

Fishery Basics – Fishing Vessels

Fishing Vessel Types

Fishing vessels are typically designed with a specific purpose. That purpose is to locate, **catch**, and preserve fish while out at sea. The planned operations of a vessel determine the overall size of the vessel, the arrangement of the deck, **carrying capacity**, as well as the machinery and types of equipment that will be supported by the vessel. Due to the inherent differences in **fishing communities** around the world, there is a wide range of types and styles of fishing vessels. Vessel sizes can range from the 2 m (6 ft) dug out canoes used in **subsistence** and **artisanal** fisheries, to factory ships that exceed 130 m (427 ft) in length. Commercial fishing vessels can also be characterized by a variety of criteria: **types of fish** (See Biology & Ecology) they catch, **fishing gear and methods used** (See Fishing Gear), capacity and **processing** capabilities, and the geographical origin of the vessel. In 2002, the United Nations Food and Agriculture Organization (FAO) estimated the **world fishing fleet** had approximately four million vessels, with an average vessel size ranging from 10-15 m (33-49 ft). Based on a **quarterly catch statistics report**, published by the **Pacific Fisheries Information Network (PacFIN)**, approximately 1,950 vessels landed their catches in California ports.

Due to the technological innovations that began in the 1950s, many fishing vessels are now classified as **multi-purpose vessels**, because of the ability to switch out gear types depending on the targeted species. However, single use vessels still exist in the world fishing fleet today. The **United Nations Food and Agriculture Organization (FAO)** has identified eight general vessel classifications by fishing method, which we have provided detailed information on. Most, if not all, modern **commercial** vessels are also equipped with advanced technological equipment for navigation and fish finding.

Seiners

Seiners use **surrounding or roundhaul nets** (See Fishing Gear), such as **purse seines** and **lampara nets**, to surround schools of **pelagic** fish near the surface. Like other modern vessels, seiners can vary by the types of equipment that are used and the geographical region in which they are used. Traditionally, seine fishing was done by hand, but modern seining began in 1960 with the introduction of the hydraulic winch and power **block**. The classification of seiners is:

- [American seiners](#)
- [European seiners](#)
- [Drum seiners](#)
- [Purse seiners](#)
- [Seine netters](#)
- [Tuna purse seiners](#)



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Some vessels operate in **nearshore** waters targeting **coastal pelagic species**, like the **Pacific Sardine** (See California Fisheries) and the **Market Squid** (See California Fisheries). In 2009, the **Pacific Fishery Management Council** reported that the **limited entry fishery** targeting coastal pelagic **species**, operating in the nearshore waters along the Pacific coast, consisted of 61 vessels. These vessels primarily target **finfish** with seine nets. Within **Monterey Bay National Marine Sanctuary** purse seiners are commonly used. The average size of a purse seiner is 15-25 m (49-82 ft) long, with a hold capacity of 18-36 t (40,000-80,000 lbs), and a crew size of 5 people.

Other seiners operate in the open-ocean targeting **highly migratory species** like **Tuna**. These larger purse seine operations are currently **open access** fisheries; therefore, the number of large purse seiners operating outside of the U.S. **Exclusive Economic Zone (EEZ)** is unknown. However, some of the smaller purse seiners from California do target **Yellowfin**, **Bluefin** and **Skipjack Tunas** within the EEZ. The number of vessels that have landed these species has varied from a high of 51 vessels in 1986 to a low of 3 vessels in 2008.

A seiner may use an additional vessel during seine fishing operations. In California, small **skiffs** (6 m, 20 ft) are used to anchor one end of the seine net, as the seiner lays out the other end of the seine net in a wide circle around the targeted species. Also, larger vessels may utilize helicopters or spotter planes to search for and track schools of fish.

