

MyCoast NSW Study

Fact Sheet 3: What does the NSW community know about coastal hazards?

Why is this important?

How people understand and perceive severe coastal storms and sea level rise, and their associated impacts of erosion and inundation, can significantly influence how and whether they engage in coastal adaptation actions - often determining the success or failure of those actions. Knowledge of what coastal

communities know about these hazards and impacts is therefore vital to those involved in managing the coast. Results of the MyCoast NSW Study found a distinct contrast between what coastal management professionals think the NSW coastal community understands and what the NSW coastal community actually understands.

What do Coastal Management Professionals think?

Coastal Management Professionals (CMPs) had low expectations of NSW coastal communities' understanding of sea level rise, coastal storms, coastal inundation, and erosion. In particular they did not think the community was prepared to cope with the repercussions of these hazards (Figure 1). However, general coastal users and coastal accommodation businesses surveyed in this study displayed a reasonably sound knowledge of these coastal hazards.

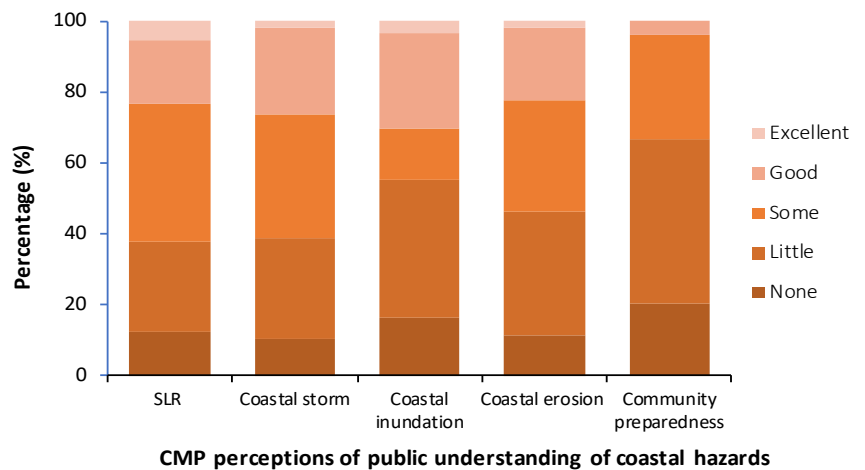


Figure 1. Coastal Management Professionals (CMPs; n=62) perceptions of NSW communities' understanding of various coastal hazards and their overall preparedness for these hazards.



What do NSW coastal communities know about sea level rise?

Rate and magnitude

While the majority of the surveyed NSW coastal community believed that sea level rise was occurring, approximately 20% don't believe it's happening or don't know (Table 1). While there is considerable difference between the perceived rates of sea level rise over the next 20 to 50 years (Figure 2), most are consistent with current sea level rise projections of 0.4m

Table 1. Perceptions of sea level rise occurrence.

Survey group	It is happening	It isn't happening	Don't know
General Coastal Users (GCUs)	85%	5%	5%
Coastal Accommodation Businesses (CABs)	75%	5%	5%

'I think that...in the next 100 yrs we will be saying 'do you remember when everyone thought that we were going to end up living in the ocean?' (GCU respondent 776)



by 2050 and 0.9 m by 2100. Approximately 75% of both General Coastal Users (GCUs) and Coastal Accommodation Businesses (CABs) think the NSW coast will be affected by sea level rise and approximately 60% think it will affect the coast closest to them, however only 55% of GCUs and 35% of CABs think sea level rise will directly impact them.

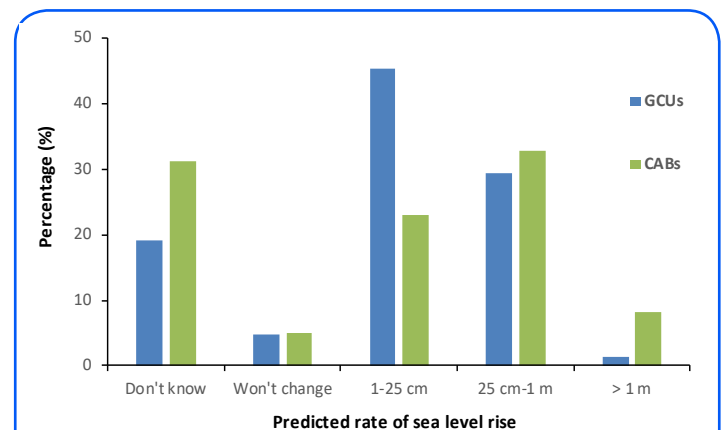


Figure 2. Opinions about magnitude of sea level rise over the next 20-50 years by GCUs (n=993) and CABs (n=62) in NSW.

