# STATUS OF THE WORLD'S MARINE SPECIES

*The loss of coral reef ecosystems will have devasting effects on a wide spectrum of marine species, as well as for people and nations that depend on reef resources for their livelihoods and economic security. © Jean-Christophe Vié*

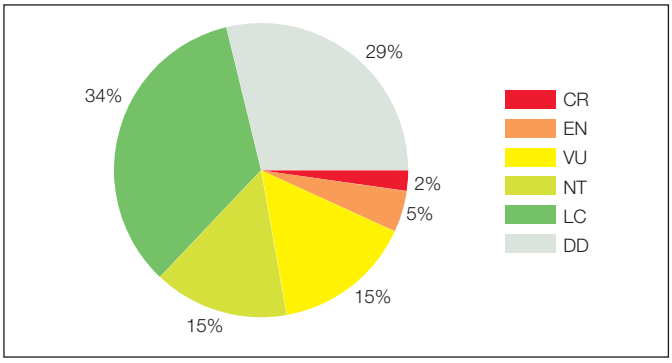
## What do we know about threats to marine species?

The oceans are home to a large percentage of Earth's biodiversity, occupying 70 percent of its surface and, when volume is considered, an even larger percentage of habitable space. However, there is growing concern that a broad range of marine species are under increased risk of extinction and that marine biodiversity is experiencing potentially irreversible loss due to a number of threats that include over-fishing, bycatch, climate change, invasive species and coastal development. The IUCN Red List of Threatened Species™ is the global gold standard for recording the threat of extinction for marine species, and forms the foundation for the identification of marine conservation priorities worldwide.

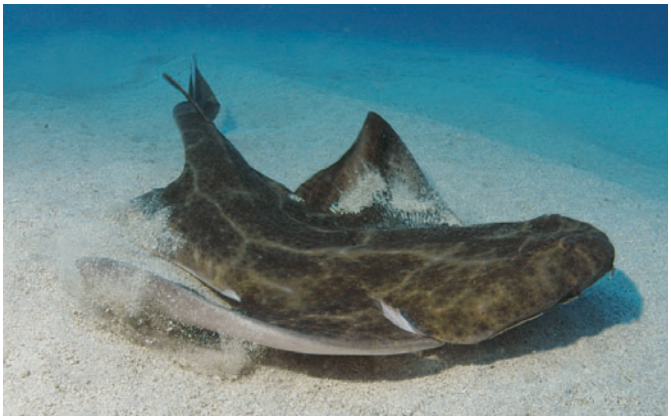
## What marine species are included in The 2008 IUCN Red List?

By 2008, approximately 3,000 marine species will have been assessed for the threat of extinction. These include comprehensive assessments of every known species of shark, ray, chimaera, reef-building coral, grouper, marine turtle, seabird, and marine mammal. These groups were completed in collaboration with a number of organizations including the IUCN Species Survival Commission Shark Specialist Group, Grouper and Wrasse Specialist Group, Cetacean Specialist Group and Marine Turtle Specialist Group. Of these completed groups, almost one-quarter (22%) have been listed in threatened categories (Critically Endangered, Endangered, Vulnerable).

***Sharks, Rays, and Chimaeras***: Approximately 17% of sharks and their relatives are threatened, an additional 13% are considered Near Threatened, and a high proportion (47%) are Data Deficient. Sharks and rays are deep-water pelagic species, making them harder to study in the wild, and less is known about their ecology and population status, including the impact of known and potentially unknown major threats. Much of what is currently known about sharks, rays, and chimaeras is from their




*Summary of 2008 Red List Categories for all sharks, rays, chimaeras, groupers, reef-building corals, seabirds, marine mammals and marine turtles (2544 species).*



*The world's angel sharks are one of the most threatened shark families due to capture in by-catch and over-exploitation. ©Simon Rogerson*

capture in nets from both targeted and accidental catch, which are the primary threats to their survival. Many of these slow-growing species are unable to recover from the proliferation of shark fisheries around the world combined with harmful fishing practices that have expanded over the past few decades.