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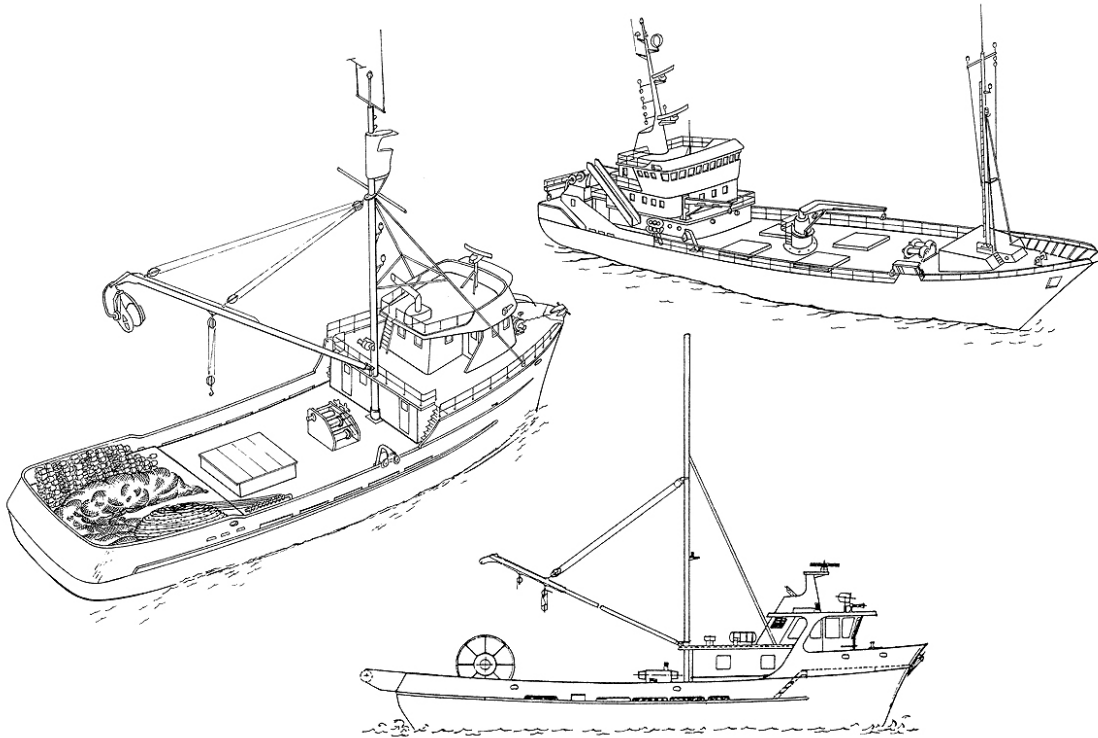
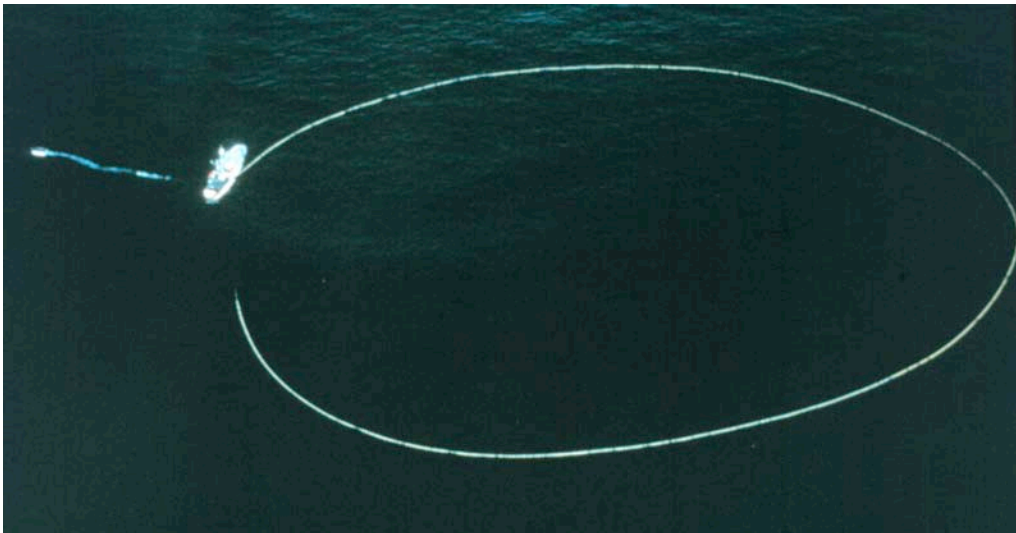


Illustration of three types of seiners: an American seiner (left), a European seiner (top right) and a drum seiner (bottom right). (Credit: Food and Agriculture Organization of the United Nations)



Aerial view of a seine fishing vessel and its accompanying support vessel fishing in the Pacific Ocean. (Credit: NOAA, South Pacific Commission)



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Additional Resources

National Marine Fisheries Services: Fisheries Gear

(link to: <http://www.nmfs.noaa.gov/fishwatch/fishinggears.htm>)

National Marine Fisheries Services: Interactive Illustration with Vessels, Gears and Species

(link to: <http://www.nmfs.noaa.gov/speciesid/Sustainability.html>)