

Oceanic pelagic zone:-

The pelagic zone consists of the water column of the open ocean, and can be further divided into regions by depth. The word "pelagic" is derived from Ancient Greek (πέλαγος), meaning 'open sea'. The pelagic zone can be thought of in terms of an imaginary cylinder or water column that goes from the surface of the sea almost to the bottom. Conditions in the water column change with distance from the surface (depth): the pressure increases; the temperature and amount of light decrease; the salinity and amount of dissolved oxygen, as well as micronutrients such as iron, magnesium and calcium, all change. Rather like the Earth's atmosphere, but depending on how deep the water is, the water column is divided vertically into up to five different layers.

In addition to the above changes, marine life is affected by bathymetry (underwater topography), by the proximity to land that is underwater such as the seafloor or a shoreline or a submarine seamount. Marine life is also affected by the proximity of the ocean surface, the boundary between the ocean and the atmosphere, which can bring light for photosynthesis but can also bring predation from above and wind stirring up waves and setting currents in motion. The pelagic zone refers to open and free waters in the body of the ocean that stretch between the ocean surface and the ocean bottom and are not too close to some boundary, like a shore or the seafloor or the surface. Marine life living in the pelagic zone can swim freely in any direction, unhindered by topographical constraints.

The oceanic zone is the deep open ocean beyond the continental shelf. These offshore waters contrast with the inshore or coastal waters near the coast, such as in estuaries or on the continental shelf. Waters can plunge in the oceanic zone to the depths of the abyssopelagic and even the hadopelagic. Coastal waters are generally confined to the relatively shallow epipelagic, though these are still pelagic waters providing they are not near the seafloor. Altogether, the pelagic zone occupies 1,330 million km³ (320 million mi³) with a mean depth of 3.68 km (2.29 mi) and maximum depth of 11 km.] Fish that live in the pelagic zone are called pelagic fish. Pelagic life decreases with increasing depth.

The pelagic zone can be contrasted with the benthic and demersal zones at the bottom of the sea. The benthic zone is the ecological region at the very bottom of the sea. It includes the sediment surface and some subsurface layers. Marine organisms living in this zone, such as clams and crabs, are called benthos. The demersal zone is just above the benthic zone. It can be significantly affected by the seabed and the life that lives there. Fish that live in the demersal zone are called demersal fish, and can be divided into benthic fish, which are denser than water so they can rest on the bottom, and benthopelagic fish, which swim in the water column just above the bottom. Demersal fish are also known as bottom feeders and groundfish.

