

## Knowledge, Guidance and Intervention

In natural environments without commercial or recreational fishing, fish populations go up and down with environmental conditions, but on average stay at about the same level. This was the case for Australian fish populations prior to colonization. In the mid- to late-1800s, laws were introduced to protect fish populations from overfishing.



Since then, there has been an increase in the need to manage fisheries because of:

- Increasing population and demand for seafood;
- Increased popularity of recreation fishing as a pastime;
- Increased technology such as more powerful boats, GPS and refrigeration;
- Increased information available of how and where to catch fish;
- Environmental degradation.



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The goal of Fisheries Management is - *to keep fish species, and the marine ecosystem as a whole, in good health into the future.* This is a balancing act between allowing people to catch fish but making sure they don't catch too much.

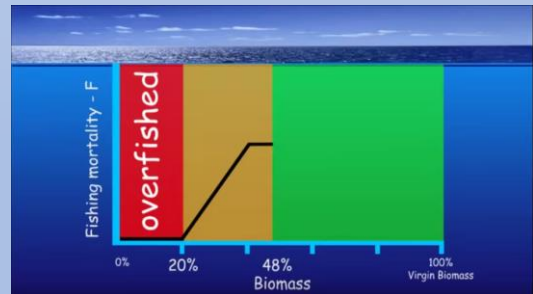


Governments use three general tools to achieve that aim that can be categorised as:

- **Knowledge** – includes information about the biology of the fish, and how much, how, where and when it is caught
- **Guidance** – this is how the knowledge is used to understand how healthy the fish stock is, how it might be affected by fishing in the future and to communicate this to fishers
- **Intervention** – are the rules that are put in place to keep the fish population healthy, and how those rules are enforced.



This series of documents will explain some of the main concepts of **Knowledge** and **Guidance**, as they are the main tools discussed in fisheries meetings. We will also show how **Knowledge** is represented in **Graphs**. **Intervention** is not covered in this series. Click on the images below to see each topic.



### Knowledge



### Graphs



### Guidance



## Information needed for fisheries management

The information needed to manage fisheries come from two main sources, the fishers and scientists. Fisheries management has traditionally relied on scientific knowledge, but there is increasing requirement for stakeholder consultation and input from fishers with local knowledge.

Monitoring the fishery takes many different forms. This includes:

- Fishers keeping a logbook of what they catch, how and where they caught it and how long it took to catch
- Fishers recording the size of the fish they catch
- Fisheries observers measuring the catch, size of fish caught and the taking sample estimate the age of the fish

Information obtained from scientific research can be regularly repeated such as

- Abundance surveys:
- Surveys to estimate recreational and indigenous catches

Or once off or irregularly repeated such as:

- Studies to count how many eggs female fish produce
- How often and to where fish move
- Genetic studies to tell if fish in one area are related to the same species from another area



These, and other information are used to guide fisheries managers in their decision making to achieve their goal - *to keep fish species, and the marine ecosystem as a whole, in good health into the future.*

This series of information sheets will introduce some of the terminology used for the most important type of information, how they are collected and what they are used for.