Climate-change adaptation requires the choice of revised policies and design codes which will provide an acceptable level of future risk. Such decisions are non-trivial because of uncertainties both in the occurrence of sea-level extremes and in the projections of sea-level rise.

Sea-level extremes are commonly described using Generalised Extreme Value distributions, based on observations over several decades. The simplest of these is the Gumbel distribution, which provides a reasonable fit to most observed data; this distribution is assumed in the present technique.

Projections of sea-level rise (e.g. as reported by the Intergovernmental Panel on Climate Change) involve considerable uncertainty, both from limitations of scientific understanding and from a lack of knowledge concerning future emissions of greenhouse gases.

A good estimate of an appropriate allowance for sea-level rise may be derived from a knowledge of:
1. the e-folding height of the Gumbel distribution defining the present sea-level extremes,
2. the central value of the projected rise in mean sea level, and
3. the uncertainty of the projected rise in mean sea level.

As an example, for the A1FI Emission Scenario, for the year 2100 and for Hobart, Australia, the appropriate allowance is:
- 0.49 metres, based on the central value of the projected rise in mean sea level, plus
- 0.17 metres, based on the uncertainty of the projected rise in mean sea level, giving a total of 0.66 metres.

This result is in excellent agreement with estimates from a more sophisticated decision-support tool which allows for any Generalised Extreme Value distribution (see www.sealevelrise.info).