



Marine Reader Series

Sea Creatures at Risk



Anna Cooke
Sheree Marris

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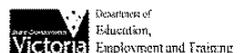
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Sea creatures at risk



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Wonderful sea creatures

Our oceans are full of many weird and wonderful sea creatures. There are giant whales that leap from the water, starfish that crawl over the seabed, beautifully coloured fish that swim in large schools, and sea birds that soar with the ocean breezes.

But some of these sea creatures are at risk of disappearing, never to be seen again. Pollution and hunting are threatening their survival.

For thousands of years, people have been catching fish and hunting sea creatures. Over the past century, better boats and improved fishing and hunting equipment have threatened the existence of many animal species. This has even led to some sea creatures becoming extinct.

What are two things that humans have done over the past century to threaten sea creatures?



Offshore reefs

Coral reefs stretch around islands and along coastlines, providing homes for many animals. These living reefs are in danger of dying because the temperature of the sea is rising. This is happening because of global warming.

The reefs that are offshore from major cities are in danger from sewage and stormwater runoff. The silt and pollution kill the corals.

Plastics and fishing line are a new risk to sea creatures. Chemical pollution from the land also puts sea creatures at risk.



Stormwater runoff causes silt that kills corals



Corals



Explain how sewage, stormwater runoff and global warming can affect the coral in the picture above.



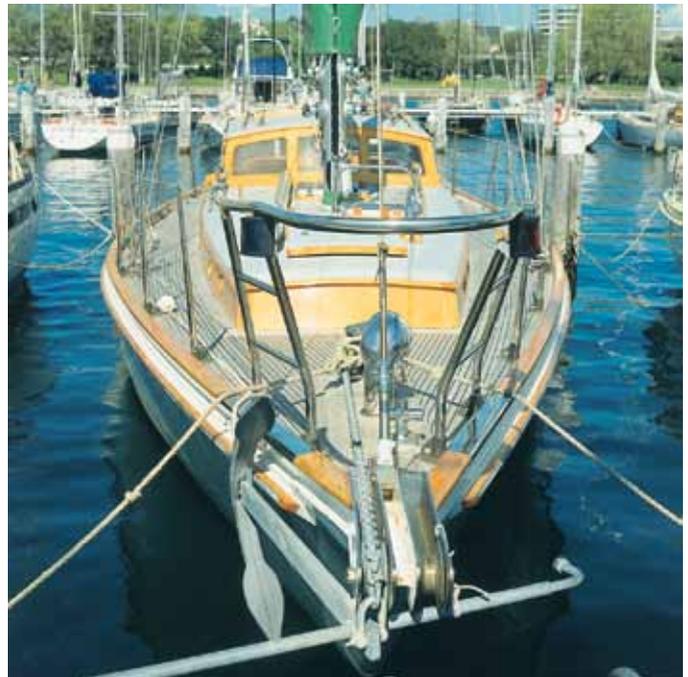
If boat anchors are such a problem to coral reefs, what would you do to solve the problem and keep boat owners happy at the same time?



Corals

Corals are a special type of tiny sea creature that can build massive homes as solid as rock. Many other sea creatures use the coral's home as their own home. Some corals are at risk of being eaten by a sea star called the Crown of Thorns sea star.

Boat anchors dropped on reefs break off large coral clumps. These clumps may take hundreds of years to regrow depending on the species.



A boat anchor



Dead dugong on beach

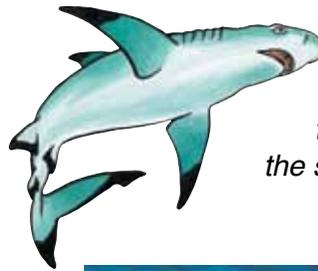
As a class, debate the usefulness of marine protected areas in helping protect dugongs.

Dugongs at risk

These strange and beautiful creatures look like a cross between a dolphin and a pig. Dugongs feed only on seagrass in shallow tropical waters. In some places, the seagrass is disappearing. Soil, fertiliser, chemicals and other pollution is washed into the sea by heavy rain. These materials can damage seagrass beds.

