

Supplementary Information

Nationwide Economic Impacts of Sea Level Rise and Storm Surge from Global Warming in Australia

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1 Australia's Coastal Length, Regions and Land Uses

1.1 Coastal Length by State

Table S1: Australia's Coastal Length (*km*)

		Mainland	Mainland & Islands
1	New South Wales	1,973	2,101
2	Victoria	1,870	2,512
3	Queensland	6,967	13,352
4	South Australia	3,815	5,059
5	Western Australia	12,895	20,788
6	Tasmania	2,827	4,872
7	Northern Territory	5,438	10,954
8	ACT (Jervis Bay)	36	39
Total		35,821	59,681

Source: Based on [1].

1.2 Land Use Aggregation

The SLR/S zones are aggregated from the Statistical Areas Level 2 (SA2) by [2] for modelling calibration and reporting purposes. Based on [3], 101 sub-sectors of land use are aggregated into ten sectors of dryland use and one wetland sector. The ten dryland categories include: (i) residential (LU1), (ii) commercial (LU2), (iii) industrial and manufacturing (LU3), (iv) quarries (LU4), (v) agriculture (LU5), (vi) infrastructure (LU6), (vii) education and public facilities (LU7), (viii) parks and outdoor areas (LU8), (ix) reserves (LU9), and (x) unidentified land use by private sector (LU10) (see Table S2).

Table S2: Selected Land Use Categories in Spatial Model

	Tertiary	LU in Model
Dry Lands		
1	1.1.0 Nature conservation	9
2	1.1.1 Strict nature reserves	9
3	1.1.3 Nature park	8
4	1.1.7 Other conserved area	9
5	1.2.0 Managed resource protection	9
6	1.2.4 Landscape	10
7	1.3.0 Other minimal use	10
8	1.3.3 Residual native cover	9
9	1.3.4 Rehabilitation	9
10	2.1.0 Grazing native vegetation	9
11	2.2.0 Production native forests	9
12	3.1.2 Softwood plantation forestry	9
13	3.2.0 Grazing modified pastures	5
14	3.2.1 Native/exotic pasture mosaic	5
15	3.2.5 Sown grasses	5
16	3.3.0 Cropping	5
17	3.3.5 Sugar	5
18	3.4.1 Tree fruits	5
19	3.4.3 Tree nuts	5
20	3.4.5 Shrub berries and fruits	5
21	3.4.7 Perennial vegetables and herbs	5
22	3.6.0 Land in transition	10

Table S2 – *Continued from previous page*

	Tertiary	LU in Model
23	3.6.4 No defined use	10
24	3.6.5 Abandoned perennial horticulture	5
25	5.1.1 Production nurseries	5
26	5.2.0 Intensive animal production	5
27	5.2.5 Aquaculture	4
28	5.2.6 Horse studs	5
29	5.2.8 Abandoned intensive animal production	5
30	5.3.0 Manufacturing and industrial	3
31	5.3.1 General purpose factory	3
32	5.3.3 Major industrial complex	3
33	5.3.6 Oil refinery	3
34	5.3.7 Sawmill	3
35	5.4.0 Residential and farm infrastructure	1
36	5.4.1 Urban residential	1
37	5.4.2 Rural residential with agriculture	1
38	5.4.3 Rural residential without agriculture	1
39	5.4.5 Farm buildings/infrastructure	1
40	5.5.0 Services	2
41	5.5.1 Commercial services	2
42	5.5.2 Public services	2
43	5.5.3 Recreation and culture	8
44	5.5.4 Defence facilities - urban	7
45	5.5.5 Research facilities	7
46	5.6.0 Utilities	6
47	5.6.1 Fuel powered electricity generation	6
48	5.6.5 Electricity substations and transmission	6
49	5.6.7 Water extraction and transmission	6
50	5.7.0 Transport and communication	6
51	5.7.1 Airports/aerodromes	6
52	5.7.2 Roads	6
53	5.7.3 Railways	6
54	5.7.4 Ports and water transport	6
55	5.7.5 Navigation and communication	6
56	5.8.0 Mining	3
57	5.8.2 Quarries	4
58	5.8.3 Tailings	3
59	5.8.4 Extractive industry not in use	3
60	5.9.0 Waste treatment and disposal	6
61	5.9.1 Effluent pond	6
62	5.9.2 Landfill	6
63	5.9.5 Sewage/sewerage	6

Source: [4] and [3]

2 Data Sources of Land Use Values

This section describes the data sources and methods used to derive land values. Prices for vacant, residential, and agricultural land were obtained from real estate sources [5, 6, 7]. These observed prices were used as baseline values and, together with relative price differences across land-use (LU) categories, to estimate values for LU3, LU4, LU6, LU7, and LU9. Where direct or derived estimates were available (e.g., LU1, LU2, LU5, and LU8), these values were applied. For categories lacking reliable market data, estimated values were derived from comparable land-use categories. Where neither observed nor suitable proxy values were available, conservative estimates were adopted following the methodological approach applied to Victoria in [8].

For vacant and potentially residential land, we also estimate and test land values using the cost of converting undeveloped land into buildable land, following [8]. For example, for land use of road (LU6), land-preparation costs are obtained from [9] and include rock clearing (\$5.53–\$9.15 per linear foot), stump removal (\$67–\$130 per stump), excavation (\$1,600–\$4,400), land grading (\$6,000–\$10,000 per acre), and clearing of heavily forested land (\$3,790–\$6,710 per acre).

Bulldozing costs are approximately \$568 per half-day, \$811 per day, or \$2,310 per week for a 140-horsepower dozer [9]. Development costs associated with roads [10], plumbing, sewerage, and utility infrastructure are also incorporated where applicable. Where these cost-based estimates are not appropriate or sufficient data are unavailable, land parcels are valued as a fraction of the observed value of comparable nearby land.

For reserves (LU9) and unidentified land (LU10), conservative values are assumed to be 15–20% and 10–15% [8], respectively, of the value of the nearest residential land, with the specific proportion varying by state. Lower values are assigned in sparsely populated and remote regions, particularly in the Northern Territory, Western Australia, and QLD, where LU9 and LU10 parcels may be distant from residential areas and economic activity. In contrast, higher relative values are applied in more densely populated states, such as Victoria and NSW. Where direct land-price information is unavailable or limited, values are approximated using observed prices for comparable nearby parcels, following an approach analogous to hedonic pricing [11]. This assumes that land values are influenced by location and surrounding socioeconomic and environmental characteristics. For example, an urban park in Melbourne would generally have a higher implicit land value than an otherwise comparable parcel in a remote rural area. This location-based valuation approach is applied primarily to LU8–LU10.

In general, conservative assumptions are adopted for land-use categories lacking direct market observations, following the valuation framework of [8] for Victoria. Quarry land (LU4) is valued at 20% of the corresponding rural land price. Land associated with electricity infrastructure (LU63–LU64), sewerage, water infrastructure (LU66–LU67), and telecommunications/aerial facilities (LU69) is valued at 1.44 times the local residential land value. Public facilities, including schools, churches, and health-care facilities (LU71), are valued at 1.2 times the price of comparable vacant land in the same area. Transport and road land (LU61) is valued using nearby vacant-land prices plus the average road-construction cost per km² [12]. Land associated with gas transmission infrastructure (LU62) is valued at 1.2 times the corresponding residential land value [8].

The value of assets attached to each land-use category is estimated from average asset prices, the number of affected buildings and properties, and the corresponding land values. For developed land-use categories, including residential, commercial, industrial, and manufacturing land, the total value incorporates both the underlying land and the associated built assets. Apartment-building values are estimated based on the assumed number of dwelling units per building. For apartment blocks, particularly in Melbourne and surrounding urban areas, an average of approximately 200 units per building is assumed based on [13].

Where increases in *real* land values by time are assumed, we follow [14, 15] and assume that the growth of the price of land/asset matches the growth of state economic growth. No explicit assumptions are made as to whether individuals are myopic in their planning, or in how they form expectations of future asset prices (e.g., tomorrow’s asset price is a simple projection of today’s price), or whether they have perfect foresight on the projected impacts of SLR/S on asset and land values in the future. Recent work suggests that sea level rise and inundation risk are not capitalized into residential property values, suggesting either myopic pricing behavior or a lack of knowledge on potential SLR/S impacts and the potential cost of adaptation in the future [16].

3 Log Normal Distribution of the Physical Damage Rate From SLR/S

The log-normal distribution is commonly used to represent processes in which outcomes arise from the multiplicative effects of several factors [17]. In this study, the annual incremental area affected by SLR/S is assumed to follow a log-normal distribution, thereby introducing stochastic variation into the projected evolution of inundation. The resulting annual inundated area is subsequently used to estimate the corresponding economic damages.

Equation 1(a)-(c) represents the probability density function (*PDF*), the cumulative distribution function (*CDF*), and the mean value of X ($\bar{X}$)

$$PDF = \frac{1}{x\sigma\sqrt{2\pi}} \exp\left[-\frac{(\ln x - \mu)^2}{2\sigma^2}\right] \quad (1a)$$

$$CDF = \frac{1}{2} \left[1 + \operatorname{erf} \frac{\ln x - \mu}{\sigma\sqrt{2}} \right] = \Phi\left(\frac{\ln(x) - \mu}{\sigma}\right) \quad (1b)$$

$$Median[X] = \bar{X} = e^{\mu} \quad (1c)$$

$$Mean[X] = e^{\left(\mu + \frac{\sigma^2}{2}\right)} \quad (1d)$$

The sensitivity analysis of physical damages from SLR/S in this study is based on three scenarios, including the Low, Base and High Cases relative to the median value, given by

$$\bar{X}_{low} < \bar{X}_{med} < \bar{X}_{high} \quad (2a)$$

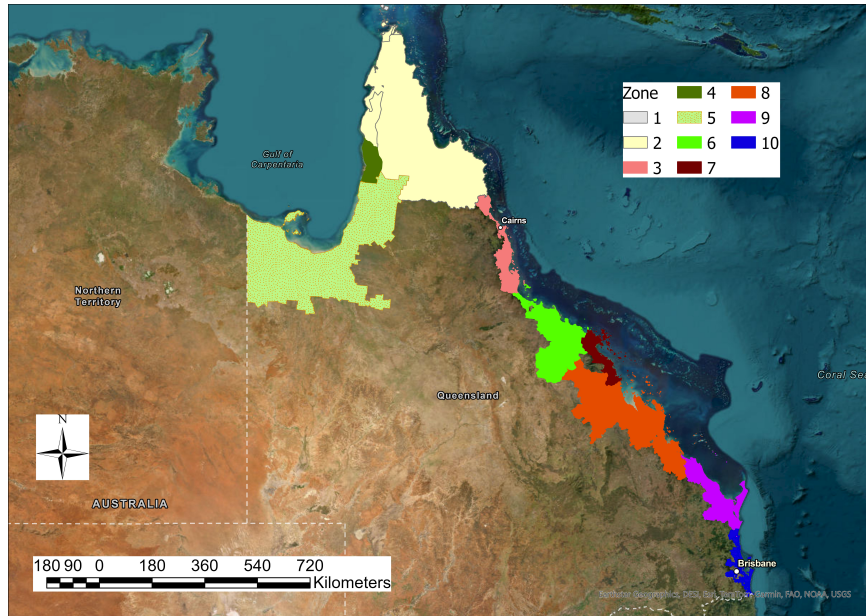
where $\bar{X}_{low}$, $\bar{X}_{med}$, $\bar{X}_{high}$ are the median value of physical damages at low, base and high-risk levels. Note: low: Low Case ($\mu_{low} = -0.10$, $\sigma_{low} = 0.12$); med: Medium Case ($\mu_{med} = 0$, $\sigma_{med} = 0.15$); high: High Case ($\mu_{high} = 0.10$, $\sigma_{high} = 0.18$). In this study, ‘medium’ is the Base Case. The Appendix to this Supplementary Information summarises the results.

