

Sea-level rise projections sourced from Section “Sea-level rise projections (national to regional scale) from IPCC AR6 in: Interim guidance on the use of new sea-level rise projections.

Published in August 2022 by the Ministry for the Environment Manatū Mō Te Taiao

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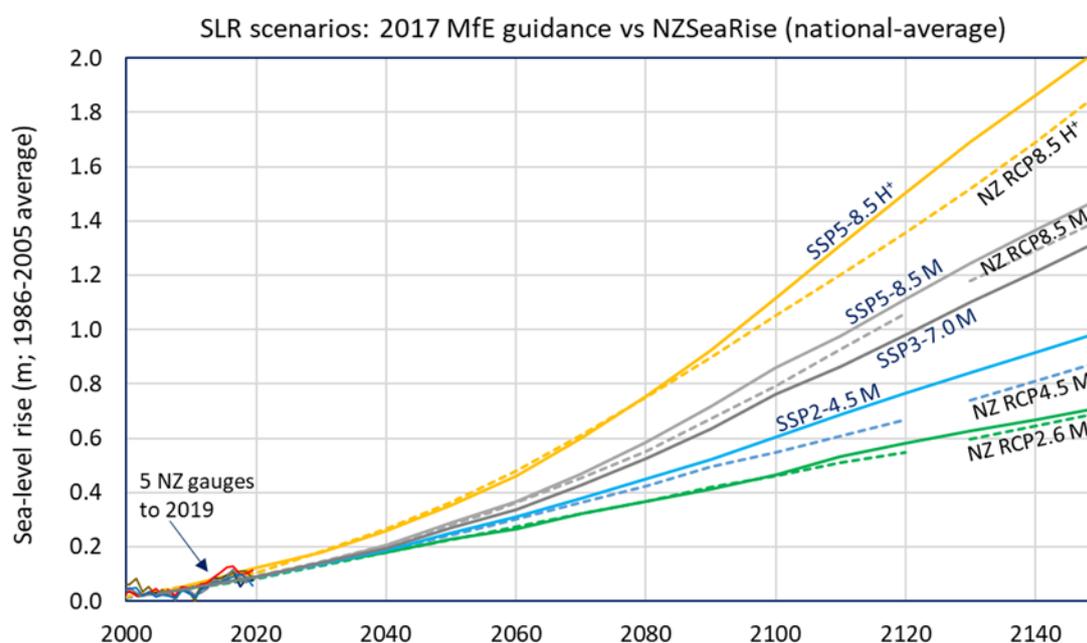
ISBN: 978-1-99-102558-5 Publication number: ME 1667

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<https://environment.govt.nz/publications/interim-guidance-on-the-use-of-new-sea-level-rise-projections/>

Please refer to the linked document above for further reference.

Figure 1: Comparison of new NZSeaRise projections with 2017 coastal hazards guidance projections from 2000 to 2150



Note for figure 1: Comparison of the new nationally averaged NZSeaRise projections (excluding VLM) (solid lines) with the matching equivalent suite of four sea-level rise (SLR) projections in the 2017 coastal hazards guidance (dashed lines), all to a common zero baseline period used previously (1986–2005).
Source: Ministry for the Environment, 2017; NZSeaRise/Takiwā platform (averaging six locations north to south) and tide-gauge data from the Ministry for the Environment and StatsNZ (<https://www.stats.govt.nz/indicators/coastal-sea-level-rise>).

Table 1: Decadal increments for averaged “medium confidence” projections of SLR applied nationally

Year	SSP1–2.6 M (median) [m]	SSP2–4.5 M (median) [m]	SSP3–7.0 M (median) [m]	SSP5–8.5 M (median) [m]	SSP5–8.5 H ⁺ (83 rd percentile) [m]
2005	0	0	0	0	0
2020	0.06	0.06	0.06	0.06	0.09
2030	0.11	0.11	0.11	0.11	0.15
2040	0.15	0.16	0.16	0.18	0.23
2050	0.20	0.22	0.24	0.26	0.32
2060	0.24	0.28	0.31	0.34	0.43
2070	0.29	0.35	0.40	0.44	0.57
2080	0.34	0.42	0.50	0.56	0.72
2090	0.38	0.49	0.61	0.69	0.90
2100	0.44	0.57	0.73	0.83	1.09
2110	0.50	0.66	0.83	0.95	1.28
2120	0.55	0.74	0.95	1.08	1.47
2130	0.60	0.81	1.07	1.21	1.66
2140	0.64	0.89	1.19	1.34	1.84
2150	0.68	0.96	1.30	1.46	2.01

