# 10 Types of Marine Ecosystems

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An [ecosystem](https://www.thoughtco.com/communities-and-ecosystems-130922) is made up of the living organisms, the habitat they live in, the non-living structures present in the area, and how all of those relate to and influence each other. Ecosystems may vary in size, but all the parts of the ecosystem depend upon each other; if one part of the ecosystem is removed, it affects everything else.

A [marine ecosystem](https://www.thoughtco.com/marine-ecosystem-definition-2291621) is any that occurs in or near salt water, which means that marine ecosystems can be found all over the world, from a sandy beach to the [deepest parts of the ocean](https://www.thoughtco.com/deepest-part-of-the-ocean-2291756). An example of a marine ecosystem is a coral reef, with its associated marine life – including fish and sea turtles – and the rocks and sand found in the area.

The [ocean](https://www.thoughtco.com/about-the-ocean-2291768) covers 71% of the planet, so marine ecosystems make up most of the Earth. This article contains an overview of major marine ecosystems, with types of habitat and examples of marine life that live in each.

### Rocky Shore Ecosystem

Along a rocky shore, you may find rock cliffs, boulders, small and large rocks, and [tide pools](https://www.thoughtco.com/tidal-pool-overview-2291685) – puddles of water that can contain a surprising array of marine life. You will also find the [intertidal zone](https://www.thoughtco.com/what-is-the-intertidal-zone-2291772) – the area between low and high tide.

**Challenges of the Rocky Shore**

Rocky shores can be extreme places for marine animals and plants to live. At low tide, marine animals have an increased threat of predation. There may be pounding waves and lots of wind action in addition to the rising and falling of the tides. Together, this activity has the ability to affect water availability, temperature, and salinity.

**Marine Life of the Rocky Shore**

Specific types of marine life vary with location, but in general, some types of marine life you'll find at the rocky shore include:

* Marine Algae
* Lichens
* Birds
* Invertebrates such as crabs, lobsters, sea stars, urchins, mussels, barnacles, snails, limpets, sea squirts (tunicates), and sea anemones.
* Fish
* Seals and sea lions

**Explore the Rocky Shore**

Want to explore the rocky shore for yourself? Learn more about visiting [tide pools](https://www.thoughtco.com/tide-pooling-tips-2292050) before you go.

### Sandy Beach Ecosystem

Sandy beaches may seem lifeless compared to other ecosystems, at least when it comes to marine life. However, these ecosystems have a surprising amount of biodiversity.

Similar to the rocky shore, animals in a sandy beach ecosystem have had to adapt to the constantly-changing environment. Marine life in a sandy beach ecosystem may burrow in the sand or need to move quickly out of reach of the waves. They must contend with tides, wave action, and water currents, all of which may sweep marine animals off the beach. This activity can also move sand and rocks to different locations.

Within a sandy beach ecosystem, you'll also find an intertidal zone, although the landscape isn't as dramatic as that of the rocky shore. Sand generally is pushed onto the beach during summer months, and pulled off the beach in the winter months, making the beach more gravelly and rocky at those times. Tide pools may be left behind when the ocean recedes at low tide.

**Marine Life on the Sandy Beach**

Marine life that are occasional inhabitants of sandy beaches:

* Sea turtles, who may nest on the beach
* Pinnipeds, such as seals and sea lions, who may rest on the beach

Marine life that are regular sandy beach inhabitants:

* Algae
* Plankton
* Invertebrates such as amphipods, isopods, sand dollars, crabs, clams, worms, snails, flies, and plankton
* Fish – including rays, [skates](https://www.thoughtco.com/skate-fish-profile-2291587), [sharks](https://www.thoughtco.com/facts-about-sharks-2292020), and flounder – can be found in shallow waters along the beach
* Birds such as plovers, sanderlings, willets, godwits, herons, gulls, terns, whimbrels, ruddy turnstones, and curlews

### Mangrove Ecosystem

[Mangrove](https://www.thoughtco.com/what-is-a-mangrove-2291773) trees are salt-tolerant plant species with roots that dangle into the water. Forests of these plants provide shelter for a variety of marine life and are important nursery areas for young marine animals. These ecosystems are generally found in warmer areas between the latitudes of 32 degrees north and 38 degrees south.

**Marine Species Found in Mangroves**

Species that may be found in mangrove ecosystems include:

* Algae
* Birds
* Invertebrates such as crabs, shrimp, oysters, tunicates, sponges, snails, and insects
* Fish
* Dolphins
* Manatees
* Reptiles such as sea turtles, land turtles, alligators, crocodiles, caimans, snakes, and lizards

### Salt Marsh Ecosystem

Salt marshes are areas that flood at high tide and are composed of salt-tolerant plants and animals.

Salt marshes are important in many ways: they provide habitat for marine life, birds and migratory birds, are important nursery areas for fish and invertebrates, and protect the rest of the coastline by buffering wave action and absorbing water during high tides and storms.

