VeriFish

Fishing Methods at a Glance

From vast nets sweeping across open waters to simple hooks lowered one by one, fishing gears shape **how we harvest food from the sea**. Each method tells a story, and understanding how different fishing gears work helps us see **how these methods interact with the environment**. It also reveals how specific gears are designed for particular species and fishing environments.

Below are **8 common types of fishing gear**, illustrated and explained, along with the marine species they are commonly used for.

1 Pelagic Trawl

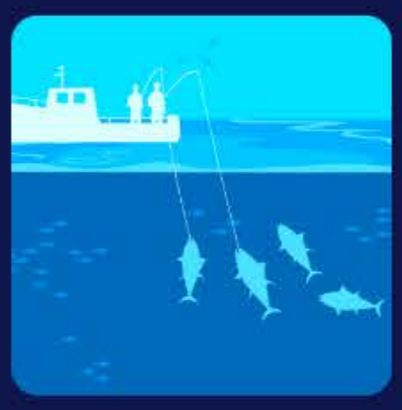
Small pelagic species such as herring, mackerel, horse mackerel, anchovies, sardines, sprat, and capelin.

These cone-shaped nets are towed by a vessel in midwater, targeting **dense schools of fish**. Because pelagic trawling focuses on shoals that usually consist of a single species, it is a highly selective method with **very low bycatch**.
The gear operates away from the seabed, resulting in **minimal impact on bottom habitats**, and it is considered one of the most **fuel-efficient** fishing methods.

2 Bottom Trawl

Species that live on or near the seabed, such as flatfish, cod, and shrimp.

Bottom trawls are cone-shaped nets that are towed over the seabed. Species near the seafloor do not live in dense shoals, so this is usually a **mixed fishery** catching a variety of species. Dragging gear across the seafloor can cause **damage to seabed habitats**. It is also fuel-intensive. To improve selectivity and reduce unwanted catches, mesh sizes can be increased and selectivity devices can be applied.
Ongoing innovations, including wheeled or raised gears and spatial management of fishing areas, aim to further **limit impacts on sensitive habitats** and **reduce fuel consumption**.



3 Pole-and-Line

From open-ocean swimmers such as tuna to bottom-dwelling species such as cod.

Pole-and-line gear involves catching fish with one or more lines that have **baited hooks**. Depending on the type of fishing and where it occurs, the gear is operated manually or mechanically.
The **impact on other species tends to be minimal** because fishers can release unwanted marine life immediately. This method **does not impact the seabed**.

4 Longlines

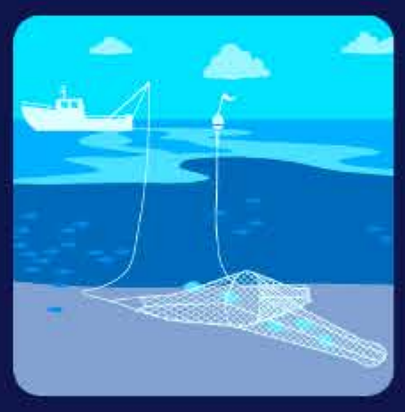
Tuna species, swordfish, cod, halibut.

This fishing method uses **a main line that can extend for many kilometres**, with baited hooks attached at regular intervals. Set longlines are deployed on or near the seabed, while drifting longlines are suspended in the water column at the surface or at midwater depths.
A range of technical measures is used to **reduce interactions with non-target species**, including bird-scaring lines, weighted hooks, and circle hooks, which improve the safe release of turtles and other marine animals. These adaptations can significantly **improve the selectivity and environmental performance** of longline fisheries.

5 Purse Seine Nets

Schooling pelagic species such as tuna, sardines, herring, and anchovies.