4 Result Summary: The Effects of Sea Level Rise and Storm Surge (SLR/S) on Properties and Lands in 2100 by RCPs

Present values are estimated using an annual discount rate of 5%, while future asset and land values incorporate the assumed growth rate of Australia’s Gross Domestic Product (GDP). Unit quantities and monetary values reported in the tables are rounded for presentation. The results presented in this Supplementary Information correspond to the Base Case estimates of SLR/S damages, with results also estimated separately for each Australian state and the NT.

4.1 Queensland

Figure S1: Queensland: SLR/S Zones



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2]. Note: Zone1: Torres Strait, Zone2: Cape York, Zone3:Wet Tropics, Zone4: Northern Gulf, Zone5: Southern Gulf, Zone6: Burdekin, Zone7: Mackay Whitsunday, Zone8: Fitzroy, Zone9: Burnett Mary, Zone10: South East Queensland includes Brisbane (Region 10); Gold Coast (Region 11), and the Rest of South East (Region 12).

Table S3: Queensland: SLR/S Zones and Sub-Regions

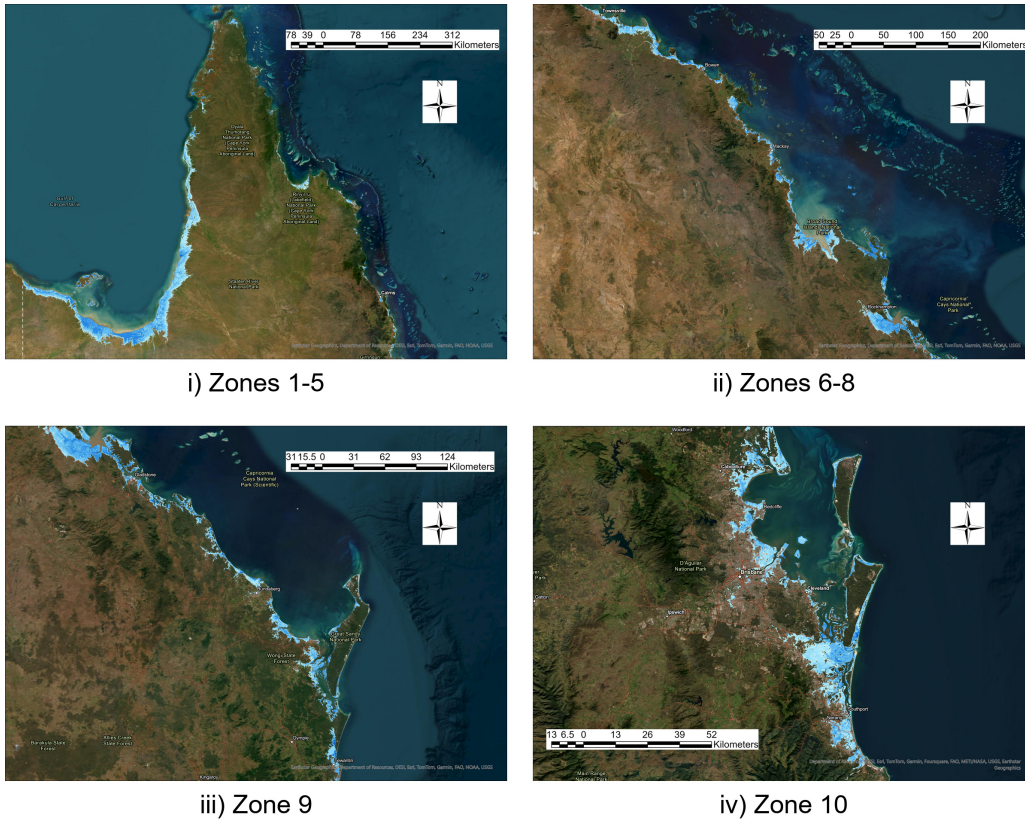
Zones & Sub-Regions		
1	Torres Strait	Torres Strait Islands
2	Cape York	Aurukun , Cape York, Northern Peninsula, Torres, Weipa.
3	Wet Tropics	Clifton Beach - Kewarra Beach, Freshwater - Stratford, Redlynch, Trinity Beach - Smithfield, Yorkeys Knob - Machans Beach, Cairns City, Earlville - Bayview Heights, Edmonton, Gordonvale - Trinity, Kanimbla - Mooroolbool, Manoora, Manunda, Westcourt - Bungalow, White Rock, Whitfield - Edge Hill, Woree, Babinda, Innisfail, Johnstone, Tully, Yarrabah, Daintree, Port Douglas, Ingham, Ingham Surrounds.
4	Northern Gulf	Kowanyama - Pormpuraaw.
5	Southern Gulf	Carpentaria.
6	Burdekin	Bowen, Collinsville, Ayr, Burdekin, Palm Island, Annandale (Qld), Belgian Gardens - Pallarenda, Bohle Plains, Garbutt - West End, Gulliver - Currajong - Vincent, Hermit Park - Rosslea, Hyde Park - Pimlico, Magnetic Island, Mount Louisa, Mundingburra, Northern Beaches, Oonoonba, South Townsville - Railway Estate, Townsville - South, Townsville City - North Ward, Wulguru - Roseneath, Burdell - Mount Low.
7	Mackay Whitsunday	Andergrove - Beaconsfield, East Mackay, Eimeo - Rural View, Mackay, Mackay Harbour, Mount Pleasant - Glenella, North Mackay, Ooralea - Bakers Creek, Sarina, Seaforth - Calen, Shoal Point - Bucasia, Slade Point, South Mackay, Walkerston - Eton, West Mackay, Airlie - Whitsundays, Cape Conway, Proserpine.
8	Fitzroy	Berserker, Bouldercombe, Emu Park, Glenlee - Rockyview, Lakes Creek, Park Avenue, Parkhurst - Kawana, Rockhampton - West, Rockhampton City, Rockhampton Surrounds - East, Rockhampton Surrounds - North, Rockhampton Surrounds - West, Shoalwater Bay, The Range - Allentown, Yeppoon, Callemondah, Clinton - New Auckland, Gladstone, Gladstone Hinterland, Kin Kora - Sun Valley, South Trees, Telina - Toolooa, West Gladstone, Broomsound - Nebo.

Table S3 – continued from previous page

9	Burnett Mary	Agnes Water - Miriam Vale, Boyne Island - Tannum Sands, Tewantin, Ashfield - Kepnock, Bargara - Burnett Heads, Branyan - Kensington, Bundaberg, Bundaberg East - Kalkie, Bundaberg North - Gooburrum, Bundaberg Surrounds - North, Bundaberg Surrounds - South, Millbank - Avoca, Cooloola, Booral - River Heads, Craignish - Dundowran Beach, Pialba - Eli Waters, Point Vernon, Torquay - Scarness - Kawungan, Urangan - Wondunna, Burrum - Fraser, Granville, Maryborough (Qld), Maryborough Surrounds - South, Tinana.
	South East	
10	Brisbane	Belmont - Gumdale, Birkdale, Capalaba, Thorneside, Wellington Point, Cleveland, Ormiston, Redland Bay, Thornlands, Victoria Point, North Stradbroke Island, Southern Moreton Bay Islands, Brisbane Port - Lytton, Manly - Lota, Murarrie, Tingalpa, Wakerley, Wynnum, Wynnum West - Hemmant, Bald Hills, Boondall, Brisbane Airport, Eagle Farm - Pinkenba, Northgate - Virginia, Nudgee - Banyo, Nundah, Bracken Ridge, Brighton (Qld), Deagon, Sandgate - Shorncliffe, Taigum - Fitzgibbon, Cannon Hill, Carina, Carindale, Coorparoo, Fairfield - Dutton Park, Greenslopes, Woolloongabba, Yeronga, Pallara - Willawong, Rocklea - Acacia Ridge, Jindalee - Mount Ommaney, Riverhills, Seventeen Mile Rocks - Sinnamon Park, Westlake, Bellbowrie - Moggill, Brookfield - Kenmore Hills, Fig Tree Pocket, Kenmore, Pinjarra Hills - Pullenvale, Chelmer - Graceville, Corinda, Indooroopilly, Sherwood, St Lucia, Taringa, Brisbane City, Fortitude Valley, Highgate Hill, Kangaroo Point, New Farm, South Brisbane, West End, Balmoral, Bulimba, East Brisbane, Hawthorne, Morningside - Seven Hills, Norman Park, Albion, Clayfield, Hamilton (Qld), Hendra, Kelvin Grove - Herston, Newmarket, Newstead - Bowen Hills, Wilston, Windsor, Woolloowin - Lutwyche, Auchenflower, Paddington - Milton, Toowong.
	Gold Coast	Broadbeach Waters, Burleigh Heads, Burleigh Waters, Mermaid Beach - Broadbeach, Mermaid Waters, Miami, Coolangatta, Currumbin - Tugun, Currumbin Waters, Elanora, Palm Beach, Arundel, Biggera Waters, Coombabah, Labrador, Paradise Point - Hollywell, Runaway Bay, Currumbin Valley - Tallebudgera, Mudgeeraba - Bonogin, Carrara, Nerang - Mount Nathan, Pacific Pines - Gaven, Coomera, Helensvale, Hope Island, Jacobs Well - Alberton, Oxenford - Maudsland, Ormeau (East) - Stapylton, Ormeau (West) - Yatala, Pimpama - North, Pimpama - South, Upper Coomera (South) - Wongawallan, Upper Coomera - North, Clear Island Waters, Merrimac, Varsity Lakes, Robina - East, Robina - West, Ashmore, Southport - North, Southport - South, Benowa, Bundall, Main Beach, Surfers Paradise - North, Surfers Paradise - South.
12	The Rest of South East	Darra - Sumner, Oxley (Qld), Wacol, Brassall, Bundamba, Ipswich - Central, Ipswich - East, Ipswich - North, Karalee - Barellan Point, Karana Downs, Leichhardt - One Mile, North Ipswich - Tivoli, Riverview, Camira - Gailes, Collingwood Park - Redbank, Goodna, Beenleigh, Eagleby, Edens Landing - Holmview, Mount Warren Park, Wolfdene - Bahrs Scrub, Chambers Flat - Logan Reserve, Munruben - Park Ridge South, Logan Village, Greenbank - North Maclean, Bethania - Waterford, Cornubia - Carbrook, Loganholme - Tanah Merah, Loganlea, Waterford West, Kingston (Qld), Slacks Creek, Beachmere - Sandstone Point, Bribie Island, Burpengary - East, Elimbah, Morayfield - East, Caboolture - East, Deception Bay, Clontarf, Margate - Woody Point, Redcliffe, Rothwell - Kippa-Ring, Moreton Island, Scarborough - Newport, Dayboro, Murrumba Downs - Griffin, Kallangur, Mango Hill, North Lakes, Lawnton, Petrie, Strathpine - Brendale, Buderim - North, Mountain Creek, Sippy Downs, Aroona - Currimundi, Buddina - Minyama, Caloundra - Kings Beach, Golden Beach - Pelican Waters, Moffat Beach - Battery Hill, Parrearra - Warana, Wurtulla - Birtinya, Caloundra West - Baringa, Meridan Plains - Little Mountain (North), Coolum Beach, Marcoola - Mudjimba, Maroochydore - Kuluin, Mooloolaba - Alexandra Headland, Noosa Heads, Noosaville, Sunshine Beach, Peregian Beach - Marcus Beach, Beerwah, Glass House Mountains, Landsborough, Bli Bli, Diddillibah - Rosemount.

