

Seagrass on the decline

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(Phys.org) —Seagrass along Moreton Bay will drastically decline as sea levels rise, a University of Queensland study has found. The study, published in international journal *Global Change Biology* this week, reveals that unless water quality improves or human populations retreat from coastlines, seagrass will continue to decline, dropping by as much as 17 per cent by 2100.

Lead author Dr Megan Saunders from UQ's Global Change Institute said the findings showed a significant proportion of valuable seagrass habitats would be lost without action to offset the affects of climate change.

"Seagrass meadows not only help to slow climate change by sucking up a large portion of the world's plant-stored carbon, but they also benefit livelihoods, food security, fisheries, biodiversity, shoreline protection and other ecosystem services," Dr Saunders said.

The study investigated what would happen if roads, houses and other developments along inundated coastlines retreated landwards with rising seas and found this scenario reduced the decline of seagrass to just five per cent over the same period.

It concluded the decline could be further offset by a 30 per cent improvement in water clarity, as seagrass needs relatively high levels of sunlight to survive.

Typical measures to improve [water clarity](#) – an important indicator of a water body's overall health, include better sewerage treatment, planting

out and protecting riverbanks, and reducing run-off of harsh chemicals such as fertilisers.

The study was the work of an interdisciplinary group of scientists at the Global Change Institute, who are investigating effects of [sea level rise](#) in coastal areas.

Along with [salt marshes](#) and mangroves, seagrass meadows are a blue carbon ecosystem, a valuable system that is responsible for sucking up more than half of the world's plant-stored carbon.

More information: [onlinelibrary.wiley.com/doi/10 ...
1/gcb.12218/abstract](https://onlinelibrary.wiley.com/doi/10.1111/gcb.12218/abstract)

Provided by University of Queensland

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