

Where Fish Live

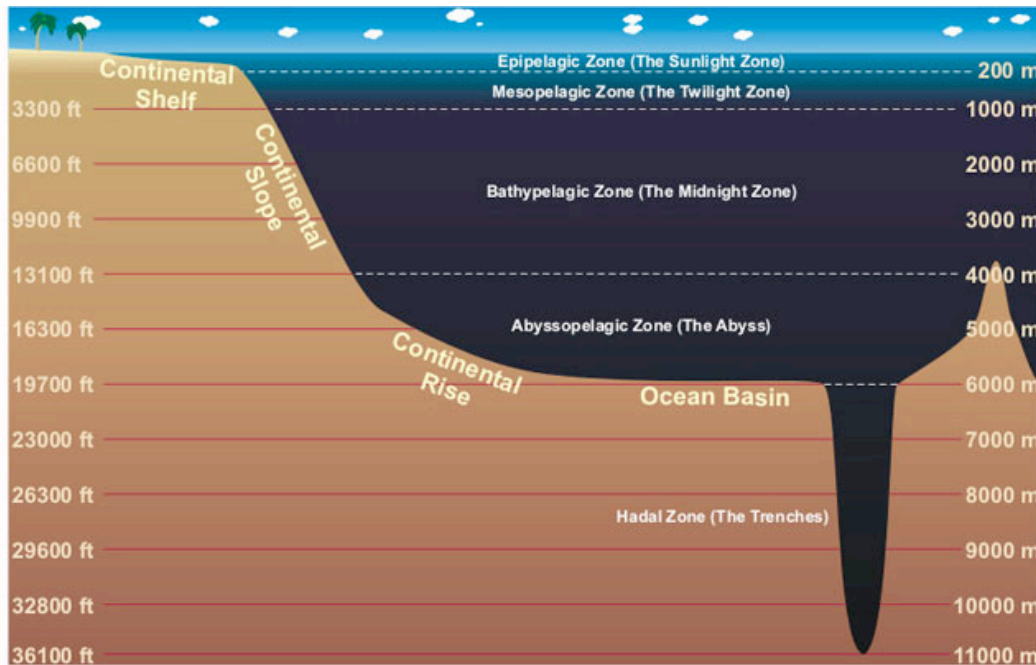


Illustration of the main oceanic zones. Source: NOAA, National Weather Service (http://www.learner.org/courses/envsci/visual/visual.php?shortname=ocean_layers)

The world's oceans are large and vast, covering nearly 71% of the Earth's surface. Marine fishes, those that inhabit the oceans, can be classified by where they live geographically, as well as where they live within the **water column**. Based on **sea surface temperatures** and the overall distribution of marine organisms, the world's oceans can be classified into four **biogeographical** zones: **polar**, **temperate**, **subtropical** and **tropical**. Some fishes may exclusively live in one zone, like many of the fish that live on coral reefs in the tropics; while other fish, like the highly migratory Tunas, might spend time in more than one zone throughout their lifetime or a year.

The depths of the ocean can vary greatly due to the many geologic features that shape the seafloor; thus, the oceans can be zoned vertically as well. There are two distinct zones of the ocean, the **benthic** zone and the **pelagic** zone. The benthic zone is comprised of the seafloor and the organisms that live within or on top of it. **Dungeness Crab** (See California Fisheries), **groundfish species** like **Sole** (See California Fisheries), and **Spot Prawns** (See California Fisheries) all inhabit the benthic zone. The pelagic zone is the entire area of open water and contains the organisms that live away from the bottom. The pelagic zone can be further divided horizontally into two zones, the **neritic** zone and the **oceanic** zone. The neritic zone is composed of the open water occurring above the **continental shelf**. **Coastal pelagic species** like the **Pacific Sardine** and **Market Squid** (See California Fisheries) are two common species that inhabit the neritic zone. The oceanic zone encompasses all other open waters and species like **Albacore Tuna** (See California Fisheries) spend a majority of their lives migrating through this zone.



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Vertically, the pelagic realm can be subdivided into 5 more zones. The uppermost zone, from the sea surface to a depth of 200 m (656 ft), is called the **epipelagic** or **photic** zone. The large amount of available sunlight makes this the most productive zone of the ocean. The water below the photic zone is referred to as the **aphotic** zone, which is also subdivided into separate zones. In the upper portions of the aphotic zone there is enough light for vision; however, there is not enough light for photosynthesis to occur. This transition section from 200 m to 1,000 m (656-3280 ft) is known as the **mesopelagic** zone, and is sometimes referred to as the **disphotic** or twilight zone. Beyond the mesopelagic zone, from 1,000 m to 4,000 m (3280-13,123 ft) is the **bathypelagic** zone. From 4,000 to 6,000 m (13,123-19,685 ft) is the **abyssopelagic** zone. The **hadal** zone is made up of the deep oceanic trenches at depths greater than 6000 m (19,685 ft).

References

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