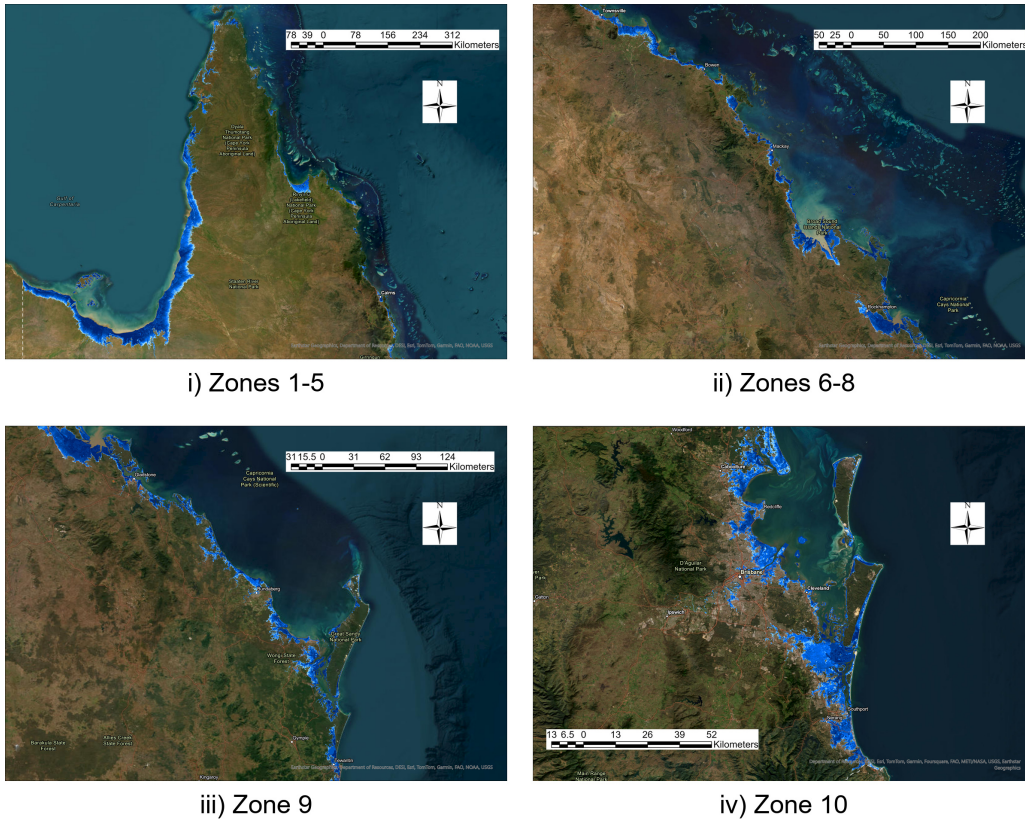
Source: GIS Modelling and [2].

Figure S2: Queensland: SLR/S Inundated Areas by RCP4.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zones 1-5: Torres Strait, Cape York, Wet Tropics, Northern & Southern Gulf; Zones 6-8: Burdekin, Mackay Whitsunday, Fitzroy; Zone 9: Burnett Mary; Zone 10: South East Queensland.

Figure S3: Queensland: SLR/S Inundated Areas by RCP8.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zones 1-5: Torres Strait, Cape York, Wet Tropics, Northern & Southern Gulf; Zones 6-8: Burdekin, Mackay Whitsunday, Fitzroy; Zone 9: Burnett Mary; Zone 10: South East Queensland.

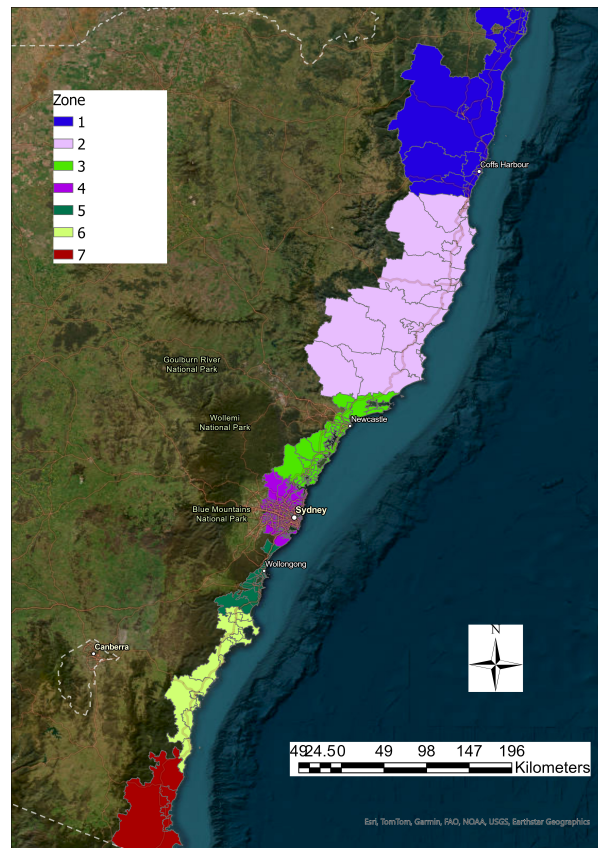
Table S4: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in Queensland by RCP, **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$mill)		
		Properties (no)	Land Use (ha)	Sum (\$Mill)	Properties (\$Mill)	Land Use (\$mill)
(i) RCP4.5						
1	Torres Strait	43	585	35.9	14.5	21.5
2	Cape York	53	33,819	907.8	23.9	883.9
3	Wet Tropics	3,047	16,167	3,560.5	1,475.7	2,084.8
4	Northern Gulf	8	26,333	631.8	2.9	628.9
5	Southern Gulf	409	314,401	20,447.3	205.6	20,241.7
6	Burdekin	3,888	24,576	5,402.2	1,883.7	3,518.5
7	Mackay	7,564	18,412	10,367.4	3,096.9	7,270.5
8	Whitsunday Fitzroy	2,937	56,474	13,689.8	654.8	13,035.0
9	Burnett Mary	7,450	28,100	10,250.3	3,959.2	6,291.1
10	Brisbane	12,392	5,419	35,024.8	11,597.3	23,427.5
11	Gold Coast	32,490	6,985	84,398.9	58,472.7	25,926.2
12	Rest South East	22,875	10,192	29,776.7	19,377.4	10,399.3
Total		93,157	541,464	214,493.5	100,764.6	113,728.9
Average/year		1,259	7,317	2,898.6	1,361.7	1,536.9
(ii) RCP8.5						
1	Torres Strait	199	1,674	125.3	66.5	58.8
2	Cape York	294	118,029	3,063.4	106.4	2,957.0
3	Wet Tropics	21,952	42,635	15,874.9	10,348.2	5,526.8
4	Northern Gulf	125	74,266	1,764.3	44.2	1,720.1
5	Southern Gulf	903	613,850	40,897.2	433.3	40,463.9
6	Burdekin	18,021	54,767	18,102.5	9,603.0	8,499.6
7	Mackay	22,532	38,304	23,613.0	8,652.9	14,960.0
8	Whitsunday Fitzroy	10,564	117,837	30,710.3	3,080.4	27,630.0
9	Burnett Mary	20,401	59,533	24,667.3	10,905.9	13,761.4
10	Brisbane	46,211	11,025	95,091.1	44,546.0	50,545.1
11	Gold Coast	84,256	12,825	197,107.0	150,923.8	46,183.3
12	Rest South East	60,765	21,829	73,088.5	50,009.0	23,079.4
Total		286,224	1,166,575	524,104.9	288,719.5	235,385.3
Average/year		3,868	15,765	7,082.5	3,901.6	3,180.9

Source: Authors. Note: The discount rate is 5%/year; the growth rate of Queensland's GSP included.

4.2 New South Wales

Figure S4: New South Wales: SLR/S Zones



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2].
 Note: Zone1: North NSW, Zone2: North Coast, Zone3: Central Coast, Zone4: Sydney Areas, Zone5: Illawarra & Wollongong, Zone6: Southern Highlands & Shoalhaven, Zone7: South Coast.

Table S5: New South Wales: SLR/S Zones and Sub-Regions

Zones & Sub-Regions	
1	North NSW
(1.1)	Clarence Valley & Coffs Harbour Grafton, Grafton Surrounds, Maclean - Yamba - Iluka, Bellingen, Coffs Harbour - North, Coffs Harbour - South, Coramba - Nana Glen - Bucca, Dorrigo, Korora - Emerald Beach, Sawtell - Boambee, Urunga, Woolgoolga - Arrawarra
(1.2)	Clarence Valley & Coffs Harbour Ballina, Ballina Surrounds, Bangalow, Brunswick Heads - Ocean Shores, Byron Bay, Evans Head, Lennox Head - Skennars Head, Mullumbimby, Lismore Surrounds
(1.3)	Tweed Valley Kingscliff - Fingal Head, Pottsville, Tweed Heads, Banora Point, Terranora - North Tumbulgum, Tweed Heads South
2	North Coast
(2.1)	Great Lakes & Kempsey - Nambucca Dungog, Bulahdelah - Stroud, Forster, Forster-Tuncurry Surrounds, Tuncurry, Kempsey, Kempsey Surrounds, Macksville - Scotts Head, Nambucca Heads, Nambucca Heads Surrounds, South West Rocks

