

Coastal erosion may force retreat from the sea

January 14 2022, by Glenn Roberts



Woorim Beach, Bribie Island, Queensland Australia. Credit: Unsplash/CC0 Public Domain

Giving up land to the sea needs to be one of the options considered for responding to serious erosion events along our coastline, says a

University of the Sunshine Coast researcher.

USC Senior Lecturer in Physical Geography Dr. Javier Leon said the sea breaking through the northern tip of Bribie Island last week was a sign of things to come as more frequent [coastal erosion](#) has been forecast for coming decades.

Dr. Leon said the combination of big swells and high water levels was likely to occur more often due to climate change, especially in La Niña events like the one Australia is currently experiencing.

He said areas at most risk include popular beaches around Maroochydore, Noosa's Main Beach, the Gold Coast, North Stradbroke Island and Byron Bay.

"We should be thinking ahead—what do we want for our coastlines in the future?" said Dr. Leon, whose research includes mapping the foreshore of beaches using drone technology.

He said coastal erosion was a complex problem that needed complex solutions, including some unpopular approaches like a planned retreat from the coast in some places, and letting the sea encroach past the dunes.

But in his view, protecting Golden Beach (adjacent the Bribie Island breakthrough) is necessary.

"In an ideal world, I'd say definitely don't build seawalls. But the infrastructure is already there at Golden Beach, so they need to protect it."

Dr. Leon said South East Queensland had been "super-lucky" in recent decades.

"Even though cyclones have come south previously, all of them were far enough away from the coast for us not to feel the full effects.

"The problem is going to be when we get a strong one. That will come with higher sea levels and, if we get it on a high tide, that's going to cause a major disaster."

The effects would be made worse, he said, if there was a series of events with too little time between them to allow beaches and dunes to regenerate.

"The beaches and dunes are our first line of defense," he said.

"The problem is when you start losing those different layers of protection."

Dr. Leon said while building sea walls might seem an obvious response, the walls had serious drawbacks such as maintenance costs and the effect on the [beach](#) in front of them and on either side.

"The clearest example is what just happened at Collaroy (on Sydney's northern beaches) where, after much opposition, a wall went up and a mild weather event led to all the sand being washed away," he said.

"I'm not saying we shouldn't be putting these protections up in some situations but, in the longer term, those options are potentially not the best ones.

"It's always going to be a compromise between protecting the infrastructure behind the wall and the beach in front of them."

Provided by University of the Sunshine Coast

Citation: Coastal erosion may force retreat from the sea (2022, January 14) retrieved 14 July 2024 from <https://phys.org/news/2022-01-coastal-erosion-retreat-sea.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.