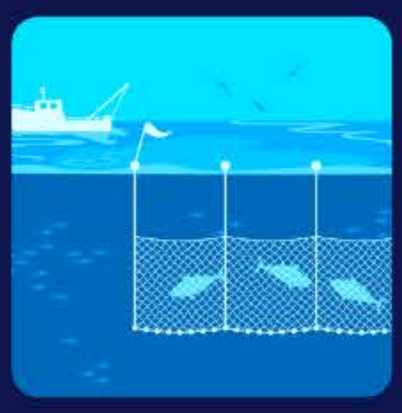
This method uses large netting walls to **surround a school of fish** from the sides and below. A drawstring at the bottom of the net is then closed, preventing fish from escaping downward. Some fisheries use natural or artificial floating objects, known as **fish aggregating devices (FADs)**, to lure tuna.
Purse seining is a **highly efficient** way to harvest schooling fish, and practices such as **biodegradable materials or "free-school" purse seining**, where nets are set on tuna schools without FADs, are widely used to improve selectivity and **reduce interactions with non-target species**.



6 Boat Seine Nets (Danish or Scottish)

Squid, plaice, red mullet, gurnard, and other demersal species.

This fishing technique uses a **seine net with a long line** (the seine rope) on both sides that is pulled through the water. **Danish seining** is usually relatively small-scale with low impact. **Scottish seine**, or **flyshooting**, is carried out at a larger scale, involves towing during the haul, and uses cables instead of lines. These cables can be **over 3,000 meters in length**. It has a **lower physical impact on the seabed** compared to other bottom trawls due to slower towing speeds, but much larger areas can be affected because of the scale of the gear. This method can also result in **substantial unwanted bycatch**.



7 Gillnets & Entangling Nets

Large mesh nets target tuna, groupers, and large flatfish, while small mesh nets are used for species such as sardines and anchovies.

Gillnets and entangling nets are **vertical netting panels**. They have floats on the upper line and weights on the lower line to keep the nets in position. Gillnets are not towed, so they generally have **minimal impact on the seafloor**. However, the **incidental catch of endangered species**, such as turtles, sharks, marine mammals, or seabirds, can be a problem. In addition, **"ghost fishing"** is a concern: when lost or discarded gillnets, or any piece of netting drifting or somehow attached to the bottom, continue to trap marine life. A strong focus in many fisheries is placed on **improving selectivity and reducing unwanted interactions** through measures such as net modifications, acoustic deterrents, and programmes to prevent gear loss and recover lost nets.

8 Fykes, Traps & Pots

Large stationary nets or barrages target migrating pelagic and demersal fish, while pots are used for lobsters, crabs, shrimps, octopus, eels, and various reef fish.

Traps, large stationary nets, barrages, or pots, are types of fishing gear in which **fish are retained or enter voluntarily** and are prevented from escaping. They are designed so that the entrance itself becomes a **non-return device**, allowing fish to enter the trap but making it impossible to leave the catching chamber.
Caught juveniles or undersized species can be released alive. Mesh size and escape panels in the trap can also be used to **release small-sized individuals and unwanted species**. Lost pots will continue to fish and thus to "ghost fish" if no gear-retrieval mechanism or biodegradable releases are installed. The ropes connecting pots can pose a risk in the **migration routes of whales**.

GEAR GLOSSARY

Ghost Fishing

The term **"ghost fishing"** refers to the continued catching of fish by fishing gear that has been abandoned, lost, or discarded. This term is commonly used to describe the behavior of unattended fishing gear that remains in the marine environment. **Abandoned, lost, or discarded fishing gear (ALDFG)** causes numerous negative environmental and economic impacts, including navigational hazards and associated safety issues. The ability of ALDFG to continue to fish is often referred to as "ghost fishing".

Shoaling Species

Fish that gather and stay together for social reasons are described as **shoaling**. When they also move together in the same direction in a well-organised way, this behaviour is called **schooling**.

Bycatch

Bycatch, also known as **unwanted catch**, refers to fish or other marine organisms that are **caught unintentionally** while targeting a different species.
Unwanted catch may include species with **low commercial value**, species for which the fisher does not hold fishing rights, or fish that are **below the minimum landing size**. Handling and management of bycatch vary depending on fishing practices, regulations, and gear type.
Bycatch is often thrown overboard (**discarded**). The survival rate of discarded fish is very low.

SOURCES

- FAO
- GRSF
- EMODnet Biology
- Sea Around Us
- BMIS
- IUCN

Scan to browse species by gear type in the VeriFish app!

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