Public Perceptions

When asked to comment on sea level rise some General Coastal Users stated that there is no consensus about how and when sea level rise will occur; *'most of it is unknown or unpredictable'* (GCU respondent 341) and *'predicted sea level rise is based on unsubstantiated hypothesis and failed computer models which don't match real data'* (GCU respondent 293). Some respondents described why they don't believe that it will be an issue in the near future as it is *'part of a natural cycle'* (GCU respondent 427) and that *'climate change has happened since the big bang'* (GCU respondent 309).

What do NSW coastal communities know about severe coastal storms?

Rate and magnitude

The majority of the NSW coastal community and accommodation businesses surveyed thought that severe coastal storms in NSW, such as damaging East Coast Low (ECL) events, occur on average 'about once every 5 years' or 'about once every 20 years' (Figure 3). These estimates are relatively accurate given that the April 2015 East Coast Low Event was considered to be a '1 in 10' year event. Presently, Australian ECL data does not cover the time period needed to account for the extreme temporal variability of Australia's climate. As a result, other large ECL events (such as the June 2007 and June 2016 events) are difficult to predict based on historical data.

Future rate and magnitude

When asked how often severe coastal storms are likely to occur in the future, 76% of surveyed general coastal users and 65% of coastal accommodation businesses thought they would occur more often over the next 20 years (Table 2).

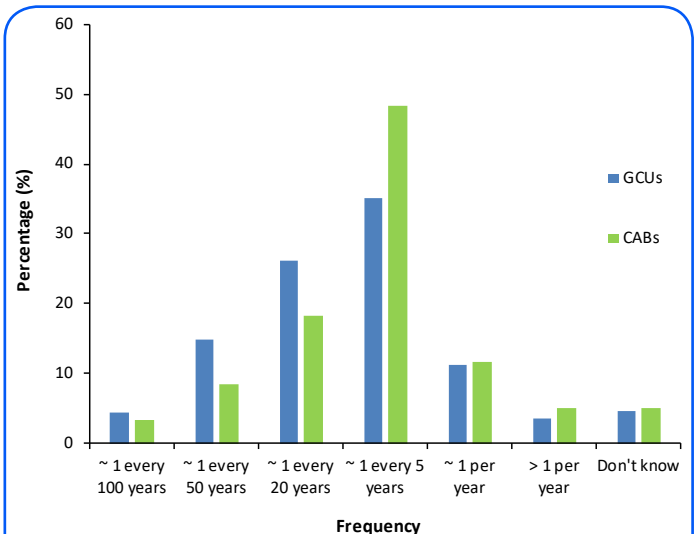


Figure 3. Comparison of surveyed General Coastal Users (GCUs; n=993) and Coastal Accommodation Businesses (CABs; n=62) perceptions of present frequency of severe coastal storms.

Table 2. Perceptions of the future rate and magnitude of severe coastal storms by NSW GCUs and CABs.

Future coastal storm occurrence in 20 years	General Coastal Users	Coastal Accommodation Businesses
Occur more often	76%	65%
Occur less often	-	1%
Occur about the same as they always have	20%	27%
Don't know	4%	7%
Future coastal storm intensity in 20 years	General Coastal Users	Coastal Accommodation Businesses
More damaging	67%	65
Less damaging	-	-
About the same	29%	30%
Don't know	4%	5%



What do NSW coastal communities know about coastal erosion and inundation?

Rate and magnitude

In general, both the surveyed General Coastal Users (GCUs) and Coastal Accommodation Businesses (CABs) think the occurrence of coastal erosion and inundation will increase over the next 20 years. However, a significant proportion of both groups either don't know or believe the occurrence of these hazards will stay the same. This is in contrast to the vast majority of surveyed coastal management professionals (95%) who think the occurrence of coastal erosion and inundation will increase (Table 3).

Erosion at Winda Woppa spit in Hawks Nest NSW (UNSW, 2019).



Table 3. Perceptions of the future rate of coastal erosion and inundation by NSW GCUs, CABs and CMPs.

	Rate of change	General Coastal Users	Coastal Accommodation Businesses	Coastal Management Professionals
Coastal Inundation	Increase	77%	67%	95%
	Decrease	1%	0%	0%
	Stay about the same	14%	20%	5%
	Don't know	8%	13%	0%
Coastal Erosion	Increase	83%	75%	95%
	Decrease	0%	0%	0%
	Stay about the same	12%	20%	5%
	Don't know	5%	5%	0%

The full My Coast Report and other Fact Sheets and resources can be found at:
www.bees.unsw.edu.au/nsw-my-coast-study

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This study was funded under the joint State and Commonwealth Natural Disaster Resilience Program. The views expressed herein do not necessarily reflect the views of the New South Wales Government.