Table S5 – continued from previous page

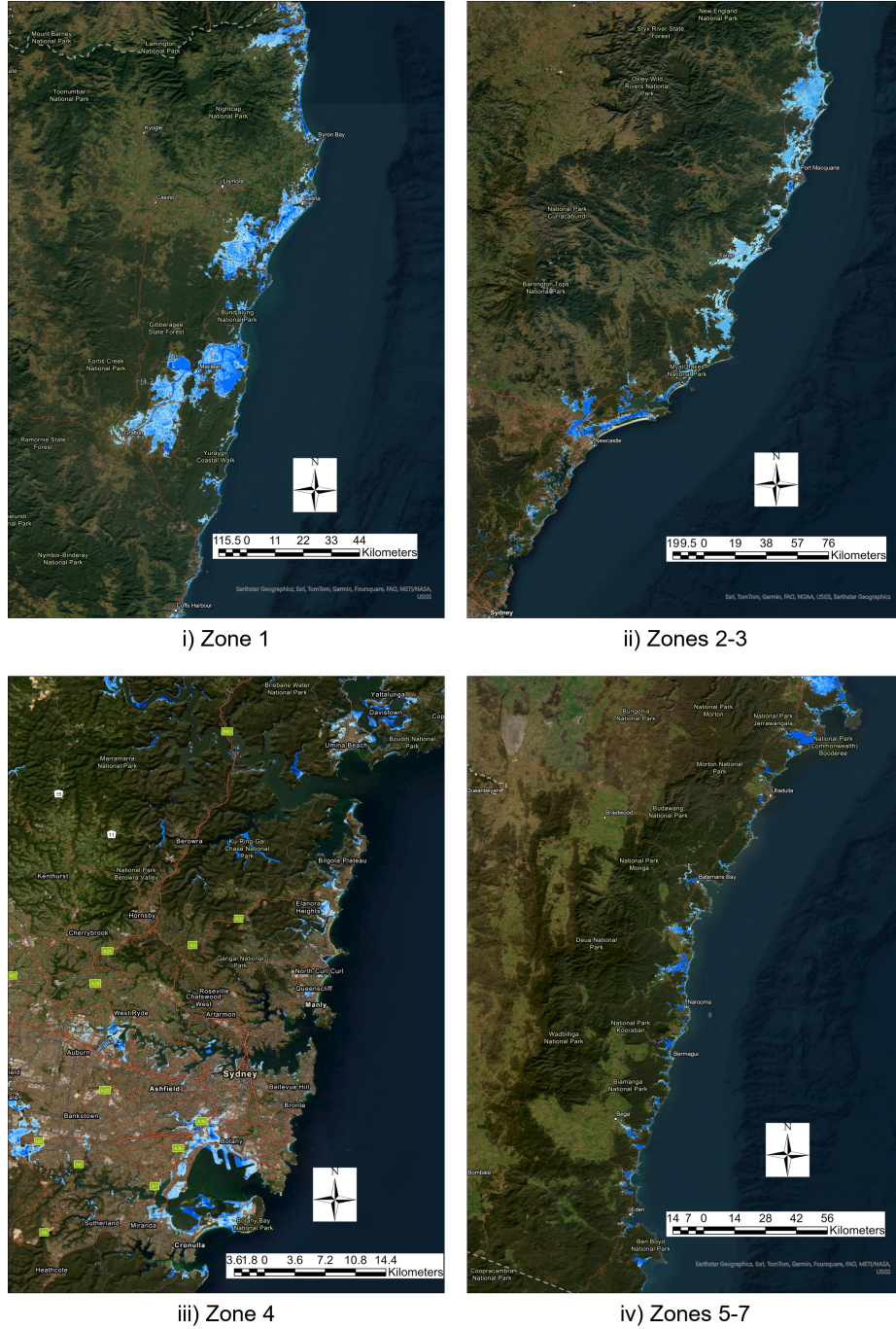
(2.2) Port Macquarie & Taree - Gloucester	
	Laurieton - Bonny Hills, Port Macquarie - West, Port Macquarie Surrounds, Wauchope, Port Macquarie - East, Port Macquarie - South, Gloucester, Old Bar - Manning Point - Red Head, Taree, Taree Surrounds, Wingham
3 Central Coast	
(3.1) Gosford	Avoca Beach - Copacabana, Box Head - MacMasters Beach, Calga - Kulmura, Erina - Green Point, Gosford - Springfield, Kariong, Kincumber - Picketts Valley, Narara, Niagara Park - Lisarow, Point Clare - Koolewong, Saratoga - Davistown, Terrigal - North Avoca, Umina - Booker Bay - Patonga, Wamberal - Forresters Beach, Woy Woy - Blackwall, Wyoming
(3.2) Wyong & Hunter Valley exc Newcastle	Seaham - Woodville, Tea Gardens - Hawks Nest, Bateau Bay - Killarney Vale, Blue Haven - San Remo, Budgewoi - Buff Point - Halekulani, Chittaway Bay - Tumby Umbi, Gorokan - Kanwal - Charmhaven, Jilliby - Yarramalong, Lake Munmorah - Mannering Park, Ourimbah - Fountaindale, Summerland Point - Gwandalan, The Entrance, Toukley - Norah Head, Tuggerah - Kangy Angy, Warnervale - Wadalba, Wyong, Anna Bay, Lemon Tree Passage - Tanilba Bay, Nelson Bay Peninsula, Raymond Terrace, Williamstown - Medowie - Karuah
(3.3) Newcastle & Lake Macquarie	Belmont - Bennetts Green, Belmont South - Blacksmiths, Charlestown - Dudley, Glendale - Cardiff - Hillsborough, Mount Hutton - Windale, Redhead, Swansea - Caves Beach, Valentine - Eleebana, Warners Bay - Boolaroo, Bolton Point - Teralba, Bonnells Bay - Silverwater, Edgeworth - Cameron Park, Morisset - Cooranbong, Toronto - Awaba, Wangi Wangi - Rathmines, West Wallsend - Barnsley - Killingworth, Adamstown - Kotara, Beresfield - Hexham, Hamilton - Broadmeadow, Lambton - New Lambton, Maryland - Fletcher - Minmi, Mayfield - Warabrook, Merewether - The Junction, Newcastle - Cooks Hill, Newcastle Port - Kooragang, Shortland - Jesmond, Stockton - Fullerton Cove, Wallsend - Elmore Vale, Waratah - North Lambton, Wickham - Carrington - Tighes Hill
4 Sydney Areas	
(4.1) Sydney North	Dural - Kenthurst, Galston - Laughtondale, Greenwich - Riverview, Lane Cove, Asquith - Mount Colah, Berowra - Brooklyn - Cowan, Normanhurst - Thornleigh - Westleigh, Hornsby - East, Hornsby - West, Wahroonga (West) - Waitara, Gordon - Killara, Lindfield - Roseville, Pymble, St Ives, Turramurra, Wahroonga (East) - Warrawee, Cremorne - Cammeray, Crows Nest - Waverton, Neutral Bay - Kirribilli, North Sydney - Lavender Bay, Mosman - South, Greenwich - Riverview, Lane Cove, Gordon - Killara, Lindfield - Roseville, Pymble, St Ives, Turramurra, Wahroonga (East) - Warrawee, Cremorne - Cammeray, Crows Nest - Waverton, Neutral Bay - Kirribilli, North Sydney - Lavender Bay, Mosman - South
(4.2) Sydney North Beaches	Greenwich - Riverview, Lane Cove, Cremorne - Cammeray, Crows Nest - Waverton, Neutral Bay - Kirribilli, North Sydney - Lavender Bay, Mosman - South, Manly - Fairlight, Freshwater - Brookvale, Manly Vale - Allambie Heights, Manly - Fairlight, Freshwater - Brookvale, Manly Vale - Allambie Heights, Ermington - Rydalmere, Fairfield - East, Gladesville - Huntleys Point, Hunters Hill - Woolwich, West Ryde - Meadowbank, Putney, Ryde - South, Cabramatta - Lansvale, Chipping Norton - Moorebank
(4.3) Sydney - City and Inner South	Banksmeadow, Botany, Port Botany Industrial, Sydney Airport, Mascot, Sydenham - Tempe - St Peters, Marrickville - South, Potts Point - Woolloomooloo, Sydney (North) - Millers Point
(4.4) City & Eastern	Bondi - Tamarama - Bronte, Bondi Junction - Waverly, Coogee - Clovelly, Malabar - La Perouse, South Coogee, Bondi - Tamarama - Bronte, Bondi Junction - Waverly, Coogee - Clovelly, Malabar - La Perouse, South Coogee
(4.5) Inner South West & West	

Table S5 – continued from previous page

		Bass Hill - Georges Hall, Condell Park, Padstow, Revesby, Yagoona - Birrong, Bankstown - North, Bankstown - South, Panania (North) - Milperra, Panania (South) - Picnic Point, Punchbowl, Earlwood, Oatley - Hurstville Grove, Peakhurst - Lugarno, Riverwood, South Hurstville - Blakehurst, Mortdale - Oatley, Kogarah Bay - Carlton - Allawah, Monterey - Brighton-le-Sands - Kyeemagh, Rockdale - Banksia, Sans Souci - Ramsgate, Arncliffe - Bardwell Valley, Wolli Creek, Concord - Mortlake - Cabarita, Drummoyne - Rodd Point, Five Dock - Abbotsford, Rhodes, Balmain, Lilyfield - Rozelle, Leichhardt, Haberfield - Summer Hill
	(4.6) Parramatta & Sutherland	Wentworth Point - Sydney Olympic Park, Ermington - Rydalmere, Fairfield - East, Gladesville - Huntleys Point, Hunters Hill - Woolwich, West Ryde - Meadowbank, Putney, Ryde - South, Gympie - Grays Point, Miranda - Yowie Bay, Sylvania - Taren Point, Caringbah, Caringbah South, Cronulla - Kurnell - Bundeena, Lilli Pilli - Port Hacking - Dolans Bay, Woollooware - Burraneer, Illawong - Alford's Point, Menai - Lucas Heights - Woronora, Oyster Bay - Como - Jannali, Royal National Park, Sutherland - Kirrawee, Woronora Heights
5	Illawarra & Wollongong	
	(5.1) Illawarra	Helensburgh, Horsley - Kembla Grange, Port Kembla Industrial, Unanderra - Mount Kembla, Berkeley - Lake Heights - Cringila, Port Kembla - Warrawong, Windang - Primbey, Dapto - Avondale, Albion Park - Macquarie Pass, Albion Park Rail, Dapto - Avondale, Albion Park - Macquarie Pass, Albion Park Rail, Kiama, Kiama Hinterland - Gerringong, Shellharbour - Flinders, Shellharbour - Oak Flats, Warilla
	(5.2) Wollongong	Balgownie - Fairy Meadow, Corrimal - Tarrawanna - Bellambi, Figtree - Keiraville, Helensburgh, Thirroul - Austinmer - Coalcliff, Woonona - Bulli - Russell Vale, Wollongong - East, Wollongong - West
6	Southern Highlands & Shoalhaven	
		Berry - Kangaroo Valley, Callala Bay - Currarong, Culburra Beach, Huskisson - Vincentia, North Nowra - Bomaderry, Nowra, St Georges Basin - Erowal Bay, Sussex Inlet - Berrara, Tomerong - Wandandian - Woollamia, Ulladulla, Ulladulla Surrounds, National Park Booderee
7	South Coast	
		Batemans Bay, Batemans Bay - South, Broulee - Tomakin, Eurobodalla Hinterland, Moruya - Tuross Head, Narooma - Bermagui, Bega - Tathra, Bega-Eden Hinterland, Eden, Merimbula - Tura Beach

