Student Fact Files

Australian Government
Great Barrier Reef Marine Park Authority

#7

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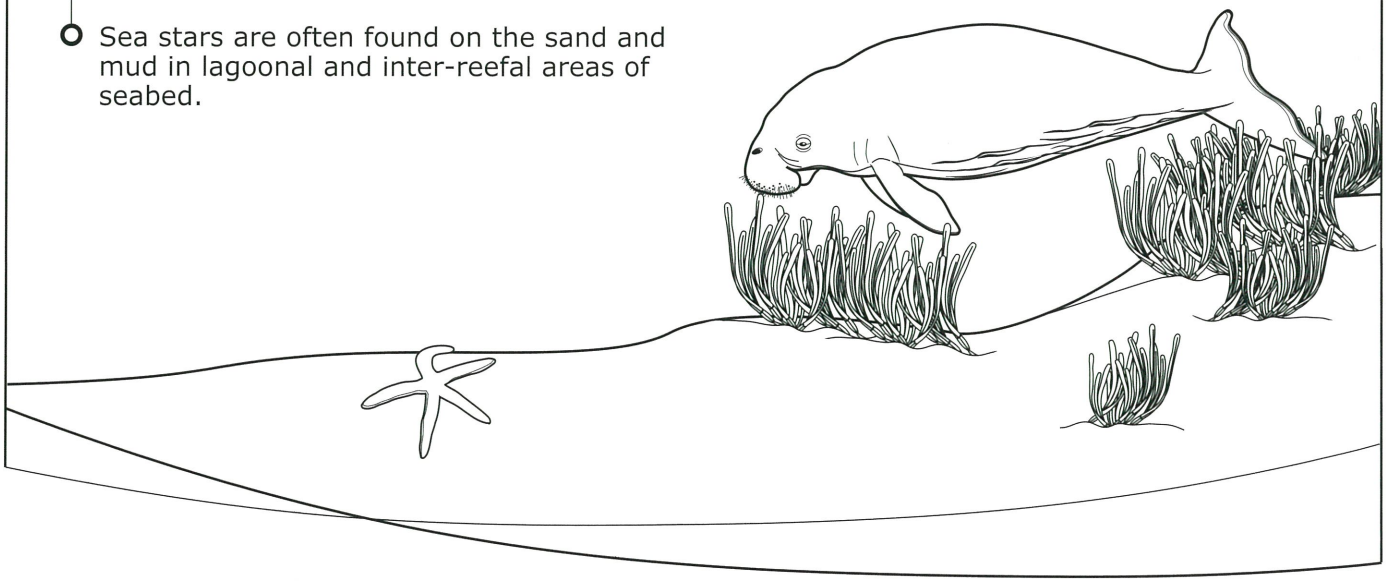
Seabeds

- Seabed makes up more than 90% of the entire Great Barrier Reef Marine Park.
- The lagoonal and inter-reefal seabed is home to great biodiversity with thousands of species calling it home.
- Millions of animals and plants use the seabed, particularly when travelling between islands, shoals and offshore reefs.
- Sea stars are often found on the sand and mud in lagoonal and inter-reefal areas of seabed.
- Coral reefs rely on a healthy seabed to survive.
- Many areas of seabed contain isolates, which provide shelter and food for many fish when they travel between reefs and habitats.
- The main threats to seabeds are trawling, careless anchoring and increased run-off of sediments and nutrients from the land.



Only 6% of the entire Great Barrier Reef Marine Park is made up of coral reefs; 94% of the area is the seabed between coral reefs. This seabed is very complex and comprises many different types of habitat, but can be divided into the inter-reef and the lagoon.

The inter-reef and the lagoon

The lagoon is a relatively open area of mainly soft sediment seabed between the mainland and the part of the seabed where the reefs start. The inter-reef refers to the seabed found between coral reefs and is always further offshore than the lagoon. The lagoon is usually much narrower (in some places almost non-existent) in the northern part of the Great Barrier Reef than in the southern parts.

What do these areas of seabed contain?

Close to shore, in the lagoon, sediments tend to be very fine and mostly come from the land. Further offshore, in the inter-reef, sediments are sandy and come from the sea. In the inter-reef, patches of hard substrate including rubble, bedrock, deep reef and shoal are scattered throughout the muddy and sandy areas of seabed. Very different communities of plants and animals live in these different types of substrate. Muddier areas of seabed have lower numbers of animals than the sandier areas and the areas of hard substrate.

In various areas of seabed isolates form. Isolates vary in appearance, however usually form when the planktonic larvae of creatures, such as sponges, settle on a dead shell and grow above the soft seabed sediments. On the long journey across the Reef between various habitats, some fish use the isolates for shelter and food.

How do seabeds benefit the Reef?

Seabed areas are critical elements of the Great Barrier Reef ecosystem. Millions of animals and plants use the seabed. In particular, the lagoonal and inter-reef seabed is home to great biodiversity of plants, animals and habitats. However, sometimes animals cannot be seen as they swim along the ocean floor travelling between islands, shoals and offshore reefs to live, breed and feed.

Two types of biological communities that use the seabed include:

- the community of animals and plants that live more or less permanently attached to the seabed (sessile organisms), and
- the community of animals (mostly fishes) that live near the seabed.