

Fact Sheet: Fisheries Management

Region

North Coast, Gascoyne Coast, West Coast, South Coast, Indian Ocean Territories

Summary

In fisheries management, the term fish is used to describe a range of aquatic resources including finfish, sharks, crustaceans and molluscs.

Western Australia's fisheries management strategies have one primary goal – Fish for the future. This means ensuring our fisheries are ecologically sustainable.

These strategies are part of an integrated approach to management that not only takes into account the impact of fishing by recreational, commercial and indigenous sectors – but also the effect of other human activities on the State's aquatic ecosystems.

Recreational fisheries are threatened by population growth, coastal development and improved fishing technology. In addition, a high participation rate, due to the low cost of equipment and the ability of fishers to access previously remote areas, is placing pressure on many fish stocks. Furthermore, industrial activities and other human-induced environmental changes have caused damage to many fish habitats.

In Western Australia, recreational fisheries are managed by the Department of Primary Industries and Regional Development and this management is based on the biology and ecology of fish stocks and knowledge of past exploitation patterns. Fishing in marine waters is managed in four broad biological regions – North Coast, Gascoyne Coast, West Coast and South Coast.

The four marine Bioregions divide the marine waters of the State into broad ecological areas. Nonetheless, the total number of fish species within each Bioregion is in the order of hundreds of species. To further refine approaches to the monitoring and assessment of fishery resources, the Department has identified five ecological suites within each Bioregion based on broad habitat and depth criteria (Figure 1);

- Estuarine suite, defined as estuarine waters up to the mouth of a river;
- Nearshore suite, from the beach to a depth of 20 metres;
- Inshore Demersal suite, between depths of 20 metres and 250 metres;
- Offshore Demersal suite, from the 250 metre isobath to the edge of the Exclusive Economic

Zone (200 nautical miles);

- Pelagic suite, which includes the pelagic fishes 'above' the Inshore Demersal and Offshore Demersal suites.

These suites are not only applicable to finfish species but to other asset categories too, such as invertebrate resources and habitats.