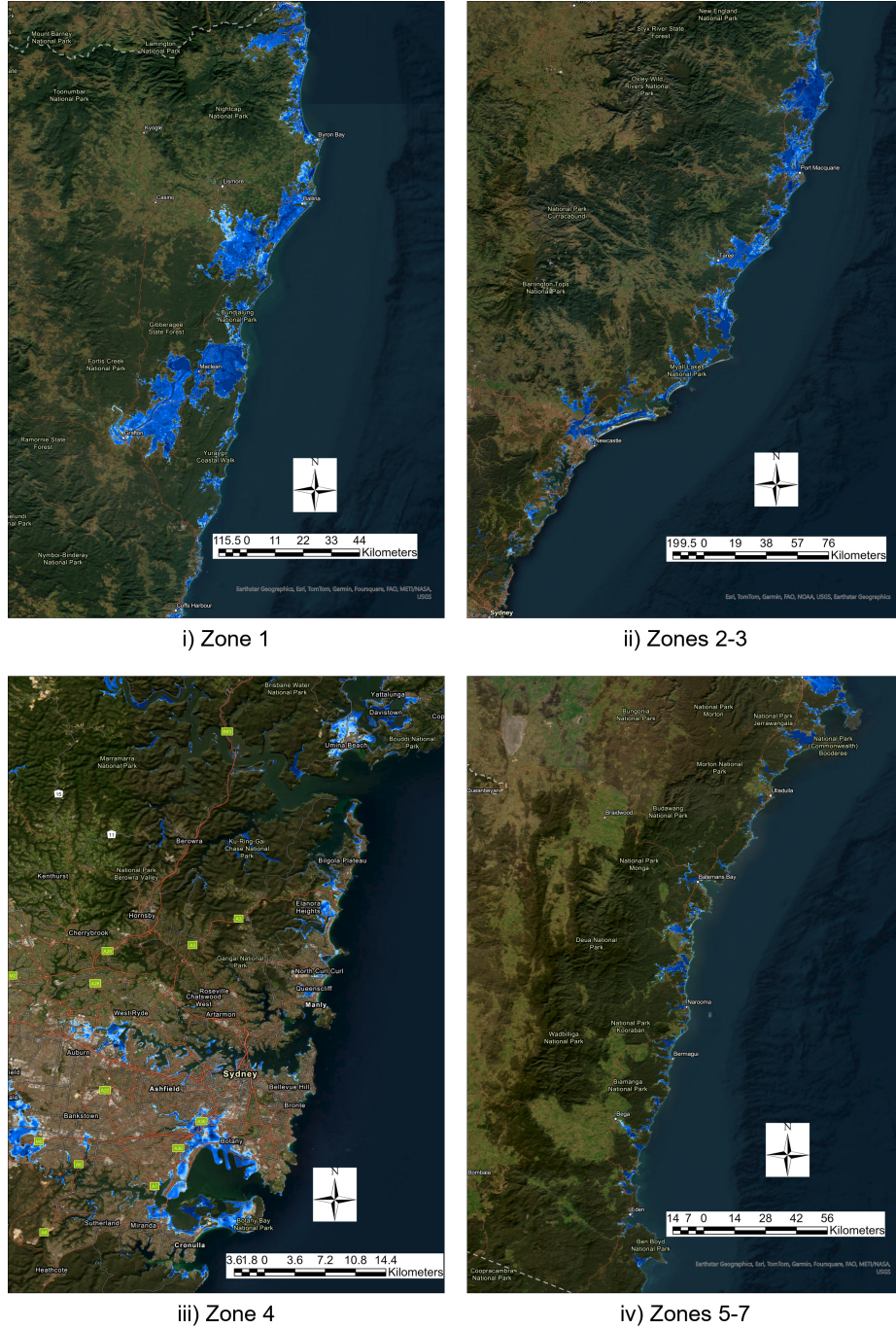
Source: GIS Modelling and [2].

Figure S5: New South Wales: SLR/S Inundated Areas by RCP4.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20].; Note: Zone1: North NSW, Zone2: North Coast, Zone3: Central Coast, Zone4: Sydney Areas, Zone5: Illawarra & Wollongong, Zone6: Southern Highlands & Shoalhaven, Zone7: South Coast.

Figure S6: New South Wales: SLR/S Inundated Areas by RCP8.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone1: North NSW, Zone2: North Coast, Zone3: Central Coast, Zone4: Sydney Areas, Zone5: Illawarra & Wollongong, Zone6: Southern Highlands & Shoalhaven, Zone7: South Coast.

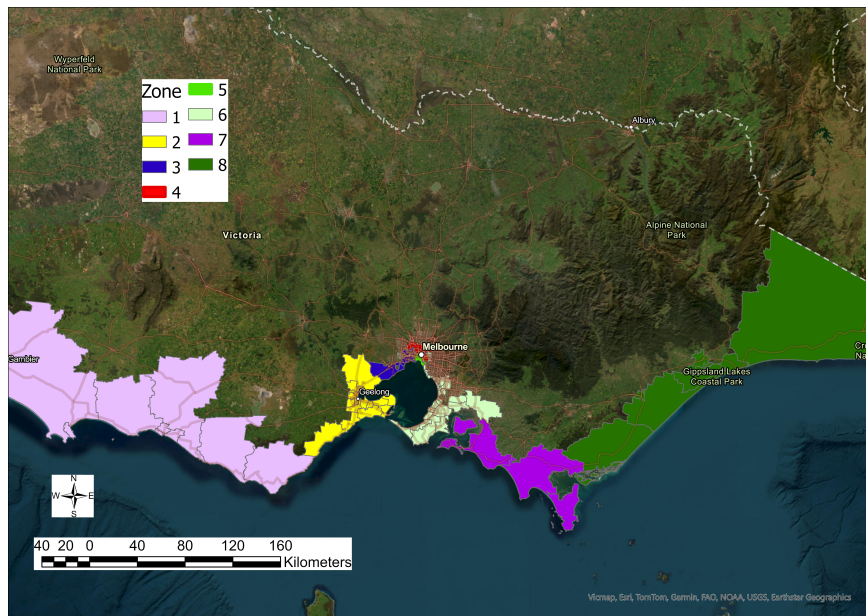
Table S6: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in New South Wales by RCP: **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (no)	Land Use (ha)	Sum (\$Mill)	Properties (\$Mill)	Land Use (\$Mill)
(i) RCP4.5						
1	North NSW	17,995	60,023.7	55,244.2	8,871.3	46,372.9
2	North Coast	10,553	68,120.2	27,555.4	3,492.1	24,063.3
3	Central Coast	17,984	17,500.7	33,182.6	9,122.5	24,060.1
4	Greater Sydney	17,631	2,962.5	20,052.6	13,131.5	6,921.1
5	Illawarra, Wollongong	2,685	3,143.6	3,704.1	1,254.8	2,449.4
6	Southern Highland, Shoalhaven	3,915	12,349.2	9,761.4	1,526.1	8,235.3
7	South Coast	448	3,623.0	1,240.6	126.8	1,113.9
Total		71,210	167,722.8	150,740.9	37,525.0	113,215.9
Average/year		962	2,266.5	2,037.0	507.1	1,529.9
(ii) RCP8.5						
1	North NSW	40,270	116,919.8	153,031.7	20,450.8	132,580.9
2	North Coast	21,983	119,461.7	64,698.0	7,459.6	57,238.4
3	Central Coast	46,325	40,187.8	95,102.5	23,976.5	71,126.0
4	Greater Sydney	63,535	7,736.0	75,574.8	50,045.1	25,529.7
5	Illawarra, Wollongong	9,080	8,070.5	14,879.0	4,463.2	10,415.8
6	Southern Highland, Shoalhaven	13,409	23,723.3	26,150.7	5,354.9	20,795.9
7	South Coast	949	6,972.5	2,972.2	303.1	2,669.1
Total		195,551	323,071.7	432,408.9	112,053.1	320,355.8
Average/year		2,643	4,365.8	5,843.4	1,514.2	4,329.1

Source: Authors. Note: The discount rate is 5%/year; the growth rate of NSW's GSP included.

4.3 Victoria

Figure S7: Victoria: SLR/S Zones



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2] and [8]. Note: Zone1: West Victoria, Zone2: Geelong, Zone3: West Melbourne, Zone4: Melbourne City, Zone5: Port Phillip, Zone6: East Melbourne, Zone7: South Gippsland, Zone8: East Victoria.

Table S7: Victoria: SLR/S Zones and Sub-Regions

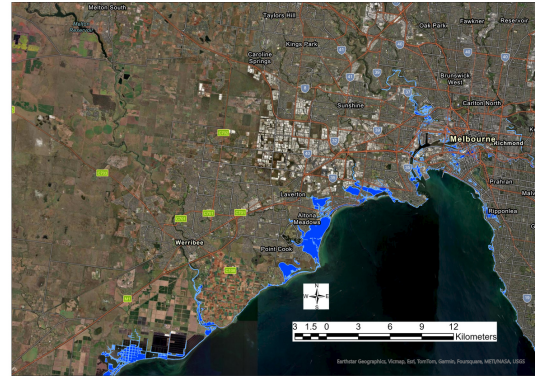
Zones & Sub-Regions	
1 Western Victoria	Glenelg, Portland, Corangamite - South, Otway, Warrnambool - North & South, Moyne East and West
2 Geelong	Belmont, Corio - Norlane, Geelong, Geelong West, Grovedale, Highton, Lara, Leopold, Newcomb - Moolap, Newtown, North Geelong, Clifton Springs, Lorne - Anglesea, Ocean Grove - Barwon Heads, Portarlington, Point Lonsdale - Queenscliff, Torquay
3 West Melbourne	Newport, Seabrook, Williamstown, Braybrook, Footscray, Maribyrnong, Seddon - Kingsville, West Footscray - Tottenham, Yarraville, Hoppers Crossing - North, Hoppers Crossing - South, Laverton, Tarneit Truganina, Werribee - South, Wyndham Vale, Point Cook - East, North and South, Werribee - East and West
4 Melbourne	Carlton, Docklands, East Melbourne, Flemington Racecourse, Kensington, Melbourne, North Melbourne, Parkville, South Yarra - West, Southbank, West Melbourne
5 Port Phillip	Albert Park, Elwood, Port Melbourne, Port Melbourne Industrial, South Melbourne, St Kilda, St Kilda East
6 East Melbourne	Beaumaris, Brighton, Brighton East, Cheltenham - Highett (West), Hampton, Sandringham - Black Rock, Aspendale Gardens, Braeside, Carrum - Patterson Lakes, Chelsea - Bonbeach, Chelsea Heights, Cheltenham - Highett (East), Edithvale - Aspendale, Mentone, Moorabbin - Heatherton, Moorabbin Airport, Mordialloc - Parkdale, Koo Wee Rup, Cranbourne South, Pearcedale - Tooradin, Carrum Downs, Frankston, Frankston North and South, Langwarrin, Seaford, Dromana, Flinders, Hastings - Somers, Mornington, Mount Eliza, Mount Martha, Point Nepean, Rosebud - McCrae, Somerville
7 South Gippsland	Foster, French Island, Phillip Island, Wilsons Promontory, Wonthaggi - Inverloch
8 East Victoria	Bairnsdale, Lake King, Lakes Entrance, Orbost, Paynesville, Longford - Loch Sport, Yarram

Source: GIS Modelling and [2].

