

Fighting rising seas a losing battle

Coastal residents may also need to relocate, much like floodwater victims

ABOUT a dozen years ago, after a talk I'd given about climate change, a young couple approached me about their recent first home purchase, a waterfront property on Hobart's Eastern Shore. They wanted to know if they'd done the right thing.

It was a confronting experience. It was one thing for me to speak in abstract terms about sea level data and future coastlines, but quite another to hear from people who, having made the biggest commitment of their lives, were seriously worried they might lose everything.

I told them that we were all learners when it came to sea level rise but that significant changes were decades away. The council in question, Clarence, had recently appointed a climate change officer and I suggested they talk things over with that person.

There's no easy way to deal with these things. The infinite array of variables involved in coastal erosion and inundation means that there's no single source of expert knowledge, so working out the future of a coastal site is never straightforward.

Ocean swells, storm surges, wind exposure, sea currents, rain run-off and the shape and hardness of coastal landforms are factors in play. Add to that the fact that sea level rise is not globally uniform – for instance, seas lapping northwest Australia are rising more rapidly than here.

But another factor, the one that

prompted that young couple's query, is very straightforward, indeed. It's measured in dollars, and this has historically trended upwards. The premium price of coastal land puts questions about future coastlines in whole different light.

With so many expensive properties threatened with inundation, all governments need to sit up and take notice, yet at a local or state level they seem disengaged. One factor might be that these properties yield large returns in rates and land taxes.

A case in point is Roches Beach, an easterly facing, relatively sheltered bit of sandy coast at Lauderdale in the Clarence municipality, where properties now fetch prices nudging \$2m.

That coast is a central focus of a multi-decadal study of Tasmanian coastal landforms by geomorphologist Chris Sharples.

While a lack of funding has limited his work to identify susceptible coasts, Sharples believes there are many Tasmanian locations we need to watch carefully. Among "early responders" – shores already showing change attributable to rising sea level – are Ocean Beach near

Strahan, Duck Bay and Robbins Passage in the far North-West and soft shores at Taroona.

Roches Beach is another such shore. Sharples has turned to early aerial photographs, starting in 1946, to show a long period of shoreline stability up to 1985 and then an abrupt switch to a long-term receding trend, which continues today. Most of the shoreline is now about 15m closer to property boundaries than it was in 1985.

Sharples' studies have found rising sea level the likeliest cause of this, ruling out other possible culprits. If so, without massive intervention, beachside properties will be lost within about 20 years and shoreline recession will accelerate until the whole neighbourhood is under the sea.

That moment of truth may be even closer. A decade ago most scientists believed that the rate of ice loss happening now in Greenland – the leading source of current sea level rise – would not happen until late this century. What we thought of as the distant future is here, now.

Coming years are going to be

PETER BOYER



Scientists Nick Bowden, from the Antarctic Climate and Ecosystems CRC, and Hobart geomorphologist Chris Sharples, from the University of Tasmania School of Geography and Environmental Studies, measure soil erosion at Roches Beach.

very trying for authorities in vulnerable coastal areas. If they fail to sharpen their plans in response to what science is saying and put off awkward conversations with owners of expensive waterfront homes, things will get even tougher.

The kind of response owners will probably want – protective measures

like a constantly growing sea wall or endless dumps of new sand, plus repeated repairs to damaged infrastructure – will be a massive and ultimately unsustainable drain on the public purse.

Governments have previously helped finance relocating victims of river flooding to higher ground in



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Queensland, and last week an \$800m federal-NSW package was announced to help flood-affected landowners in the Northern Rivers region. More than half of it will go towards relocating the most at-risk homeowners.

The same needs apply to coastal erosion and inundation. If we are to

get ahead of coming changes, good public policy demands that authorities identify vulnerable coastlines, notify affected communities and help owners of unviable properties prepare for loss and relocation.

That would require governments to shift focus from private needs to

public ones, if necessary taking a tough stance with recalcitrant owners and resisting cries of foul. The inevitable alternative is coastal chaos.

Peter Boyer is a former Mercury reporter and public servant, who specialises in the science and politics of climate.

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