



Marine Debris Impacts on Marine Animals and Wildlife

What is harmful marine debris?

Harmful marine debris consists of plastic garbage washed or blown from land into the sea, fishing gear abandoned by recreational and commercial fishers, and solid non-biodegradable floating materials (such as plastics) disposed of by ships at sea.

Under the *International Convention for the Prevention of Pollution from Ships*, overboard disposal of food, paper, glass, metal and crockery (but not plastics) is permitted from vessels more than 12 nautical miles from land. Plastic materials are defined as: bags, bottles, strapping bands, sheeting, synthetic ropes, synthetic fishing nets, floats, fibreglass, piping, insulation, paints and adhesives.

Entanglement

Entanglement in marine debris can cause restricted mobility, starvation, infection, amputation, drowning and smothering. Turtles, whales and sea birds may be severely injured and even die after entanglement with fishing lines, fragments of trawl netting or plastic packing straps. Seabirds caught up in marine debris may lose their ability to move quickly through the water, reducing their ability to catch prey and avoid predators; or they may suffer constricted circulation, leading to asphyxiation and death. Fishing line debris, nets and ropes cut into the skin of whales or turtles, leading to infection or the slow and painful amputation of flippers, tails or flukes.

Ingestion

Marine species confuse plastic bags, rubber, balloons and confectionery wrappers with prey and ingest them. The debris usually causes a physical blockage in the digestive system, leading to painful internal injuries. Turtles frequently eat plastic bags, confusing them with jellyfish, their common prey. Sea birds eat polystyrene balls and plastic buoys, confusing them with fish eggs and crustaceans, and the Humpback, Southern Right and Blue Whales eat plastic debris. Autopsies performed on marine species such as Grey Nurse Sharks have found that swallowed hooks have punctured the stomach, pericardial cavity and oesophagus causing infection and death.

Which species are particularly affected by ingesting or entanglement in marine debris?

The following endangered and vulnerable species listed under the *Environment Protection and Biodiversity Conservation Act 1999* are adversely affected by the threatening process:

Endangered species

- Loggerhead Turtle
- Southern Right Whale
- Blue Whale
- Tristan Albatross
- Northern Royal Albatross
- Gould's Petrel



Vulnerable species

- Leatherback Turtle
- Hawksbill Turtle
- Flatback Turtle
- Green Turtle
- Wandering Albatross
- Humpback Whale
- Antipodean Albatross
- Gibson's Albatross
- Southern Royal Albatross
- Indian Yellow-nosed Albatross
- Grey Nurse Shark
- Grey-headed Albatross
- Blue Petrel

Source: Department of Environment & Heritage

Seals and sea lions are also particularly affected by derelict fishing gear and nets, and six pack rings, probably due to their very inquisitive nature. Entanglement rates in these animals of up to 7.9% of a population have been recorded.

An estimated 58% of seal and sea lion species are known to have been affected by entanglement including the Hawaiian monk seal, Australian sea lions, New Zealand fur seals and species in the Southern Ocean.

Source: Debris in the World's Oceans, Greenpeace Report