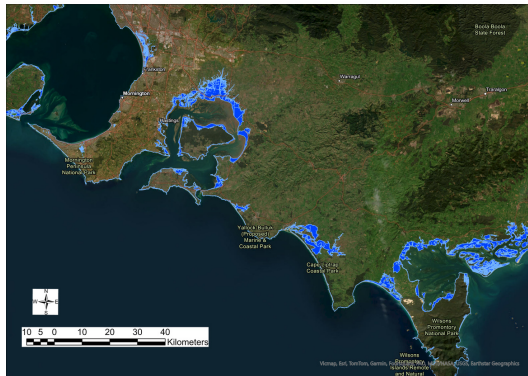
Figure S8: Victoria: SLR/S Inundated Areas by RCP4.5 in 2100



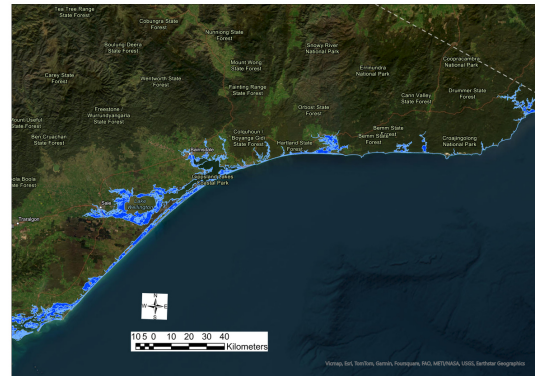
i) Zones 1-2



ii) Zones 3-5



iii) Zones 6-7



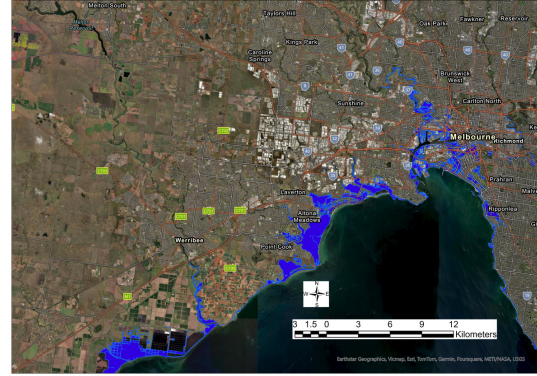
iv) Zone 8

Source: Authors, [18], [19], and [20]; Note: Zone1: West Victoria, Zone2: Greater Geelong, Zone3: West Melbourne, Zone4: Melbourne City, Zone5: Port Phillip, Zone6: East Melbourne, Zone7: South Gippsland, Zone8: East Victoria.

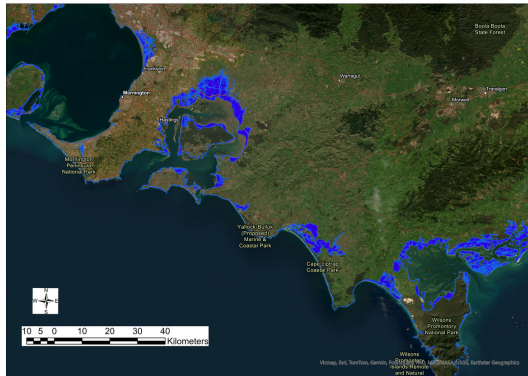
Figure S9: Victoria: SLR/S Innundated Areas by RCP8.5 in 2100



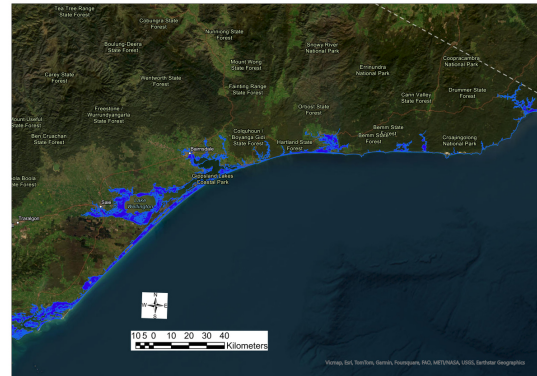
i) Zones 1-2



ii) Zones 3-5



iii) Zones 6-7



iv) Zone 8

Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], [20], and [8]; Note: Zone1: West Victoria, Zone2: Greater Geelong, Zone3: West Melbourne, Zone4: Melbourne City, Zone5: Port Phillip, Zone6: East Melbourne, Zone7: South Gippsland, Zone8: East Victoria.

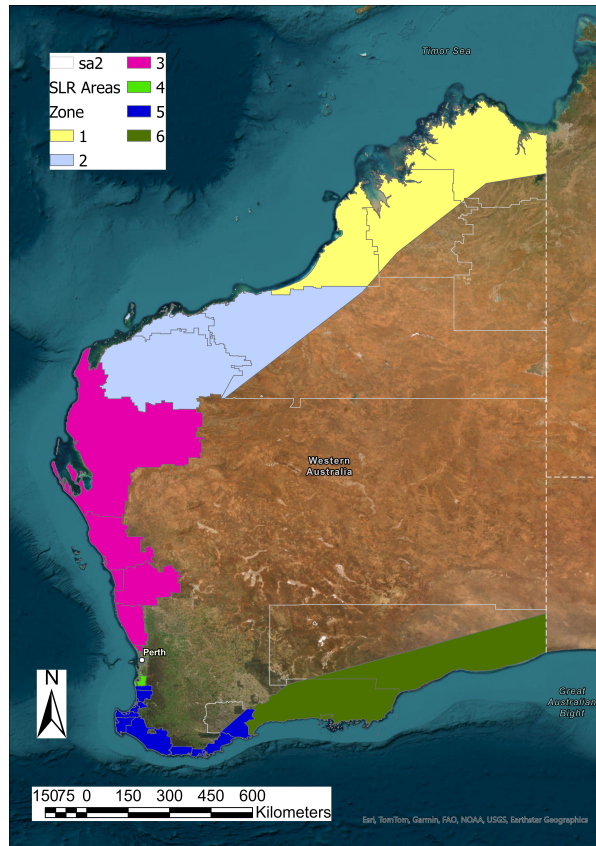
Table S8: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in Victoria by RCP, **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (no)	Land Use (ha)	Sum (\$Mill)	Properties (\$Mill)	Land Use (\$Mill)
(i) RCP4.5						
1	West Victoria	1,610	20,077.1	8,470.4	2,563.2	5,907.2
2	Geelong	3,879	15,703.4	19,450.7	5,330.3	14,120.5
3	West Melbourne	310	22,951.3	23,184.3	582.5	22,601.9
4	Melbourne	1,299	1,276.7	20,550.4	14,423.9	6,126.5
5	Port Phillip	268	357.7	2,978.0	1,310.6	1,667.4
6	East Melbourne	1,042	22,558.1	68,667.4	56,604.7	12,062.7
7	South Gippsland	2,227	39,527.4	5,541.9	1,368.6	4,173.4
8	East Victoria	6,729	63,323.8	18,272.0	3,386.6	14,885.4
Total		17,364	185,775.5	167,115.1	85,570.3	81,544.8
Average/year		235	2,510.5	2,258.3	1,156.4	1,102.0
(ii) RCP8.5						
1	West Victoria	4,333	29,010.1	14,428.9	5,274.7	9,154.1
2	Geelong	10,728	20,794.6	32,666.0	11,297.5	21,368.5
3	West Melbourne	1,760	27,565.1	40,533.2	1,792.0	38,741.2
4	Melbourne	2,909	3,596.2	73,831.0	64,353.7	9,477.4
5	Port Phillip	3,380	2,089.8	23,177.2	17,981.4	5,195.8
6	East Melbourne	8,308	29,190.6	107,258.2	87,052.2	20,206.0
7	South Gippsland	5,494	48,468.6	9,020.3	2,801.3	6,219.0
8	East Victoria	10,833	75,564.3	26,879.0	5,824.9	21,054.1
Total		47,745	236,279.2	327,793.7	196,377.7	131,416.0
Average/year		645	3,193.0	4,429.6	2,653.8	1,775.9

Source: Authors. Note: The discount rate is 5%/year; the growth rate of VIC's GSP included.

4.4 Western Australia

Figure S10: Western Australia: SLR/S Zones



Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2]. Note: Zone1: Kimberley, Zone2: Pilbara, Zone3: Middle West, Zone4: Greater Perth, Zone5: South West, Zone6: South East.

Table S9: Wester Australia: SLR/S Zones and Sub-Regions

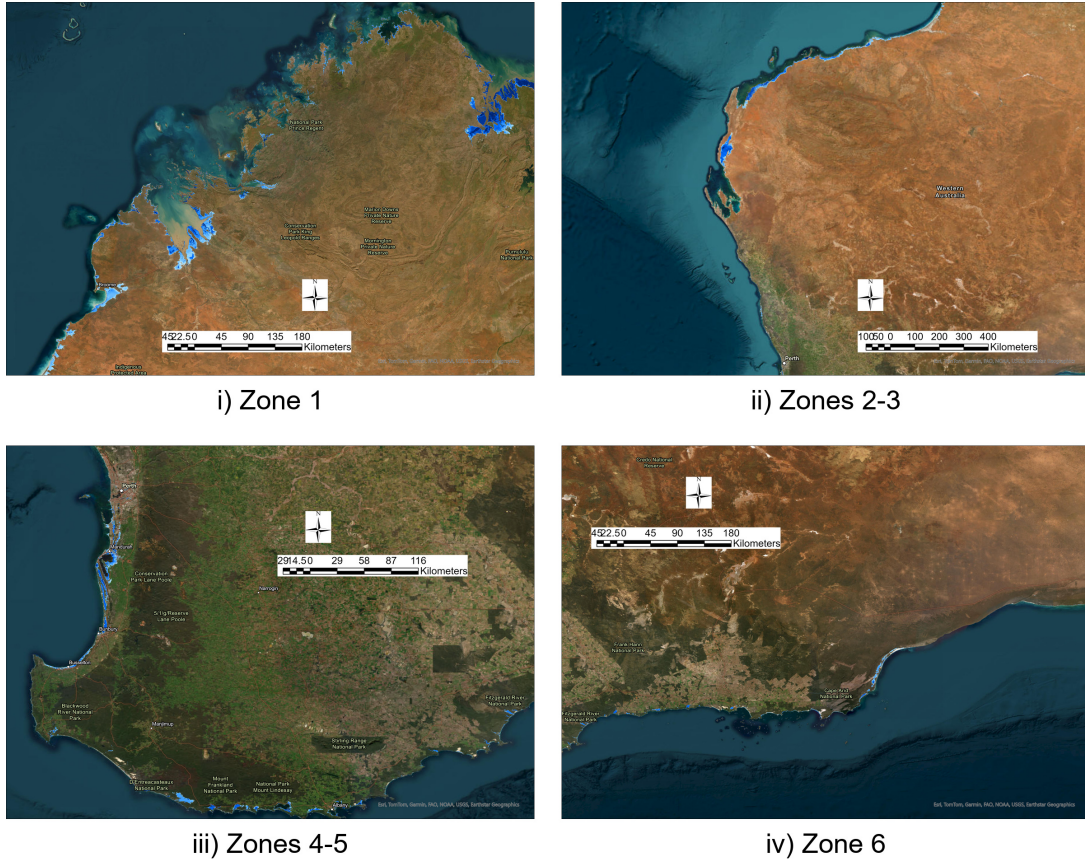
Zones & Sub-Regions	
1	Kimberley North
	Broome, Derby-West Kimberley, Kununurra, Roebuck
2	Pilbara
	(2.1) East Pilbara
	East Pilbara, Port Hedland, South Hedland
	(2.2) West Pilbara
	Ashburton(WA), Karratha, Roebourne
3	Middle West
	(3.1) Gascoyne
	Carnarvon, Exmouth
	(3.2) Mid West
	Geraldton-East, Geraldton-North, Geraldton-South, Irwin, Morawa, Northampton-Mullewa-Greenough
	(3.3) WheatBelt-North
	TwoRocks, Gingin-Dandaragan
4	Greater Perth