Without seagrass to eat, dugongs will starve.

Other human activities put dugongs at risk. Dugongs breathe air and can drown when caught in fishing nets. They can be badly injured when hit by boat propellers.



How could you allow boat owners, developers, tourists and the animals and plants of the sea to live in harmony?



Boats can harm marine life

Turtles and plastic bags

All types of sea turtles are at risk today. In the past, many were hunted for their meat and shells. In some places turtles are still hunted. Rubbish is a threat to sea turtles. They can mistake plastic bags for sea jellies and choke when they try to eat them. They are also at risk of being caught and drowned in fishing nets and lines.

Turtles return to the same beach they were born every year to lay eggs in the sand. Street lights near these beaches confuse turtles and make them lose their way back to the sea. People, foxes and cats can disturb the eggs and break them.



Turtle caught in fishing net

Your class has just been elected to council and you have the power to enact new litter laws to protect the sea. What five new laws would you vote in to protect local sea creatures at risk?





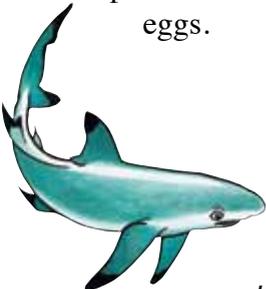
Spotted handfish

Spotted handfish

The spotted handfish uses its fins to walk along the bottom of the sea rather than swim. This very rare fish is found only in Tasmanian waters.

It has a strange habit of laying its eggs on animals and plants that live on the seabed. The picture to the right shows a mass of eggs that has been laid on a red sea whip that is fixed to the seabed.

However, sea whips are being eaten by many hungry introduced sea stars. This leaves the spotted handfish with fewer places to lay eggs.

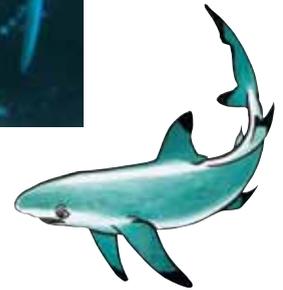


How does reduced numbers of sea whips affect spotted handfish?



Courtesy CSIRO

Spotted handfish with an eggmass on a sea whip



Sharks

Sharks are awesome fish found in all oceans. Sharks are hunted for food and for sport. Some sharks are killed when their fins are cut off to make shark fin soup.

Some, like the Great White and Grey Nurse sharks are at risk and are now protected in Australia.

Like many other sea creatures, some sharks die when they get caught in fishing nets.

Sharks are important in the food chain because as predators they tend to eat the slower or weaker species in the sea.

If the numbers of sharks is reduced, the natural balance of the sea is altered.

Why are predators important to the survival of other sea life?

Are some sharks protected in your state? If so which ones?





Whales

Some of the biggest and most spectacular sea creatures are the whales. Many of them, like the Blue whale and Humpback whale, were once hunted for their meat and oil. Whalers shot them with explosive harpoons.

The whaling ships pulled the bodies aboard and carved them up.

Many species were hunted almost to extinction.

Now that most whaling has been banned, some types of whales have increased their numbers.



Find out which countries still kill whales. Debate as a class the value, if any, of killing whales.



The whale's spout is easily spotted by whalers

Weedy seadragon

Weedy seadragons and their relatives, the seahorses, are also at risk from human hunters. In some countries, seahorses have almost disappeared because they are being collected, sold and used in medicines.

Australian laws now protect weedy seadragons from being collected.

These delicate creatures also are under threat from pollution from the land. Industrial waste and stormwater runoff damage water quality.



Weedy seadragon



What has stopped weedy seadragons being collected in Australia?

