

# Dugongs

(*Dugong dugon*)

Gentle, sociable dugongs are sometimes called 'sea cows' for their habit of grazing on seagrass. Dugongs live their entire lives in the marine environment but are air-breathing. These endearing mammals can grow to about three metres in length and weigh as much as 400 kilograms!

As well as "dugong" or "sea cow", the dugong has a scientific name - *Dugong dugon*.



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## What do dugongs look like?

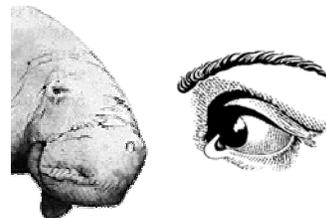
- Dugongs are large grey mammals that spend their entire lives in the sea.
- Unlike land mammals, such as cows and rabbits, dugongs are not very hairy. Their skin is smooth, with a few hairs scattered over the surface.
- Dugongs have rounded heads with small eyes and a large snout. Their paddle-like flippers do not have nails.
- Dugongs usually occur in herds.

**Size:** An adult dugong averages about 2.7 m in length, and weighs about 250-300 kg. Calves are about 1 metre in length at birth, and weigh 20-35 kg. Males and females are similar in size.



**Breathing:** Like other mammals, dugongs must breathe air. Dugongs cannot hold their breath underwater for very long. Generally they only hold their breath for a few minutes, especially if they are swimming fast.

**Vision:** Dugongs have poor eyesight.



**Locomotion:** Dugongs swim by moving their broad spade-like tail in an up and down motion. They steer themselves with their two front flippers.



Dugongs are slow swimmers, generally moving along at about 10km/hr. However, across short distances their maximum speed can be more than 25km/hr!

**Defenses:** As dugongs are large animals, only humans, large sharks, saltwater crocodiles and killer whales are a danger to them.

**Communication:** Dugongs have been heard producing chirps, squeaks, and barks, especially in the mating season.

## Fussy eaters?

Dugongs eat mostly plants. And they are fussy eaters! Dugongs really only like to eat **seagrass** (and not all types of seagrass either!).

Seagrasses are plants that form meadows in estuaries and shallow coastal waters with sandy or muddy bottoms.

Dugongs need to eat large amounts of seagrass every day to get enough energy to live.



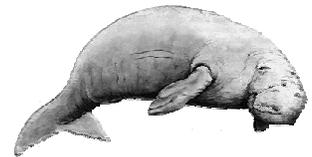
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The dugong has developed many special features to help it eat seagrass off the bottom of the sea.

- A heavy skeleton to help the dugong stay underwater while eating seagrass off the seafloor.
- A mouth –that faces downwards in the direction of the food!
- A broad, flexible, bristle-covered upper-lip to find and grab seagrass.
- Tough pads for grasping the seagrass and flattened teeth for chewing it.



Dugongs have been observed feeding in groups of 100 animals or more.



As dugongs graze, they usually pull up entire seagrass plants. This behaviour means dugongs leave distinctive, elongated **feeding trails** through the seagrass beds.



© Lo Voi

**A dugong feeding trail through a lush seagrass bed**

## Habitat requirements

Dugongs are usually found in shallow coastal waters that are protected from large waves and storms.

Dugongs like wide shallow bays, wide shallow mangrove channels, and areas on the sheltered side of large inshore islands. These places often coincide with sizeable **seagrass meadows** (yum!).



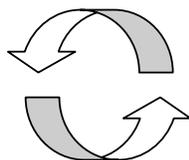
Seagrass beds at low tide

© Sombat Poovatchiranon

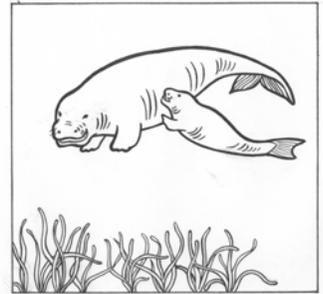
## Life cycle

An individual dugong may live for 70 years or more. Dugongs are mature (adult) at around 6 -17 years of age.

A female dugong has one calf every three to seven years. The young dugong is born underwater and swims to the surface for its first breath. The calf stays with its mother, drinking milk from her teats and following close by until it is one or two years old. Calves also begin eating seagrass soon after birth.



Dugong mothers are very attentive and communicate with their young through chirps and high-pitched squeaks and squeals. The calf never ventures far from its mother's side and frequently rides in her slipstream.



## What sort of animals are dugongs?

Dugongs are aquatic marine mammals.

**Aquatic** = they live in the water

**Marine** = they live in the sea

**Mammals** = see below!

### What is a mammal?

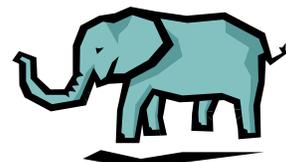
To be a mammal an animal must

- (1) Feed their babies with milk from mammary glands, and
- (2) Have hair, even if only very little.

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### Did you know?

Dugongs are more closely related to elephants than to other marine animals such as whales and dolphins.



## Where in the world?

The dugong is widely distributed, and is found in the waters of more than 30 countries along the western Pacific and Indian Oceans.

The species range extends from east Africa to the eastern coast of Australia and Vanuatu.