Table S9 – continued from previous page

(4.1) Wanneroo, Cottesloe-Claremont, Joondalup, Stirling(North)	Butler-Merriwa-Ridgewood, Carramar, Clarkson, Mindarie-Quinns Rocks Jindalee, Neerabup National Park, Alkimos-Eglinton, Carabooda-Pinjar, Two Rocks, Yanchep, City Beach, Claremont(WA), Cottesloe Mosman Park-PeppermintGrove, Swanbourne-MountClaremont, Heathridge-Connolly, Hillarys, Iluka-BurnsBeach, Mullaloo-Kallaroo, OceanReef, Sorrento-Marmion, Scarborough, Trigg-North, Beach-WatermansBay
(4.2) Canning, Gosnells, Kalamunda (East)	Canning Vale-West, Canning Vale Commercial, Welshpool, Beckenham-Kenwick, Langford, Thornlie, Forestfield-Watle Grove
(4.3) Cockburn, Fremantle, Kwinana, Melville (South West)	Coogee, Henderson, North Coogee, South Lake-Cockburn Central, Beeliar-Wattleup, Jandakot, East Fremantle, Fremantle, Fremantle-South, Calista, Hope Valley-Postans, Kwinana Industrial, Applecross-Ardross, Bicton-Palmyra, Melville
(4.4) Rockingham(South)	PortKennedy, Rockingham, Rockingham Lakes, Safety Bay-Shoalwater, Singleton GoldenBay-SecretHarbour, Waikiki, Warnbro, Baldivis-South,Karnup
(4.5) Mandurah	Dawesville-Bouvard, Falcon-Wannanup, Halls Head-Erskine, Mandurah, Mandurah-East, Mandurah-North, Mandurah-South, Pinjarra
5	South West
(5.1) Bunbury and Manjimup	Australind-Leschenault, Capel, Dardanup, Davenport, Eaton-Pelican Point, Harvey, East Bunbury-Glen Iris, Waroona, Dalyellup, Gelorup-Stratham, South Bunbury, Bunbury, Withers-Usher, Pemberton
(5.2) Augusta-MargaretRiver-Busselton	Augusta, Busselton Surrounds, Margaret River, Busselton-East, Busselton-West
(5.3) Albany	Albany, Albany Surrounds, Denmark, Gnowangerup, Little Grove-Elleker, McKail-Willyung
6	South East
(6.1) Esperance	Esperance, Esperance Surrounds
(6.2) Goldfields	Kambalda-Coolgardie-Norseman

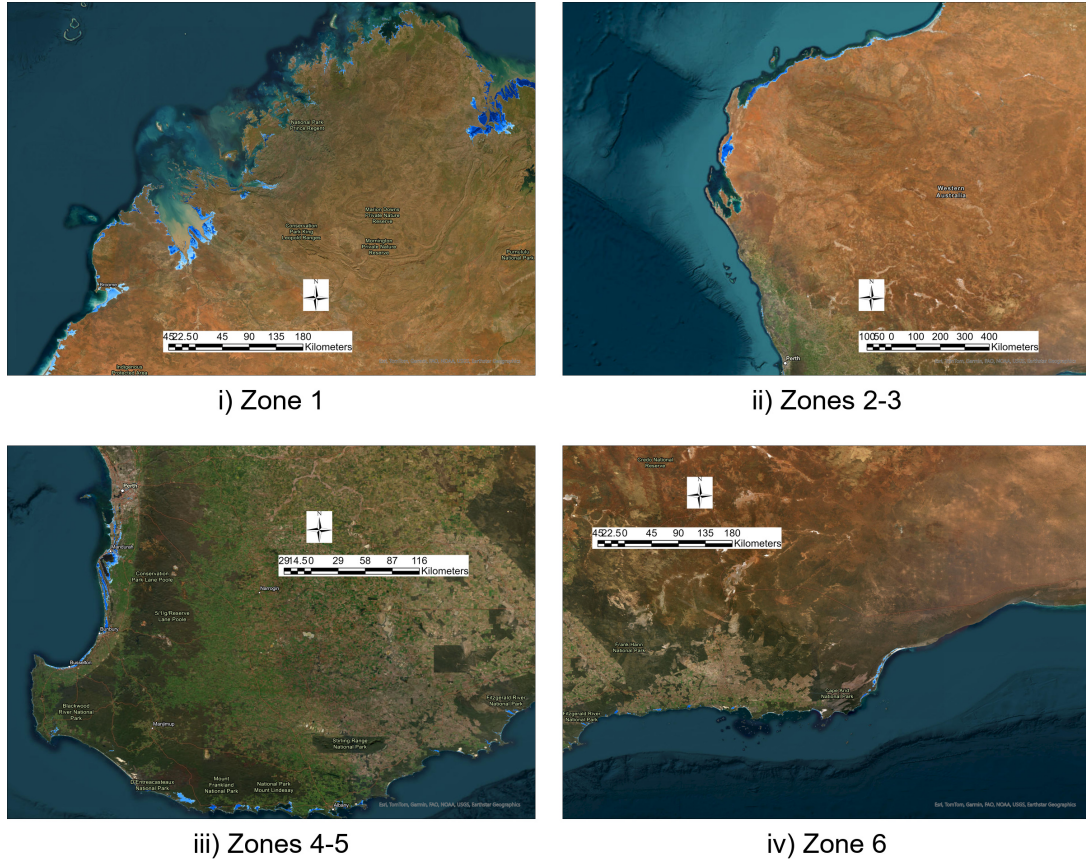
Source: *GIS Modelling and [2]*.

Figure S11: Western Australia: SLR/S Inundated Areas by RCP4.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone 1: Kimberley North, Zones 2-3: Pilbara & Middle West, Zones 4-5: Greater Perth & South West, Zone 6: South East.

Figure S12: Western Australia: SLR/S Inundated Areas by RCP8.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone 1: Kimberley North, Zones 2-3: Pilbara & Middle West, Zones 4-5: Greater Perth & South West, Zone 6: South East.

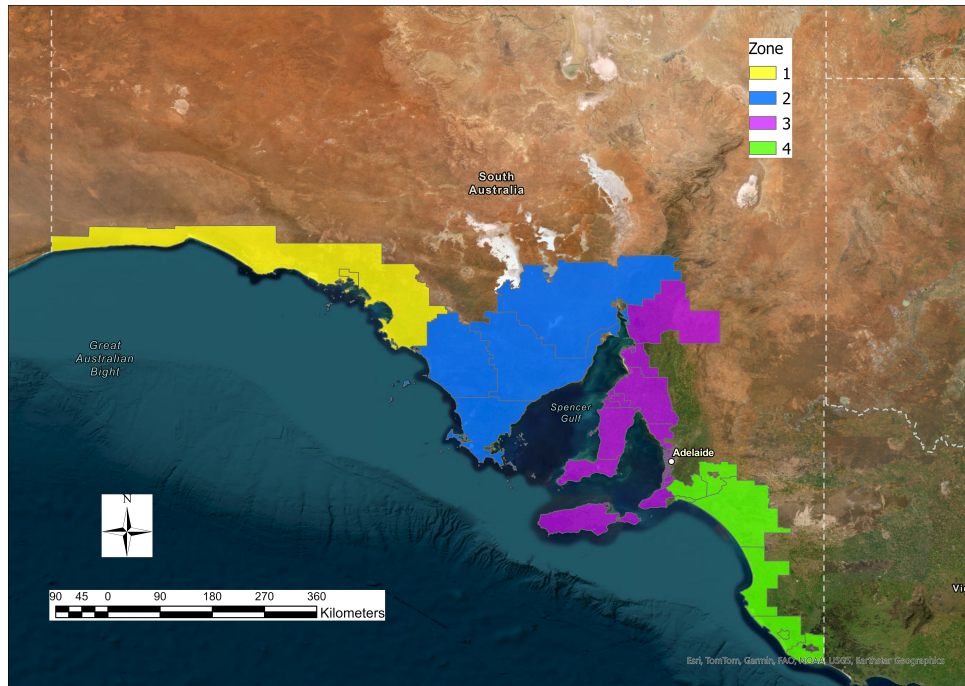
Table S10: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in Western Australia by RCP, **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (no)	Land Use (ha)	Sum (\$Mill)	Properties (\$Mill)	Land Use (\$Mill)
(i) RCP4.5						
1	Kimberley North	204	291,089.2	65,407.8	115.7	65,292.1
2	Pillbara	755	164,852.5	33,119.5	863.1	32,256.4
3	Middle West	2,683	84,982.2	55,034.4	1,180.7	53,853.7
4	Greater Perth	33,208	11,803.8	47,611.8	22,562.6	25,049.3
5	South West	14,090	33,548.7	28,936.7	10,115.4	18,821.3
6	South East	426	610.1	356.3	222.6	133.7
Total		51,366	586,886.6	230,466.5	35,060.1	195,406.4
Average/year		694	7,931	3,114	474	2,641
(ii) RCP8.5						
1	Kimberley North	799	488,969.3	115,676.5	451.2	115,225.3
2	Pillbara	2,645	293,207.5	61,414.0	2,465.8	58,948.2
3	Middle West	4,111	161,312.9	106,843.5	1,821.9	105,021.6
4	Greater Perth	50,981	21,338.5	76,035.0	35,119.4	40,915.7
5	South West	19,509	55,090.5	45,715.6	14,639.7	31,075.8
6	South East	624	1,154.1	644.0	341.4	302.6
Total		78,669	1,021,072.8	406,328.6	54,839.3	351,489.2
Average/year		1,063	13,798	5,491	741	4,750

Source: Authors. Note: The discount rate is 5%/year; the growth rate of WA's GSP included.

