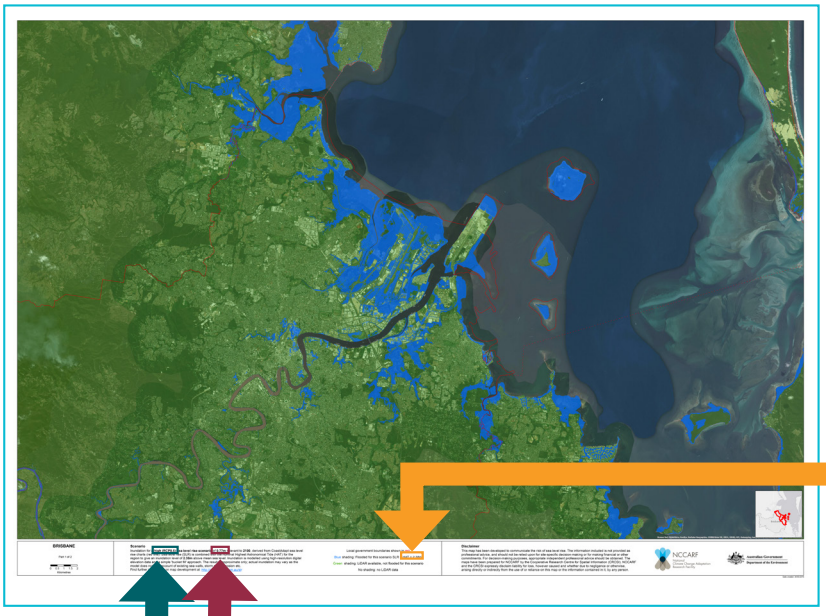
Understanding **CoastAdapt** inundation maps

Key

- **Blue shading:** inundated
- **Green shading:** not inundated
- **Grey shading:** no data

Blue and green shading: LiDAR data available.



HAT Highest Astronomical Tide

'...combined with the nominal Highest Astronomical Tide (HAT)...' To make the map, sea level rise is added to the HAT – the average of recorded high tides – to give an estimate of the worst case inundation risk.

RCP (8.5)

The RCP is the scenario of future greenhouse gas concentrations in the atmosphere. RCP8.5 is a very high greenhouse gas scenario. For 2100, we also supply maps for RCP4.5 (low concentrations).

0.77 m

0.77 m is the amount the sea is expected to rise at this location by 2100 under RCP8.5 (based on CSIRO modelling). For 2100 there is a map for RCP4.5 also. For 2050, there is only a map for RCP8.5– there is little difference between scenarios before the second half of the 21st century.

Why are there differences between inundation maps?

?

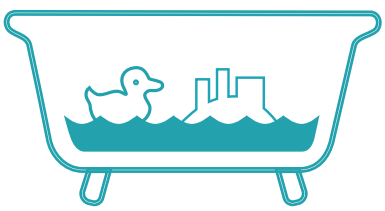
Not all inundation maps look the same: check the scenario, the date, does the map use bathtub modelling or hydrodynamic modelling, does the map account for tides? Use maps for different dates and different scenarios to evaluate the range of risk to your area.

What is bathtub modelling?

The ***bucket fill*** or ***bathtub*** method of modelling simply raises water levels over existing topography.

Benefits of bathtub models

- simple and easy to generate so can explore several scenarios
- good for looking at a regional scale
- easy to link to other maps (e.g. GIS)



Limitations of bathtub models

Does not consider:

- tidal flows in estuaries
- protection from seawalls and other structures
- wind and waves so gives little guidance on storm surge
- rainfall coming downstream and making flooding worse.