500 t per year.

The reduction in catch across the resource can be attributed to a reduction in targeting in response to lack of markets and low wholesale prices for the species. Low catch levels may also be attributed to reduced availability of fish in some years due to environmental factors affecting catchability.

Western Australian salmon is an important recreational species, especially for shore-based fishers, noting that the state-wide recreational catch is difficult to estimate. Recent research indicates that a large proportion of Western Australian salmon taken by boat-based recreational fishers in WA are released (69%).

Finfish weight-of-evidence stock assessment

Stock assessments of finfish species comprise a range of analyses to provide an understanding of the sustainability of stocks, which may include:

- measurements of commercial and recreational catches and catch trends
- representative sampling of catching to derive biological information such as age data, length data, spawning activity, and length-at-maturity
- analysis of lengths and ages of fish in catches to evaluate trends in population characteristics and comparison of these with international standards
- construction of population models to evaluate trends in fishing pressure and biomass (relative abundance) of stocks and comparison of these with international standards.

In each assessment, all these analyses are used to identify the current sustainability of stock and the risk of future depletion (that is, a weight of evidence approach whereby all the lines of available data are evaluated). This is used to inform whether management action is required to ensure ongoing sustainability.

Regular stock assessments are important because they add to our comprehensive databases, provide fishery managers with the information needed to understand the stock status and inform management arrangements. Stock assessments ensure that WA's aquatic resources are used sustainably.

Latest science outcomes

- The latest assessment indicates that risk to the Western Australian salmon stock is **low**
- Salmon is a relatively short-lived and productive species and has experienced a period of historically low catch. The marked decline in commercial fishing effort in recent years was driven primarily by market factors and does not indicate unacceptable depletion of the stock.
- Minor shifts in catch distribution have occurred which appear to be associated with variations in environmental conditions.
- The latest assessment noted that the relative abundance of older age classes increased, with a maximum age of 11 years recorded. The recent changes in age structure are reflective of a stock experiencing reduced fishing mortality.

Next steps

The current salmon risk score of **low** assumes the total catch will be maintained at near current levels, however a moderate increase in catch is possible while still maintaining a risk level of medium or less. No changes to the current management measures for salmon fishing (both recreational and commercial) are proposed.

It is recommended that collection of age-based samples from south coast commercial fishers is undertaken for two consecutive years prior to the next assessment. The stock assessment has also suggested additional collections of recreational samples should also be acquired from existing competitions to further inform the next assessment.

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