

Mudflats

Fact Sheet



Clear as
MUD!



Mudflats
© Richard Majlinder / shutterstock.com

1 Mudflats are amazing recyclers, breaking down mangrove leaves and algae to release nutrients back into the ecosystem.

2 Mudflats are often found next to salt marshes, which are also important parts of the intertidal zones, providing protection to the coast and habitat for a range of species.

3 Mudflats and the mangroves behind them are important nurseries for young fish, prawns, and crabs - nearly 70% of the seafood we eat depends on mudflats for at least part of its lifecycle.

4 The difference between mudflats and sandflats is in the size of the sediment – sand has bigger particles while mudflats have smaller (and generally darker) particles.

5 The surface of a mudflat is covered in millions of microscopic plants called 'microalgae' that grow by capturing the sun's energy.

Explore the mudflats of Gladstone

They might not look as appealing as a white sandy beach, but mudflats are one of Gladstone's most important marine ecosystems.

Mudflats are intertidal habitats, the banks between the lowest tide level and usual sea level (also called the 'lower tidal range'). They are made up of the very fine sediment that is left behind when the tide comes in and goes out.

These tiny particles restrict water movement into the soil and allow very little oxygen below the surface, giving mudflats their dark colour while creating the perfect environment for bacteria to produce those smelly gasses.

But there is a lot more to mudflats than bacteria and a bad smell - mudflats are part of the environmental super team (with mangroves) in sustaining local fisheries!

You can find worms, crabs and all sorts of molluscs (soft-bodied invertebrates) within this ecosystem, as well as hungry fish, stingrays, and sharks when the tide is high.

Mudflats matter

Mudflats are important to the overall health of the marine environment as they support animals including:

- Worms, snails, crabs and yabbies.
- Oysters – if they can find something hard to attach to!
- Fish, sharks and rays on the hunt for yabbies, worms, snails, clams and prawns to eat during high tide.
- Bird species like the eastern curlew which can be found at low tide poking their beaks into the mud to find worms, crabs, yabbies, snails and clams.



Mudflats fronting mangroves near Fisherman's Landing
© Norm Duke, James Cook University

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Mud has a life cycle?

Yes! Mudflats grow and shrink each year over three “seasons” – summer wet, winter, and summer dry – based on temperature and water flow.

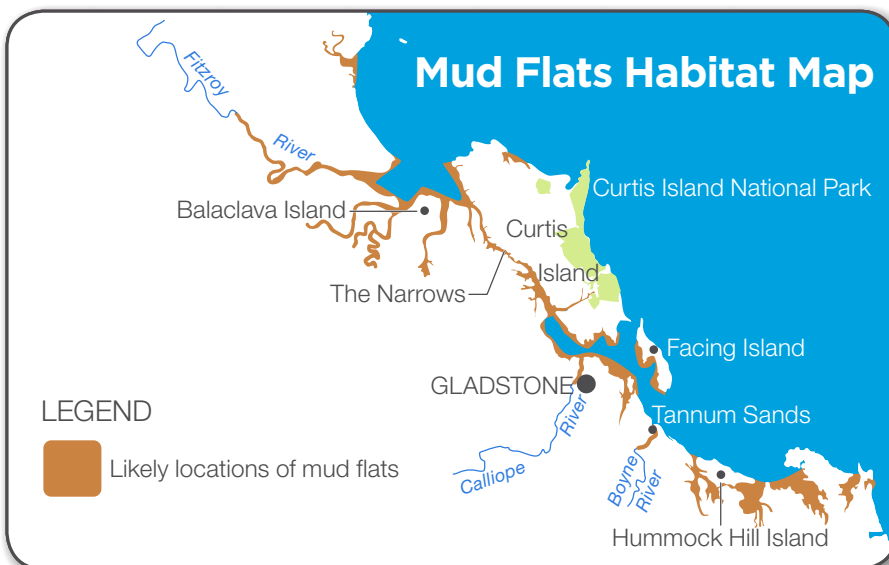
The microalgae on the surface of the mud also move through an annual life cycle tied to these seasons and this has a big affect on the amount of food and nutrients provided by the mudflat ecosystem.

The ‘summer wet’ season begins each January with monsoonal rains that bring warm water loaded with nutrients. The ‘winter’ season starts in April when less water runs off the land and cooler salty water moves up rivers and creeks. This is the best time for algae to grow and sometimes you will see what looks like a green carpet of algae on the surface of the mud.

When temperatures get hotter in September, the mudflats become too hot for algae to flourish. As the microalgae decays, nutrients are released back into the water and the cycle begins again.

Where they are

Mudflats like calm areas seaward of mangroves but protected from big waves. Targinie Creek, Graham Creek, and the Fitzroy River are some of the best examples of mudflats near Gladstone, as illustrated in the map below.



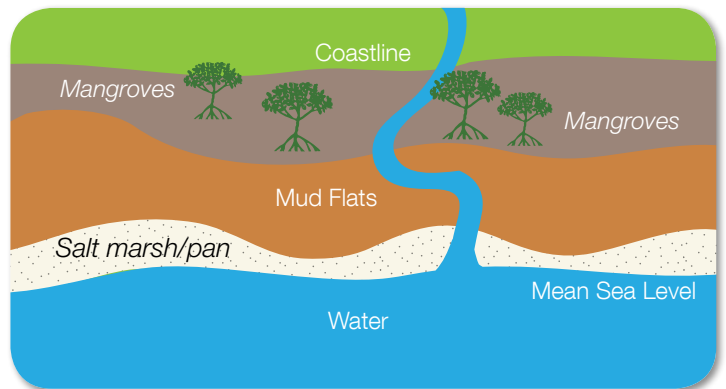
Find out more

The Queensland Museum
www.qm.qld.gov.au

Australian Government Department of the Environment - Intertidal mudflats
www.environment.gov.au/wetlands

Threats

- Reclamation and inshore development can destroy mudflats or change the way sediments are deposited.
- Oil or chemical spills can contaminate the mud and kill the plants and animals that live on and in it.
- Rising sea levels can put mudflats underwater permanently!



How you can help

- Know what the tides are doing and be careful when out on the water – tides can drop quickly and crashing into a mudflat will harm the habitat and your boat!
- Remember that all drains lead to the ocean and that litter and pollution can upset the mudflat ecosystem – always put your rubbish in a bin and never pour chemicals down the drain.



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