**Marine Species Found in a Salt Marsh**

Examples of salt marsh marine life:

* Algae
* Plankton
* Birds
* Fish
* Occasionally [marine mammals](https://www.thoughtco.com/types-of-marine-mammals-2292023) such as dolphins and seals.

### Coral Reef Ecosystem

Healthy coral reef ecosystems are filled with an amazing amount of diversity, including hard and soft corals, invertebrates of many sizes, and even large animals such as sharks and dolphins.

The [reef-builders](https://www.thoughtco.com/how-do-coral-reefs-form-2291791) are the hard (stony) corals. The basic part of a reef is the skeleton of the coral, which is made of limestone (calcium carbonate) and supports tiny organisms called polyps. Eventually, the polyps die, leaving the skeleton behind.

**Marine Species Found on Coral Reefs**

* Invertebrates may include: hundreds of species of coral, plus sponges, crabs, shrimp, lobsters, anemones, worms, bryozoans, sea stars, urchins, nudibranchs, octopuses, squid, and snails
* Vertebrates may include a wide variety of fish, sea turtles, and marine mammals such as seals and dolphins

### Kelp Forest

Kelp forests are very productive ecosystems. The most dominant feature in a kelp forest is – you guessed it – [kelp](https://www.thoughtco.com/what-is-kelp-2291971). The kelp provides food and shelter for a variety of organisms. Kelp forests are found in cooler waters that are between 42 and 72 degrees Fahrenheit and in water depths from about 6 to 90 feet.

**Marine Life in a Kelp Forest**

* Birds: seabirds such as gulls and terns, and shorebirds such as egrets, herons, and cormorants
* Invertebrates such as crabs, sea stars, worms, anemones, snails, and [jellyfish](https://www.thoughtco.com/jellyfish-profile-2291827)
* Fish, including sardines, garibaldi, rockfish, seabass, barracuda, halibut, halfmoon, jack mackerel and sharks (e.g., horn shark and leopard shark)
* Marine mammals, including [sea otters](https://www.thoughtco.com/facts-about-sea-otters-2292013), sea lions, seals, and whales

### Polar Ecosystem

[Polar](https://www.thoughtco.com/geography-of-earths-arctic-region-1434938) ecosystems are found in the extremely cold waters at the Earth's poles. These areas have both cold temperatures and fluctuations in the availability of sunlight – at some times in polar regions, the sun doesn't rise for weeks.

**Marine Life in Polar Ecosystems**

* Algae
* Plankton
* Invertebrates: one of the most important invertebrates in polar ecosystems is [krill](https://www.thoughtco.com/understanding-the-arctic-food-web-1140785)
* Birds: penguins are well-known inhabitants of polar ecosystems, but they live only in the Antarctic, not the Arctic
* Mammals: Polar bears – known for living only in the Arctic, not the Antarctic – a variety of whale species, plus pinnipeds such as [seals](https://www.thoughtco.com/types-of-seals-2291967), sea lions, and [walruses](https://www.thoughtco.com/facts-about-walruses-2291965)

### Deep Sea Ecosystem

The term "[deep sea](https://www.thoughtco.com/ocean-trench-definition-4153016)" refers to parts of the ocean that are over 1,000 meters (3,281 feet). One challenge for marine life in this ecosystem is light and many animals have adapted so that they can see in low light conditions, or don't need to see at all. Another challenge is pressure. Many deep sea animals have soft bodies so that they aren't crushed under the high pressure that is found at extreme depths.

**Deep Sea Marine Life:**

The deepest parts of the ocean are more than 30,000 feet deep, so we're still learning about the types of marine life that live there. Here are some examples of general types of marine life that inhabits these ecosystems:

* Invertebrates such as crabs, worms, jellyfish, squid, and octopus
* Corals
* Fish such as anglerfish and some sharks
* Marine mammals, including some types of deep-diving marine mammals such as sperm whales and elephant seals

### Hydrothermal Vents

While they are located in the deep sea, [hydrothermal vents](https://www.thoughtco.com/what-is-a-hydrothermal-vent-2291778) and the areas around them make up their own unique ecosystem.

Hydrothermal vents are underwater geysers that spew mineral-rich, 750-degree water into the ocean. These vents are located along [tectonic plates](https://www.thoughtco.com/about-plate-tectonics-1441104), where cracks in the Earth's crust occur and seawater in the cracks is heated up by the Earth's magma. As the water heats and pressure rises, the water is released, where it mixes with the surrounding water and cools, depositing minerals around the hydrothermal vent.

Despite the challenges of darkness, heat, ocean pressure, and chemicals that would be toxic to most other marine life, there are organisms that have adapted to thrive in these hydrothermal vent ecosystems.

**Marine Life in Hydrothermal Vent Ecosystems:**

* [Archaea](https://www.thoughtco.com/archaea-373417): bacteria-like organisms that perform chemosynthesis — turn the chemicals around the vents into energy — and form the base of the hydrothermal vent food chain
* Invertebrates, such as tubeworms, limpets, clams, mussels, crabs, shrimp, squat lobsters, and octopuses
* Fish, such as eelpouts (zoarcid fish)