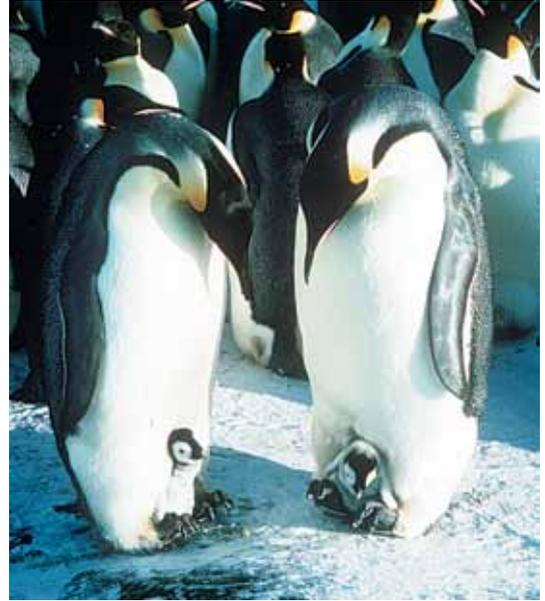
Sea birds

Albatrosses are the largest sea birds in the world. Some breed on islands near Antarctica and spend the rest of the time around the coast of Australia. They have hooked beaks for catching fish.

Many albatrosses are drowned as they get hooked trying to take baits off long-line fishing gear. People are trying to find fishing techniques that are safe for albatrosses.

Malaria is a tropical disease carried by mosquitoes. In 1950, a chemical called DDT was invented that killed the mosquitoes.

Unfortunately DDT has built up in the food chain since then. It has damaged wildlife all over the world. DDT has even been found in Antarctica.



Penguins

How do fishing lines affect sea birds and dolphins?

How does DDT affect Penguins?



Albatross



Dolphin

Dolphins are at risk

Dolphins are at risk of getting caught in fishing nets. In some parts of the world long fishing nets, called drift nets, are dropped from boats to catch large schools of fish.

These nets are made from very fine and strong threads. Dolphins can't see the nets or detect them with their sonar.

When they swim into a net, they struggle and quickly get tangled. Dolphins must breathe air. If they can't get to the surface, they drown.

Australia's fishing industry is very aware of the environmental problems associated with nets. Drift nets are banned. Turtle exclusion nets and dolphin warning devices are some new ways fishers are trying to save marine life.



Fishing net



Sea-lion

Australian sea-lions

All over the world in the nineteenth century, seals and sea lions were hunted for their fur. Hunters killed the sea-lions when they were breeding on the land. Most hunting stopped when sea-lions became rare and there were not enough to hunt.

Some seal colonies are starting to recover and their numbers are increasing. Sea-lion populations have not recovered as much. Both species are still at risk. Fishing nets can get caught around their throats and strangle them.

Seals are at risk from rubbish in the ocean. For example, plastic rings stop the seal from feeding.



What effect will pollution have on the animals in the pictures on this page?

We can all help

We can help our wonderful sea creatures. We can make sure our rubbish goes into a bin with a lid and never tip oils, paints or other pollution down the drain.

We can be careful not to lose fishing line in the sea. We can be careful when we buy fish and make sure it is a kind that is not at risk.

The photograph shows a turtle exclusion net. This net traps prawns but lets turtles and non-target species out.



A turtle exclusion device on a trawler net

Laws protect sea creatures at risk

We have laws to help save our sea animals. These laws make sure that:

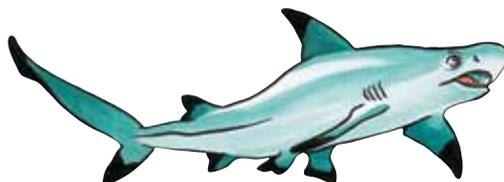
- our sewage is cleaned up before it is discharged into the ocean
- fish are not caught during closed seasons



- fish can only be caught if they are the right size
- whales are left alone
- boats moor at proper buoys on reefs
- protected zones and sanctuary areas are provided

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A National Marine Education Program



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- Book 6 : Be Safe at the Beach

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Level 4

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- Book 18 : Don't Mess with the Sea



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