Sea-level rise projections sourced from Section 2.1 ‘Assessing sea-level rise’ in: Coastal hazards and climate change guidance 2024.

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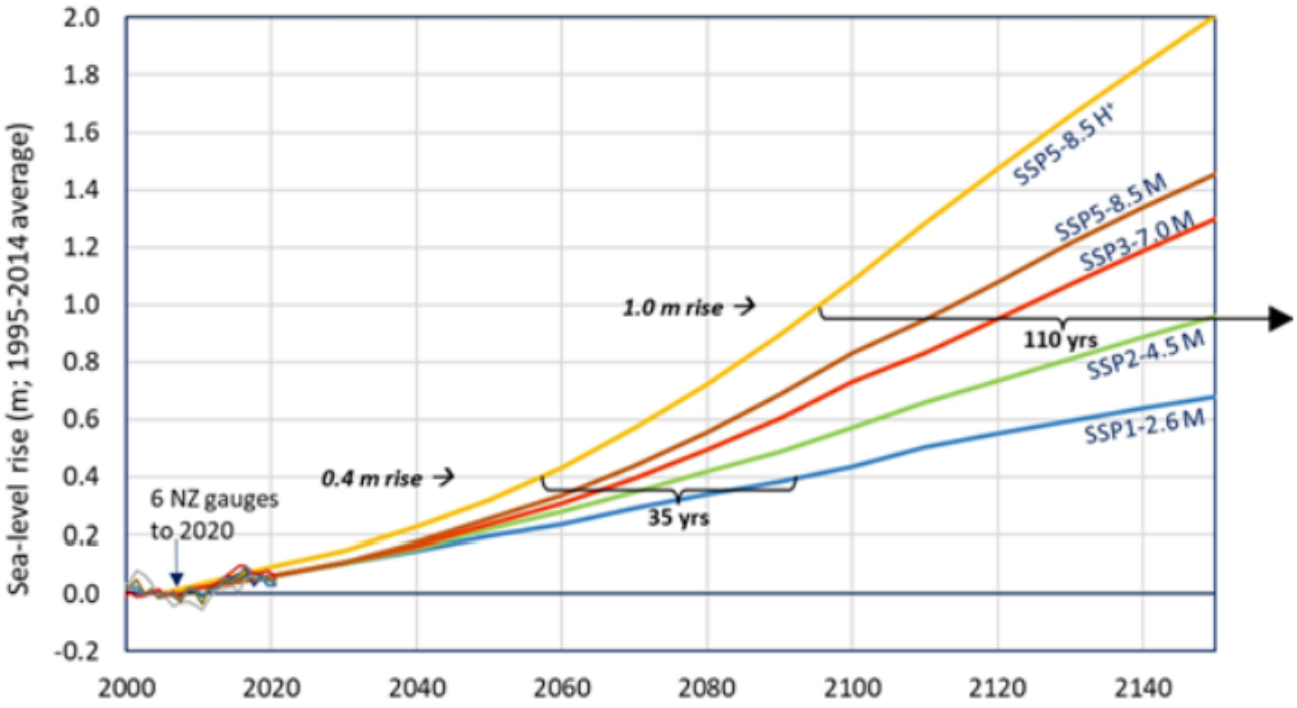
Please refer to the linked document above for further reference.

Figure 10: Recommended sea-level rise (SLR) projections (excluding vertical land movement) based on shared socio-economic pathways scenarios (SSP) (from a central location, broadly representative of SLR across Aotearoa New Zealand)



Notes: The figure shows two examples of expected time brackets when a 0.4 metre and 1.0 metre sea-level rise (SLR) height would be reached. Locally, incorporating vertical land movement from NZ SeaRise, a similar graphic can be generated for specific relative sea-level rise heights, or refer to figure 14 in *Climate change, sea-level rise and coastal hazards science: Coastal hazards and climate change guidance – Supplement A*.

The absolute SLR from south to north across Aotearoa New Zealand varies ± 0.025 metres by 2150, relative to the central location.

Shared socio-economic pathway (SSP) is used by the Intergovernmental Panel on Climate Change for climate scenarios, with the latter number (2.6, 8.5 and so on) related to the previously used representative concentration pathway. M = the median (50th percentile) projection for that SSP. H+ is the top of the likely range for the SSP5-8.5 scenario (83rd percentile), representing widening future deep uncertainties associated with SLR. Annual sea level from the six tide-gauge records is sourced from Stats NZ (http://www.stats.govt.nz/indicators/coastal-sea-level-rise).

