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Common Fishery Terms

Benthic zone—Ecological area that includes the seafloor and the region directly above it. It commonly consists of nutrient-rich sand, silt or dead organisms and is typically home to seaweeds, bacteria, fungi, sponges, sea anemones, worms, sea stars, fishes and other creatures.

Biomass (B)—The quantity of a group of living organisms, measured by weight.

B_0 —The historical baseline or unfished virgin biomass (B) against which decline should be measured.

Bycatch—The part of a fishery catch that is not a legal target of the fishery. Bycatch may be retained and landed but is usually discarded (released or returned to the sea, dead or alive). Examples: sea turtles caught in a longline fishery, sharks caught while fishing for swordfish, small or undersize red snapper caught when fishing for larger red snapper, and target species caught after a quota or limit has been reached.

Catch—The total number or weight of fish taken out of their environment, dead or alive, through fishing. Catch includes fish that are discarded or released and not landed.

Ecosystem-based management (EBM)—An integrated approach to oversight that considers the entire ecosystem, including interactions and interdependencies among species and their habitats.

Exclusive economic zone (EEZ)—The area of sea and seabed extending from the shore of a country claiming exclusive rights to it. Under the United Nations Convention on the Law of the Sea, coastal countries have sovereign rights within a 200-nautical-mile EEZ with respect to natural resources and certain economic activities. Nations also exercise jurisdiction over marine science research and environmental protection. Freedom of navigation and overflight, as well as other uses permitted on the high seas (waters beyond national jurisdiction) are still allowed.

Fishing mortality (F)—The rate at which fish are removed from a population through fishing or the portion of the total mortality rate that is attributed to fishing.

Highly migratory species (HMS)—Species whose life cycle includes lengthy migrations, usually through multiple exclusive economic zones (EEZ) or the high seas. Examples: bluefin tuna and great white sharks.

Landings—The number or weight of fish unloaded at a dock or brought to shore.

Maximum sustainable yield (MSY)—The largest average catch that can be taken continuously (sustained) under prevailing environmental conditions without affecting the reproductive health of a stock. B_{MSY} is the long-term average biomass (B) level needed to achieve MSY. F_{MSY} is the fishing mortality rate (F) that results in B_{MSY} for a fish population.

Overfished—Refers to a stock whose biomass (B) has been exploited below the minimum level recommended by scientists and set by management. The minimum threshold is often the biomass associated with maximum sustainable yield (B_{MSY}) or a percentage of B_{MSY} . A stock below the minimum threshold requires a rebuilding plan to return it to a state equal to or greater than B_{MSY} .

Overfishing—Refers to fishing at a mortality rate (F) above a maximum recommended by scientists and set by management. The maximum rate is often a percentage of the fishing mortality rate associated with maximum sustainable yield (F_{MSY}). Overfishing typically results in declines in fish numbers or biomass (B) and requires a reduction in fishing effort.

Pelagic zone—The ecological area consisting of the open sea away from the coast and the ocean bottom. The pelagic zone contains organisms such as surface seaweeds, many species of fish and sharks and some mammals, such as whales and dolphins. Pelagic animals may remain solely in the pelagic zone or may move among zones.

Recruitment—A measure of the number of fish entering the fishable population by surviving to a certain age or size or by migrating into a fishing area. Recruitment can also refer to the number of fish reaching sexual maturity or spawning age within a species.

Size limit—A minimum or maximum on the size of fish that may legally be caught.

Spawning stock biomass (SSB)—The total amount of male and female fish in a stock, measured by weight, that are sexually mature (old enough to spawn).

Stock—A grouping of fish used as the basic unit for fisheries management. A stock includes one species of fish in a particular area that shares similar growth and migration patterns. Example: the northern stock of Pacific Ocean albacore tuna.

Straddling Stock—A stock that moves within the exclusive economic zones (EEZs) of two or more coastal countries or between an EEZ and an area adjacent to it. Example: bluefin tuna.

Total allowable catch (TAC)—The total catch permitted to be caught from a stock for a given time period determined by fisheries managers. A management agency allocates the TAC among stakeholders.

Total mortality (Z)—The rate of fish dying during a year or season due to both fishing and natural causes. This rate varies among species.

Transboundary fish stocks—A stock or population of fish that moves across political or management boundaries. Examples: Atlantic cod (United States and Canada), Pacific cod (United States, Canada and Russia) and Atlantic bluefin tuna (many countries).

Weight-at-age—The average individual weight of the fish in each age class of a particular stock.

Yearlage class—The fish spawned or hatched in a given year, a “generation” of fish. The age composition of a given stock or catch refers to the proportion of fish of different ages or generations.



OCEAN SCIENCE FACT SHEET

The Pew Environment Group is the conservation arm of The Pew Charitable Trusts, a non-governmental organization headquartered in the United States that applies a rigorous, analytical approach to improving public policy, informing the public and stimulating civic life.

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