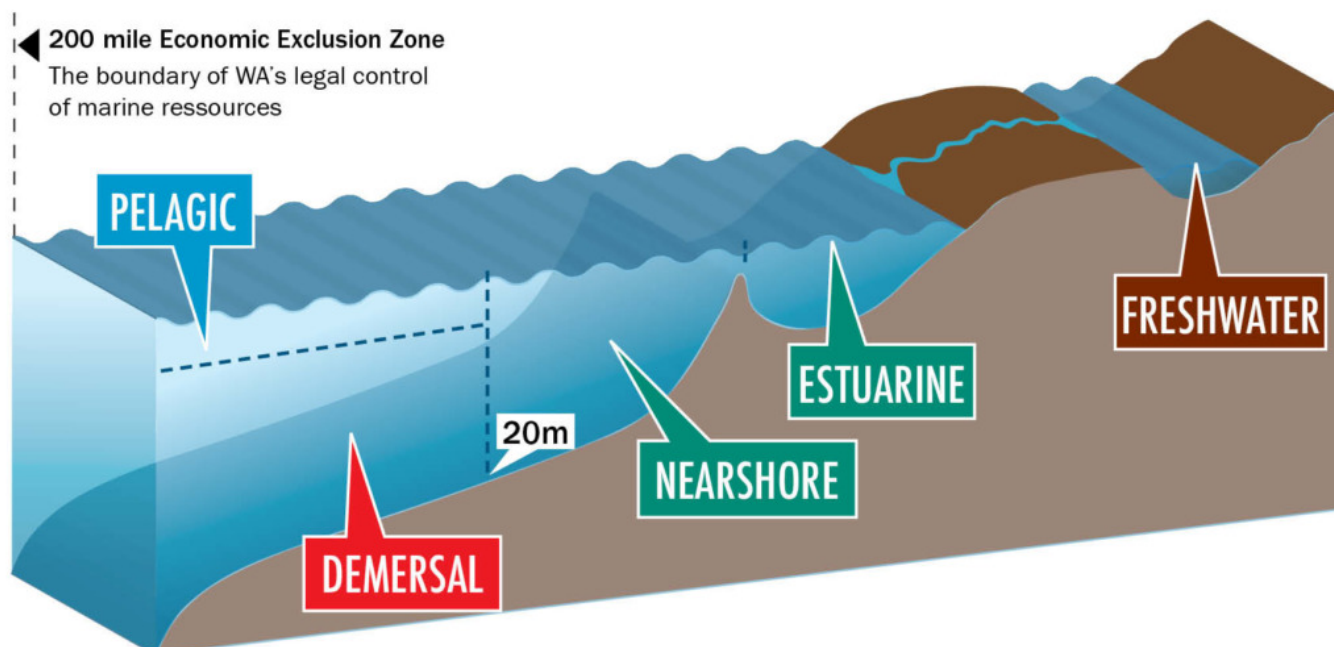


Figure 1. Schematic representation of the five suites of finfish species within each marine Bioregion of Western Australia. (Image: DPIRD)

Management Tools

A key objective of fisheries management is to achieve a sustainable yield – the idea that given certain management arrangements, a specified amount of fish should be able to be fished (removed from the water) each year, without depleting the population.

Fish protection measures that serve the purpose of achieving an ecological sustainable yield include protecting nursery grounds to ensure juveniles survive to the reproductive phase, preventing the take of undersize fish to allow them to reach sexual maturity prior to removal from the population and restricting the number of fish taken to ensure a base population to produce new recruits for future seasons.

To manage the take of fish, management authorities define who can catch the fish, what species can be caught, how much can be harvested, the area that can be fished, and what fishing gear and methods can be used.

Daily bag limits are designed to set a social standard for a 'fair day's catch' for an individual fisher, sharing the available catch among the thousands of fishers wanting to catch a fish. They may also reduce the rate at which an aggregation of fish or an area is depleted by fishing, and ensure that a larger number of fish are available in the water for a longer period of time. When set very low, they may also reduce the total catch of a species. Finfish species are grouped into four categories – demersal, large pelagic, nearshore/estuarine and freshwater. A daily bag limit for each category applies.

Possession and trip limits manage the total take of an individual fish on any one fishing trip. They represent an individual quota and put a ceiling on the total amount of fish a person can possess at any one time in a defined area – whether in total weight or in numbers of fish, or a combination of both.

Size limits are usually based on the breeding biology of a species. Minimum size limits are set to protect fish until they reach maturity and have been able to spawn at least once. These limits can also be set to enhance recreational fishing quality by increasing the average size of fish available. Maximum size (or referred to as slot limits when used in combination with a minimum size limits) are useful in protecting large breeding fish or in reducing the take of highly prized and often rare, large individuals.

Additional protection measures can be introduced when fish are in a vulnerable life stage, such as physically displaying fertilised eggs in the case of crustaceans (berried females) or signs that the fish has reached a breeding condition.

Some species in WA are **totally protected**, which means they must not be caught by any means. This is an important measure to be introduced if a species becomes rare or endangered, is extremely vulnerable to overfishing or to maintain a high level of apex predators.

Closed seasons and closed areas are widely used in recreational and commercial fisheries to contain total effort or to protect fish at a crucial stage of their life cycle, such as spawning. These seasons affect all fishers equally, and effectively limit the opportunity to fish for a given number of days. These are widely accepted in marron, trout, rock lobster, prawn and abalone fisheries, and recently in blue swimmer crab and demersal finfish fisheries.

Gear and method restrictions limit the type of fishing gear that can be used, or limit the area and time in which defined types of gear may be used. In recreational fisheries, highly destructive fishing methods such as the use of poisons and explosives, as well as the use of highly efficient commercial-type fishing, are illegal. Gear controls also aim to reduce conflict in some areas between incompatible fishing activities such as set netting and angling.

Licensing is a key strategy used throughout the world to manage recreational fisheries. There are six recreational fisheries in WA that require a licence: abalone, rock lobster and marron, and

to participate in boat fishing, netting and south-west freshwater angling within WA. Licences provide a database (i.e. list of licence holders) for research and education purposes, as well as ensuring the level of funds for the management of recreational fisheries is in line with the growth in recreational fishing.

References

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Department of Primary Industries and Regional Development: Fisheries, Western Australia
www.fish.wa.gov.au

Fisheries Research and Development Corporation, www.frdc.com.au

Recfishwest, www.recfishwest.org.au

Related resources

[Lesson: Go Fishing](#)