Table 6: Summary of approximate year when absolute sea-level rise (SLR) heights could be reached using the recommended projections for a central location in Aotearoa New Zealand

SLR (metres)	Year achieved for SSP5-8.5 H+ (83rd percentile)	Year achieved for SSP5-8.5 (median)	Year achieved for SSP3-7.0 (median)	Year achieved for SSP2-4.5 (median)	Year achieved for SSP1-2.6 (median)
0.2	2035	2040	2045	2045	2050
0.3	2050	2055	2060	2060	2070
0.4	2055	2065	2070	2080	2090
0.5	2065	2075	2080	2090	2110
0.6	2070	2080	2090	2100	2130
0.7	2080	2090	2100	2115	2150
0.8	2085	2100	2110	2130	2180
0.9	2090	2105	2115	2140	2200
1.0	2095	2115	2125	2155	>2200
1.2	2105	2130	2140	2185	>2200
1.4	2115	2145	2160	>2200	>2200
1.6	2130	2160	2175	>2200	>2200
1.8	2140	2180	2200	>2200	>2200
2.0	2150	2195	>2200	>2200	>2200

Notes: Approximate year (to the nearest five-year value) when each absolute sea-level rise (SLR) height could be reached from a central location from the NZ SeaRise platform, under the *medium confidence* SLR projections, relative to the 1995–2014 baseline (mid-point 2005). Excludes vertical land movement and the *low confidence* SLR projections. The table uses 0.1 metre SLR height increments up to 1 metre, thereafter 0.2 metre height increments.

Can be considered broadly representative across Aotearoa New Zealand, because the absolute SLR from north to south only varies by ± 0.025 metres by 2150 (relative to the central location).

Table 8: Interim precautionary relative sea-level rise allowances recommended to use for coastal planning and policy before undertaking a dynamic adaptive pathways planning approach for a precinct, district or region

Planning category	Recommended interim precautionary RSLR allowances
A. Coastal subdivision, greenfield developments and major new infrastructure	Using a **timeframe** out to **2130** (≥100 years), apply the *medium confidence* **SSP5-8.5 H+** based RSLR projection* that includes the relevant VLM rate for the local and/or regional area. (Note: approximately 1.6 metre rise in MSL, before including VLM.)
B. Changes in land use and redevelopment (intensification and upzoning)	Using a **timeframe** out to **2130** (≥100 years), apply the *medium confidence* **SSP5-8.5 H+** based RSLR projection* that includes the relevant VLM rate for the local and/or regional area. (Note: approximately 1.6 metre rise in MSL, before including VLM.)
C. Land-use planning controls for existing coastal uses and assets (building additions)	Using a **timeframe** out to **2130** (≥100 years), apply the *medium confidence* **SSP5-8.5 M** based RSLR projection that includes the relevant VLM rate for the local and/or regional area. (Note: approximately 1.2 metre rise in MSL, before including VLM.)

Planning category	Recommended interim precautionary RSLR allowances
D. Non-habitable, short-lived assets with a functional need to be at the coast, which are either low consequences or readily adaptable (including services)	Using a **timeframe** out to **2075** (≥50 years), apply the *medium confidence* **SSP5-8.5 M** based RSLR projection that includes the relevant VLM rate for the local and/or regional area. (Note: approximately 0.5 metre rise in MSL, before including VLM.)

Notes:

* H+ is the 83rd percentile (or *p83* at the top of the likely range on graphs in the NZ SeaRise platform).

i) Relative sea-level rise (SLR) projections that include satellite-derived vertical land movement (VLM) are available from the NZ SeaRise platform. Alternatively, locally monitored VLM can be applied to the SLR projections.

ii) M = median or *p50* (50th percentile); MSL = mean sea level; RSLR = relative sea-level rise; SSP = shared socio-economic pathway used by the Intergovernmental Panel on Climate Change; VLM = vertical land movement.

The approximate rise in MSL can be considered broadly representative across Aotearoa New Zealand, because the absolute SLR from north to south only varies by ± 0.025 metres by 2150 (relative to the central location).