Notes for table 1: Decadal increments for average¹¹ “medium confidence” projections of sea-level rise (metres above 1995–2014 baseline) applied nationally and excluding any regional and local factors including VLM. For local or regional scale sea-level rise projections, use the NZSeaRise maps in Takiwā¹² and downloaded datasets to create a similar table.

¹¹ Averaged over six sites: Opuā, Auckland, Wellington, Lyttelton, Port Chalmers and Bluff. Regional north to south differences from the national average (excluding VLM) range ±0.04 m for the lowest SSP1-2.6, only ±0.02 m for the middle scenarios, and ±0.03–0.05 m for the upper H⁺ scenario.

¹² <https://www.searise.nz/maps-2>

Table 2: Approximate years when various national sea-level rise increments could be reached

SLR (m)	Year achieved for SSP5-8.5 H ⁺ (83 rd 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)
0.3	2050	2055	2060	2060	2070
0.4	2060	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 for Table 2: Approximate year (to the nearest five-year value) when each national sea-level rise increment could be reached, under the “medium confidence” sea-level rise projections, with increments relative to a 1995–2014 baseline (midpoint 2005). Excludes any regional and local factors including VLM and the “low confidence” projections. Where VLM is significant, use the Takiwā maps and downloaded datasets to create a similar table.

Table 3: Recommended updates to the minimum transitional procedures or RSLR allowances

Category	Description	Transitional allowances in the 2017 coastal hazards guidance (s. 5.7.3) or table 2 of the Summary (Ministry for the Environment, 2017a)	Transitional allowances to use now, until the refresh of the coastal guidance
A	Coastal subdivision, greenfield developments, and major new infrastructure	<i>Avoid hazard risk by using sea-level rise over more than 100 years and the H+ scenario</i>	Avoid new hazard risk by using “medium confidence” sea-level rise out to 2130 for the SSP5-8.5 H+ (83 rd percentile SSP5-8.5 or p83) scenario that includes the relevant VLM for the local/regional area (from table 1; typically 1.7 m rise in regional MSL before including VLM). Also, check the lifetime and utility of new developments using the median RSLR projections for the “low confidence” SSP scenarios out to 2150 and beyond.
B	Changes in land use and redevelopment (intensification)	<i>Adapt to hazards by conducting a risk assessment using the range of scenarios and the pathways approach</i>	Adapt to hazards by conducting a risk assessment using the range of updated “medium confidence” RSLR scenarios (including VLM) out to 2130 with the dynamic adaptive pathways planning approach; or if a more immediate decision is needed: <ul style="list-style-type: none"> • avoid new and increased hazard risk by using “medium confidence” sea-level rise out to 2130 and the SSP5-8.5 H+ (83rd percentile SSP5-8.5 or p83) scenario that includes the relevant VLM for the local/regional area (from table 1; typically 1.7 m rise in regional MSL before including VLM).
C	Land-use planning controls for existing coastal development and assets planning. Use of single values at local/district scale transitional until dynamic adaptive pathways planning is undertaken	<i>1.0 m sea-level rise</i>	Use the SSP5-8.5 M scenario out to 2130 , which includes the relevant VLM for the local/regional area (from table 1; typically 1.2 m rise in regional MSL before including VLM).
D	Non-habitable, short-lived assets with a functional need to be at the coast, and either low-consequences or readily adaptable (including services)	<i>0.65 m sea-level rise</i>	Use the SSP5-8.5 M scenario out to 2090 that includes the relevant VLM for the local/regional area (from table 1; typically 0.7 m rise in regional MSL before including VLM).

Notes for table 3: Recommended updates (last column) to the minimum transitional procedures or RSLR allowances, are for use in planning instruments while in transition towards a DAPP strategy. VLM = vertical land movement; p83= 83rd percentile (top of shaded likely range).