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.

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

= **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

**Higher wave heights**
Storm surges

= **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