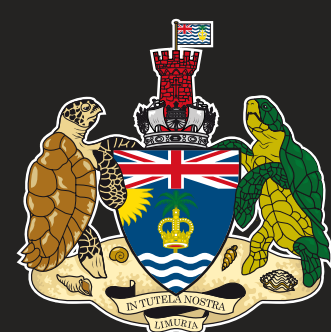


Coral Atolls

The British Indian Ocean Territory has one of the great coral reef systems of the world, with over 1% of global reefs within its waters, more than Florida, or the Seychelles, or Belize. These coral reefs rise high above the seabed and have been built by millions and millions of coral polyps. Individually, a polyp is a simple animal, only about 1-3mm in diameter – little more than a mouth, surrounded by a ring of tentacles. But they live in huge colonies, with each polyp secreting part of a communal limestone skeleton, a coral. Corals depend on a mutually beneficial, or symbiotic, relationship with a microscopic algae (called zooxanthellae) which live within the coral tissue. Like all plants, these algae generate food from the sunlight, and the corals depend on them in waters that are otherwise quite poor in nutrients.

Coral atolls are a particular type of coral reef structure which develops when corals settle on the underwater slopes of extinct volcanoes, forming a ring around their perimeter. As the volcanoes begin to subside beneath the waves, the corals continue building the reef upwards. Eventually the volcano sinks beneath the surface completely, and a ring of coral reefs, a coral atoll, is formed with a lagoon of calm waters in the middle of the atoll. There are five coral atolls in BIOT, Peros Banhos, Salomon, Egmont, the submerged Blenheim reef and the island of Diego Garcia.

The seaward side of the reef which drops into deeper water is known as the outer or fore reef, and this is the richest area of coral growth where the 'rainforests of the sea' may be found. Light and temperature conditions are most favourable to coral growth resulting in incredible biodiversity. Above these slopes, there is typically a ridge of coralline rock, called the reef crest. For much of the year this is waveswept and marked by white, surging waves. Further in, where waters are calm and shallow there is a wide expanse known as the reef flat which is intertidal. The outer reef, reef crest and reef flat play a critical role in protecting the lagoon and all the coral islands – they have been shown to reduce the energy of incoming waves by 97%. Without them the pounding energy of oceanic swells would rapidly reduce shores and erode the islands.



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