

THE SCIENCE AND SUSTAINABILITY OF MSC CERTIFIED TRAWL FISHERIES

Marine Stewardship Council

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Trawling is a fishing method that herds and captures target species by towing a net through different levels of the water column. It is one of the most common methods of fishing in the world, **supplying approximately one quarter of all wild-capture seafood globally.** It is an efficient way of catching large quantities of highly nutritious fish and shellfish which are needed to feed a growing global population. **Over 3 billion people rely on our oceans for a major source of protein and other nutrients such as omega-3 fatty acids, iron and vitamin B12.**

Many commonly consumed species are caught using trawl gear including whitefish like cod and pollock and flatfish like halibut and sole. Shrimp and squid can also be caught through this method.

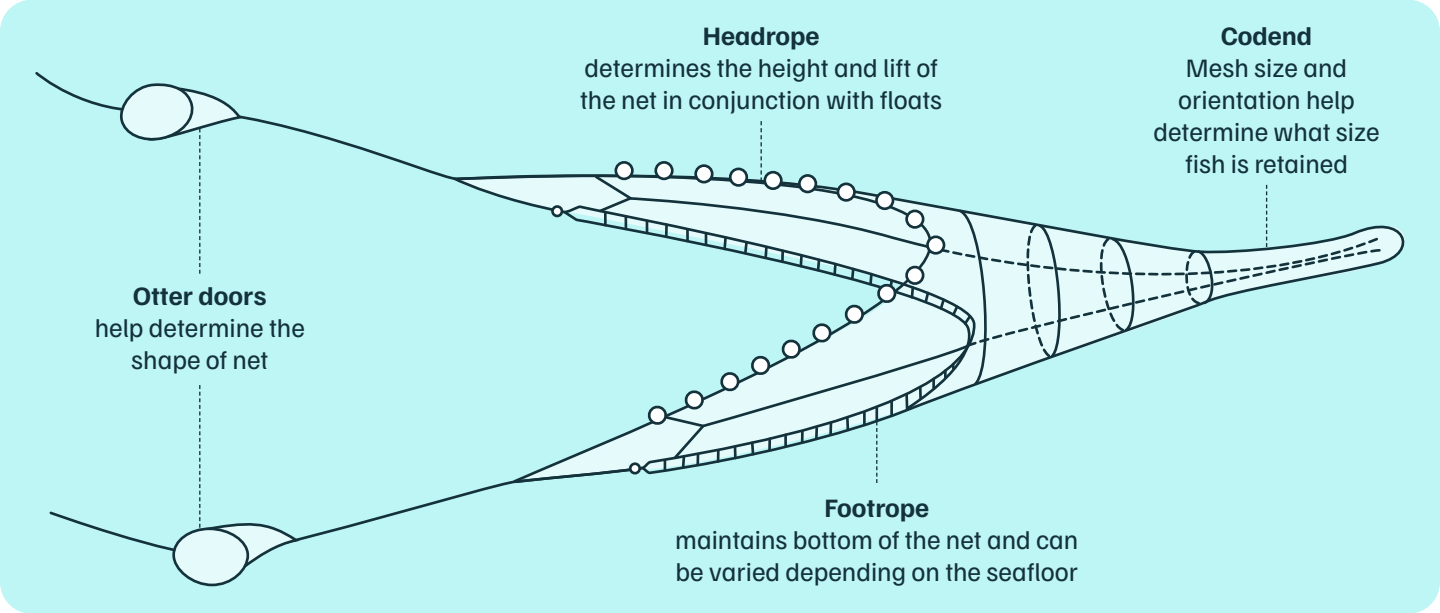
Bottom trawl: Towed nets used to catch fish living on or close to the seabed. Also known as "demersal trawl".

Mid-water trawl: or "pelagic" trawl, designed to target fish in the mid- and surface water and may also operate close to and touch bottom surfaces.

Because of the scope and scale of this harvesting method, **it is critical for trawling to be managed properly to minimize habitat impacts and catch of non-target species.** Fisheries using bottom trawl gear can only achieve MSC certification if they can demonstrate they do not cause serious or irreversible harm to seabed habitats and biodiversity. Many fisheries are also monitoring impacts, adapting gear, and innovating to proactively manage environmental impacts.

BASIC ANATOMY OF TRAWL GEAR

Trawl Gear Diagram



"THERE ARE MANY WAYS TO MODIFY TRAWL GEAR TO REDUCE BYCATCH AND MINIMIZE SEABED IMPACTS. FISHERS AND SCIENTISTS WORK COLLABORATIVELY TO DEVELOP AND TEST THESE MODIFICATIONS, GENERATING THE RESEARCH NEEDED TO INFORM BETTER FISHERIES MANAGEMENT." AARON WHITMAN, SENIOR RESEARCH ASSOCIATE, GULF OF MAINE RESEARCH INSTITUTE

In both bottom and midwater trawling, trawl doors help spread the net horizontally as the vessel moves forward. Bridles and sweeps connect the doors to the net and, depending on the gear configuration, help herd fish toward the net opening. The net then narrows toward the back, or codend, where the catch is collected.

Trawl gear is highly adaptable and can be modified to target particular species while reducing unwanted environmental impacts. Many MSC certified fisheries have adapted gear to reduce impacts and demonstrate sustainability. Nets can be adjusted by width, length, shape, mesh size, and configuration, as well as towing depth and speed, to improve species selectivity. Modifications to the doors, sweeps, and lower portion of the net can help control contact with the seafloor and reduce interactions with sensitive habitats.

LEADING BY EXAMPLE: INNOVATIONS & ADAPTIVE MANAGEMENT

MSC certified fisheries already perform at a high level to meet the requirements of the Fisheries Standard, however many continue to improve and innovate by adopting advanced fishing gear technologies, improving data collection, and refining ecosystem management. These case studies from MSC certified fisheries demonstrate fisheries that are leading by example.

SMARTER NETS REDUCE BYCATCH

The US West Coast pink shrimp fishery has continuously improved its fishing gear to catch shrimp more selectively while reducing bycatch. The fishery introduced bycatch reduction devices (BRDs), special grids fitted inside the trawl net, that allow larger fish to escape while keeping the smaller shrimp in the net. Fishermen, scientists and managers also worked together to test the attached LED lights to the net opening to deter nontarget species. The lights help eulachon, juvenile flatfish and juvenile rockfish detect and avoid the approaching gear, dramatically reducing bycatch without reducing shrimp catches. As a result of the success of these trials, Oregon and Washington made the use of LED lights mandatory in 2018, and it became required in California in 2022, making an already selective fishery even more effective.

RESTRICTING FISHING TO HELP JUVENILES

A highly targeted and versatile management system is employed in the US Atlantic scup fishery, combining spatial, temporal, and gear-based regulations to protect juvenile scup while minimizing disruption to fishing activity. The Scup Gear Restricted Areas focus on small-mesh trawling during peak vulnerability, which was identified as the highest-risk for juvenile bycatch. This approach allows conservation of juveniles while lower-impact fisheries continue to operate, reducing economic costs. The system is strengthened by its adaptive design, as restricted area boundaries have been modified over time in response to new scientific data and changing bycatch patterns. Scientific assessments from the Northeast Fisheries Science Center suggest these measures reduce juvenile mortality and enhance survival in the fishable population while encouraging more selective fishing practices across overlapping fisheries such as squid, summer flounder, and black sea bass.

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To learn more about MSC certified trawl fisheries, contact:
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The Marine Stewardship Council (MSC) is a global nonprofit dedicated to a healthier ocean and seafood for the future. **msc.org** | **@MSCbluefish**

Photo: US West Coast Groundfish Fishery