Why is sea-level rise important?

Sea-levels are rising because of climate change

Thermal expansion

Warmer water expands, therefore global warming is causing the water in our oceans to expand

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Melting ice

Global warming is melting our glaciers and the Greenland and Antarctic land-based ice sheets

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Higher sea levels

The amount of sea-level rise depends on the amount of climate change

Sea levels are now 19 cm higher

than they were at the beginning of the 20th century

and

will continue to rise over the next centuries

half a metre or more by the end of the century; around 6 m if the Greenland ice sheet melts completely

however

if we limit our emissions,

sea-level rise could be reduced

but not for many decades, even centuries because oceans respond very slowly to change

Sea-level rise creates risks for our coasts

Higher water levels

Floods

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Higher wave heights

Storm surges

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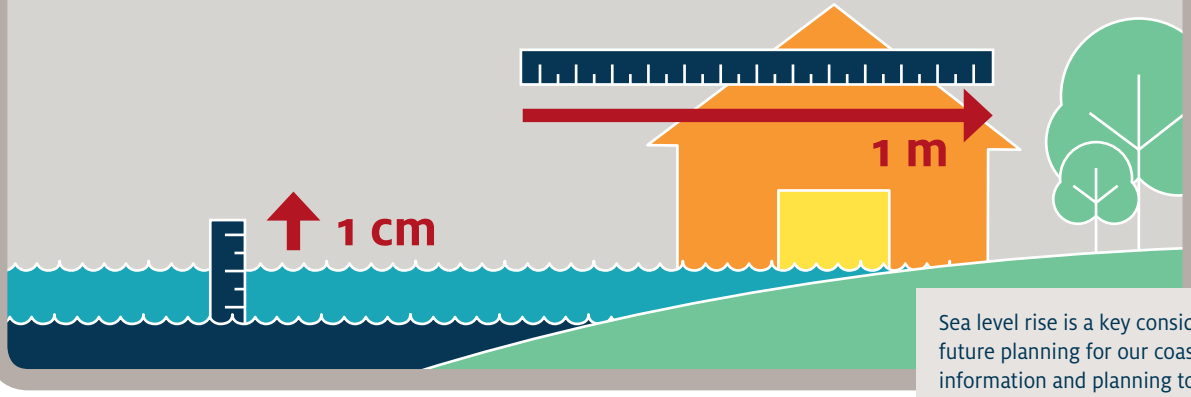
Threats

to land, roads, railways, hospitals, schools, houses

A rough rule of thumb

Approximately a 1 cm rise in sea level on a gently sloping beach...

...will bring the water 1 m further landward



Sea level rise is a key consideration for future planning for our coasts. Further information and planning tools are available at www.coastadapt.com.au

Australian Government
Department of the Environment and Energy
CoastAdapt
NCCARF National Climate Change Adaptation Research Facility