



What is a fishery? A fishery* consists of a population or stock of fish or other aquatic species* that is exploited by fishers. A fishery, therefore, includes the exploited species, the fishers and the marketers as well as the ecosystems* in which all aquatic species are components.

An ecosystem is a biological community of interacting plants and animals (including humans) and the non-living components of the environment.*

A fishery also includes the people, in both fishing communities and government authorities, who manage the fishery.

Why manage fisheries?

All fisheries need to be managed to ensure that fish stocks are not overexploited* and continue to provide benefits to people in the future. With increasing populations and an increasing demand for seafood, a fishery will inevitably be overexploited if it is not managed.

Who manages fisheries?

Fishing communities, government agencies and fishing cooperatives can all manage fisheries. In many Pacific Island countries, fishing communities are managing fisheries and are using traditional knowledge to do so. Most national governments have an agency that is responsible for fisheries management.

Why do fisheries need to be managed?

The main aim of fisheries management is to ensure that fishing is sustainable. If management is successful, seafood will continue to be available both now and in the future.

Who assesses fish stocks and fisheries?

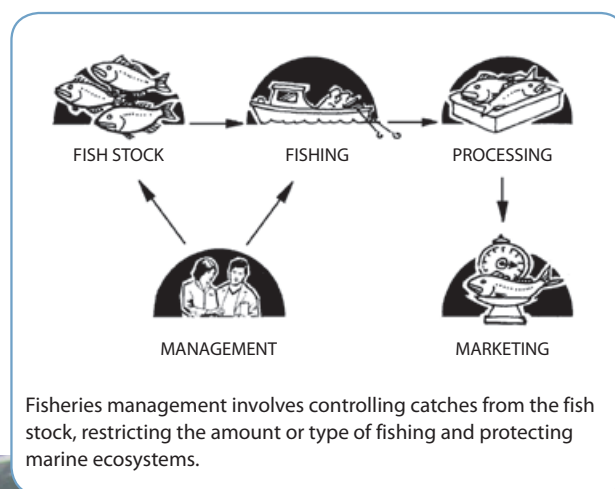
Managers rely on receiving assessments of the health of fish stocks. Sometimes this information comes from fishing communities. More technical assessments are made by scientific staff of government and regional fisheries agencies (see Teachers' Resource Sheet 3: Fisheries assessment).

What or who are we managing?

Fisheries management is mainly about managing people. It often involves preventing people from taking too many fish, using damaging fishing methods and harming the marine environment.

How can we ensure we have seafood for the future?

We have to have rules or regulations to protect our seafood species and the places in which they live. Fishing communities and national fisheries authorities impose many rules and these must be supported by all people.



Some general rules are:

- **Leave small individuals in the sea.** This allows adult fish to live long enough to breed and produce young fish, many of which will grow and be available to be caught in future years. Many fisheries authorities ban the catch of fish less than a minimum size.
- **Leave some big fish in the sea.** Larger individuals produce many more eggs. This is because egg carrying capacity is related to fish volume not length.
- **Protect plant-eating fish.** Some fish, such as parrotfish, unicorn fish and surgeonfish, eat seaweeds that would otherwise displace, compete with, or cover corals.
- **Ban or restrict some types of fishing.** Some types of fishing are more damaging than others. Some fisheries managers restrict the length of gill nets, ban the use of small nets, and limit the number of fish traps and fences. Methods such as using underwater torches and spears at night, when fish are sleeping, should be banned. (see Information Sheet for Fishing Communities number 29: Plant-eating fish).
- **Ban the use of damaging fishing methods.** Using poisons and explosives destroy our resources and our future.
- **Ban or reduce fishing on spawning* fish.** Ban fishing in areas where fish are known to gather to spawn* or at times when fish are gathering to spawn. Spawning refers to the act of releasing eggs, which in most fish, are fertilised by males releasing sperm into the sea. Many fish have to gather in large numbers to reproduce successfully (see Information Sheet for Fishing Communities number 24: Spawning aggregations)*.
- **Protect critical habitats.*** All species need places to eat, live and grow. Some species use different habitats at different stages of their lives. These important habitats may include mangroves, seagrass beds and corals.
- **Set up permanent reserves to protect fish and places in which they live.** Set up an area where fishing is banned to protect areas including corals and seagrass beds. No-take areas* may allow fish catches to eventually increase in nearby areas.
- **Protect watershed areas.** Seek government support to reduce sediments and nutrients* running off the land into rivers and lagoons; these cause damage to many marine habitats (see Community Information Sheet 27: Nutrients and sediments).



Not all of the above measures are appropriate for all species. Individual information sheets should be consulted for the management options appropriate for specific species.

Fisheries managers recognise that we must manage not only fisheries but the areas in which fish live – this is called an ecosystem approach to fisheries management.