***Groupers***: At least 12.4% of the world's grouper species are now threatened, another 14% are Near Threatened, and 30% are considered to be Data Deficient. Major threats to groupers are over-fishing, particularly the targeting of spawning aggregations and uncontrolled fishing on multiple life history phases ranging from small juveniles to adults. Of particular concern are the more than 20% of groupers captured globally that are destined for luxury restaurants and the live reef fish food trade in the Indo-Pacific region.

***Reef-building Corals***: Over one-quarter (27%) of the world's 845 species of reef-building corals have been listed as threatened, an additional 20% are considered Near Threatened, and 17% are Data Deficient. The primary threats to these corals are increased frequency and duration of bleaching and disease events that have been linked to the increase in sea temperatures, a symptom of global climate change. The impacts of these oceanographic environmental changes are also compounded by anthropogenic threats including coastal development, coral extraction, sedimentation and pollution.

***Marine Mammals***: Marine mammals include whales, dolphins, porpoises, seals, sea lions, walruses, sea otter, marine otter, manatees, dugong and the polar bear. One-quarter (25%) of these species are now threatened. Major threats to marine mammals include entanglement in fishing gear, directed harvesting, noise pollution from military and seismic sonar, and boat strikes. In many regions, marine mammals are also threatened by water pollution, habitat loss from coastal development, loss of prey or other food sources due to poor fisheries management, intensive hunting, and the combined effects of climate change.

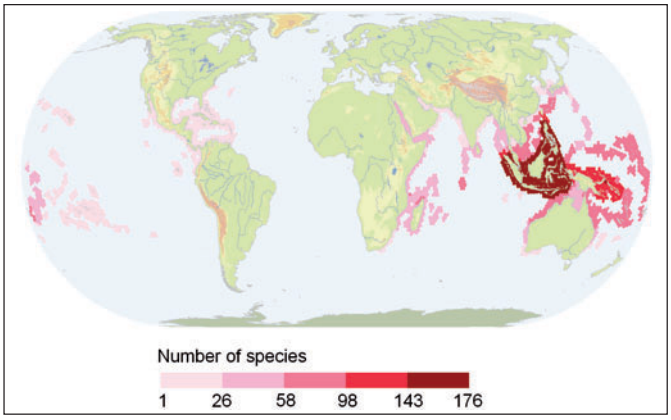
***Seabirds***: Over 27% of the world's seabirds are threatened. Major threats to seabirds include mortality in long-line fisheries and gill-nets, oil spills, and the impact of invasive alien species (in particular predation by rodents and cats) at the breeding colonies. Additional threats to breeding sites of seabirds are habitat loss and degradation from coastal development, logging and pollution. Many species of seabirds are exposed to a combination of these threats throughout their life history.

***Marine Turtles***: Six of the seven species of marine turtle are threatened. Threats to marine turtles occur at all stages of their life cycle. Marine turtles lay their eggs on beaches, which are subject to threats such as coastal development, sand mining, and introduced predators. The eggs and hatchlings are threatened by pollution and predation, and eggs are collected by humans for food in many parts of the world. Once at sea, marine turtles are faced with threats from targeted capture in small-scale subsistence fisheries, by-catch largely by long line and trawling activities, entanglement in marine debris, and boat strikes.

## How are the remaining marine species being assessed?

The number of marine species on The IUCN Red List still lags far behind terrestrial species. In 2006, IUCN, Conservation International and Old Dominion University joined forces to address this gap and initiated an ambitious project (the Global Marine Species Assessment) to complete IUCN Red List assessments for over 20,000 marine species by 2012. Priority groups include the approximately 15,000 marine fishes, important habitat-forming primary producers such mangroves, seagrasses, certain seaweeds and the remaining corals; and important invertebrate groups including molluscs and echinoderms.

*The Indo-Malay-Philippine Archipelago or the "Coral Triangle" region has the highest number of reef-building coral species in threatened categories as well as the highest coral species richness.*




**For more information: www.iucn.org/redlist/ and www.sci.odu.edu/gmsa/**