However, dugongs are now extinct or extremely rare in much of their former range (largely because of over-hunting).



Little information is available for dugongs in Vietnam. Dugongs may once have been common along the coast of Vietnam, especially in areas such as Phu Quoc Island in the south. However, now even Con Dao Island probably has less than 10 dugongs living in its waters.

Unfortunately, the lovely, gentle dugong is becoming rare in the Southeast Asian region.



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## Dugongs in DANGER!

Vietnam may once have had large populations of dugong along the coast and near offshore islands. Unfortunately, these days there are very few left. The Vietnamese government forbids international trade in dugong and their products.

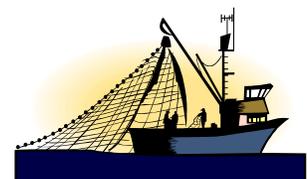


## Pushed to the edge – threats to dugongs

The dugong is an endangered species facing a variety of serious threats.

**Hunting/fishing:** Dugongs have long been hunted for food throughout the world, and are a traditional food of many coastal peoples. Commercial and private harvesting of dugongs has led to the decline of dugong populations in many places. Hunting of dugong was once common in Vietnam, and still continues in a few places.

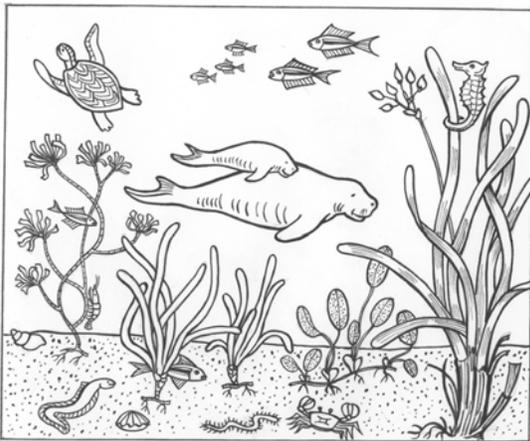
**Fisheries bycatch:** Dugongs often become entangled and die in gill and mesh nets set by fishers and in shark nets set off beaches to protect swimmers. Dynamite and cyanide fishing probably harm dugong too.



**Habitat destruction:** The loss of seagrass beds can be due to dredging, trawl fishing, construction and land reclamation activities in coastal waters (where seagrass is pulled up and damaged).

Poor water quality can also kill seagrass. Soil washing from the land to the ocean can block the sunlight needed by seagrass to grow.

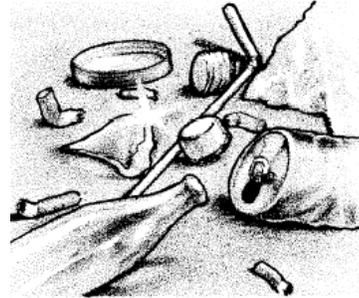
Without seagrass, dugongs starve to death.



**Boats and noise:** If boats speed in shallow water they may hit a dugong and hurt or kill it!! Boat noise also disturbs dugongs and can disrupt their feeding.



**Pollution:** Dugongs can become entangled in plastic, old nets, fishing line and rope that have been thrown into the sea. They may also cut themselves on sharp glass and rubbish that ends up among the seagrass.



**Large-scale weather events:** Typhoons may pose a threat to dugongs because the wild storms and tidal surges can leave dugong stranded high on mudflats and beaches. The extra soil washing from the land can kill large areas of seagrass - causing dugongs to starve.



**Lack of knowledge:** Very little scientific research has been conducted on dugongs in Vietnam. For this reason it is difficult to estimate how many dugongs are left and how many die each year from human-related causes. More studies are needed to help us learn more about Vietnam's dugongs.



# Help save dugongs!

The fate of the gentle dugong depends on us.

## 1. Help keep seawater clean.

Much that goes down the sink, toilet, stormwater drain, or onto your garden/field eventually goes to the ocean where it may harm dugongs or seagrass. Use fewer chemicals, don't litter, and plant trees to stop too much soil washing into the sea.

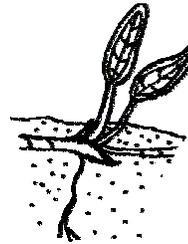
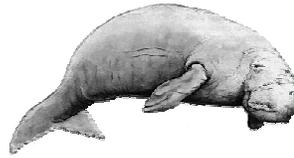
**2. Reduce rubbish.** Try to "Reduce, Reuse and Recycle" plastics and other materials that you use in your home or business. Don't let your rubbish end up in the ocean.

**3. Protect seagrass.** Be careful not to damage or destroy seagrass through careless boat anchoring. Support establishment of marine parks that protect seagrass habitat.

**4. Reduce your boat speed.** Go slow and look out for dugongs when traveling by motorboat over an area of seagrass.

**5. Spread the word.** Tell others about dugongs and why they should be protected. Educate your family and friends, or write a letter to the government supporting dugong protection measures.

**6. Report deaths.** Report any dead, sick or injured dugong to the authorities.



### Information and text sources

Marsh, H. et al. (2002) Dugong Status Report and Action Plans for Countries and Territories. UNEP Early Warning and Assessment Report Series. UNEP/DEWA/RS.02.1  
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