4.5 South Australia

Figure S13: South Australia: SLR/S Zones



*Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2].
Note: Zone1: South West, Zone2: Central, Zone3: North Central, Zone4: South East.*

Table S11: South Australia: SLR/S Zones and Sub-Regions

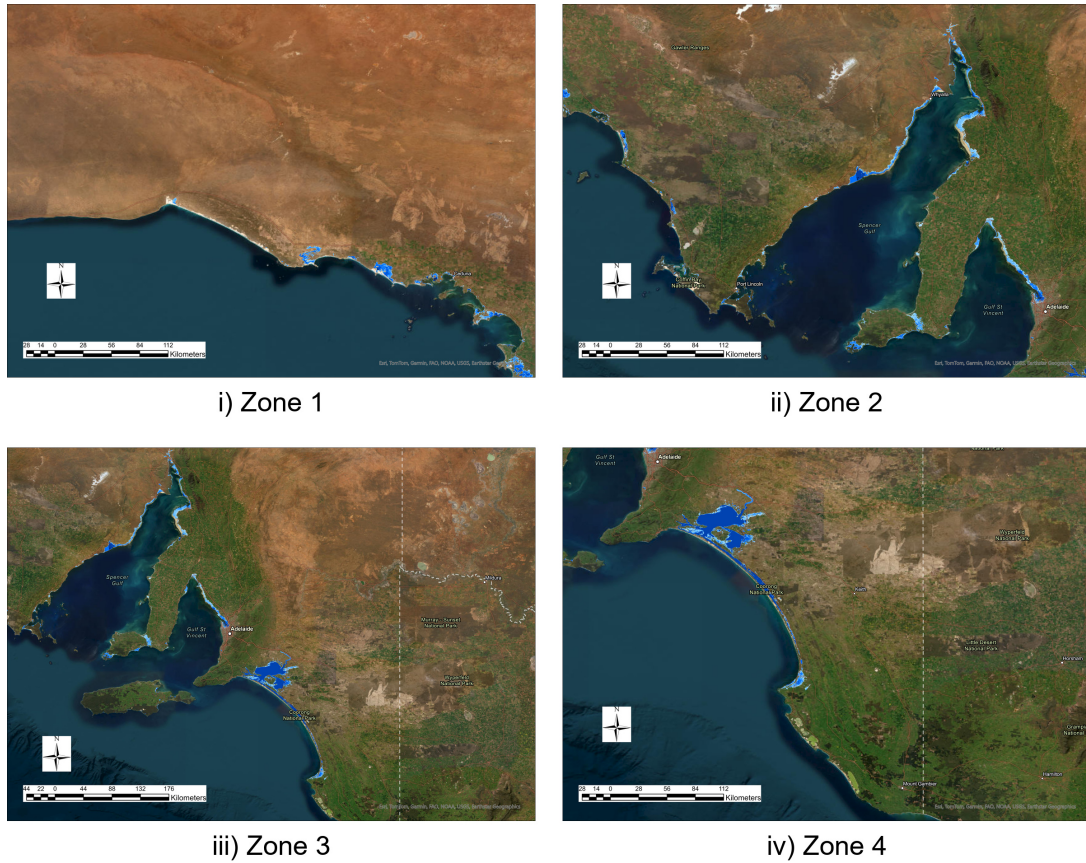
Zones & Sub-Regions	
1	South West
	Eyre Peninsula & South West, Ceduna, West Coast (SA), Port Lincoln
2	Central
(2.1)	Eyre Peninsula & South West
	Eyre Peninsula, Kimba - Cleve - Franklin Harbour, Le Hunte - Elliston, Port Lincoln
(2.2)	Outback - North and East
	Quorn - Lake Gilles, Port Augusta, Quorn - Lake Gilles, Whyalla
3	North Central
(3.1)	Barossa - Yorke - Mid North
	Mallala
(3.2)	Charles Sturt & Kangaroo Island
	Beverley, Flinders Park, Henley Beach, Hindmarsh - Brompton, Royal Park - Hendon - Albert Park, Seaton - Grange, West Lakes, Woodville - Cheltenham, Kangaroo Island, Yankalilla, Brighton (SA), Glenelg (SA), Wakefield - Barunga West
(3.3)	Marion & Mid North
	Edwardstown, Hallett Cove, Marino - Seaview Downs, Mitchell Park, Morphettville, Sheidow Park - Trott Park, Warradale, Peterborough - Mount Remarkable, Port Pirie, Port Pirie Surrounds
(3.4)	Onkaparinga

Table S11 – continued from previous page

	Aldinga, Christie Downs, Christies Beach, Coromandel Valley, Flagstaff Hill, Hackham - Onkaparinga Hills, Hackham West - Huntfield Heights, Happy Valley, Happy Valley Reservoir, Lonsdale, McLaren Vale, Morphett Vale - East, Morphett Vale - West, Reynella, Willunga, Woodcroft, Seaford - Seaford Meadows, Seaford Rise - Moana, Virginia - Waterloo Corner
(3.5) Port Adelaide & Salisbury	Enfield - Blair Athol, Dry Creek - South, Largs Bay - Semaphore, North Haven, Port Adelaide, The Parks, Torrens Island, Dry Creek - North, Parafield, Parafield Gardens, Paralowie, Salisbury, Mawson Lakes - Globe Derby Park, Pooraka - Cavan
(3.6) West Torrens	Adelaide Airport, Fulham, Lockleys, Plympton, Richmond (SA), West Beach
4 South East	
(4.1) Limestone Coast	Grant, Kingston- Robe, Millicent, Wattle Range
(4.2) Murray and Mallee, Kangaroo Island	Murray Bridge Surrounds, the Coorong, Goolwa - Port Elliot, Strathalbyn Surrounds, Victor Harbor

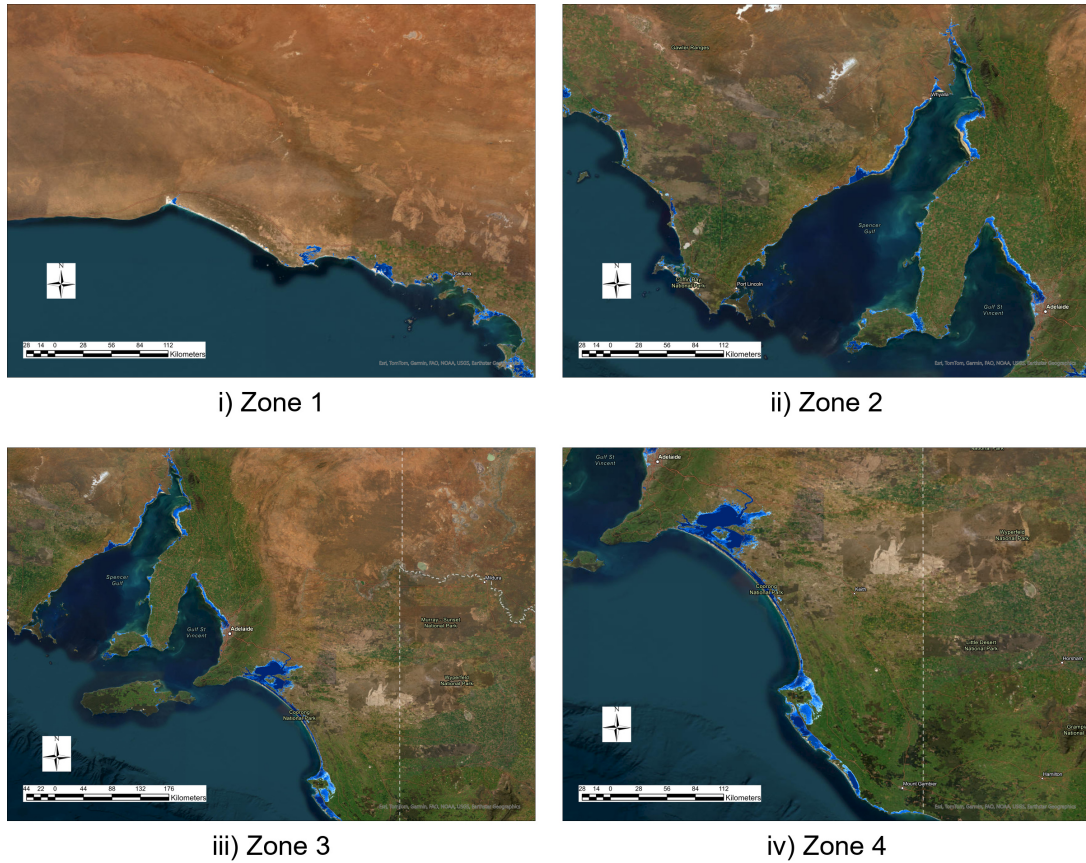
Source: GIS Modelling and [2].

Figure S14: South Australia: SLR/S Inundated Areas by RCP4.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone 1: South West, Zone 2: Central, Zone 3: North Central, Zone4: South East.

Figure S15: South Australia: SLR/S Inundated Areas by RCP8.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone 1: South West, Zone 2: Central, Zone 3: North Central, Zone4: South East.

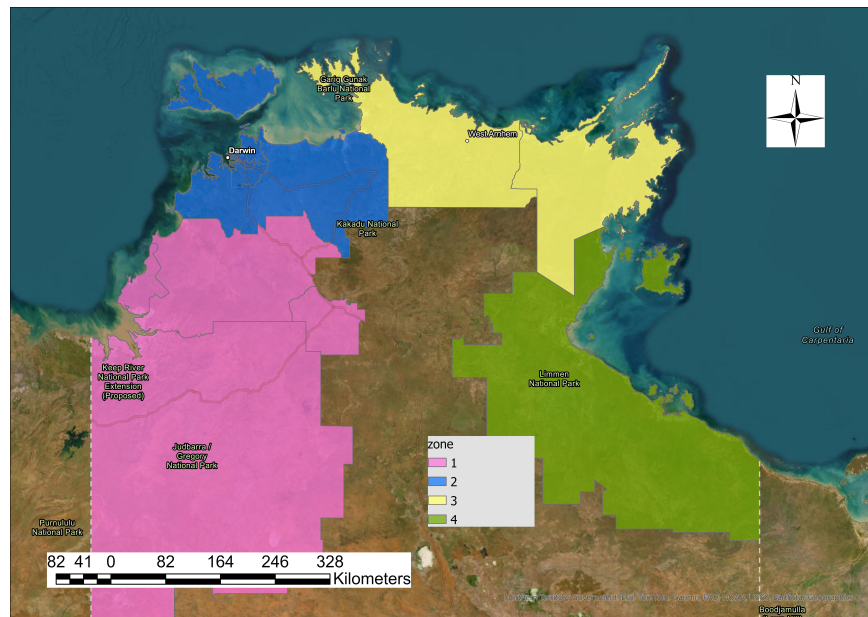
Table S12: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in South Australia by RCP, **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (<i>no</i>)	Land Use (<i>ha</i>)	Sum (<i>\$Mill</i>)	Properties (<i>\$Mill</i>)	Land Use (<i>\$Mill</i>)
(i) RCP4.5						
1	South West	309	15,941.2	6,037.5	192.6	5,844.9
2	Central	4,926	10,638.6	4,055.0	2,918.2	1,136.8
3	North Central	18,454	12,458.8	23,504.9	8,586.7	14,918.2
4	South East	8,103	25,721.4	15,607.8	2,697.9	12,910.0
Total		31,791	64,760.0	49,205.2	14,395.4	34,809.9
Average/year		430	875.1	664.9	194.5	470.4
(ii) RCP8.5						
1	South West	1,288	28,568.7	12,592.3	2,829.3	9,763.0
2	Central	16,413	24,841.4	11,291.1	8,501.0	2,790.1
3	North Central	68,280	37,432.4	76,177.1	32,887.6	43,289.6
4	South East	15,694	69,557.9	38,687.5	5,815.9	32,871.6
Total		101,676	160,400.4	138,748.1	50,033.8	88,714.3
Average/year		1,374	2,167.6	1,875.0	676.1	1,198.8

Source: Authors. Note: The discount rate is 5%/year; the growth rate of SA's GSP included.

4.6 Northern Territory

Figure S16: Northern Territory: SLR/S Zones



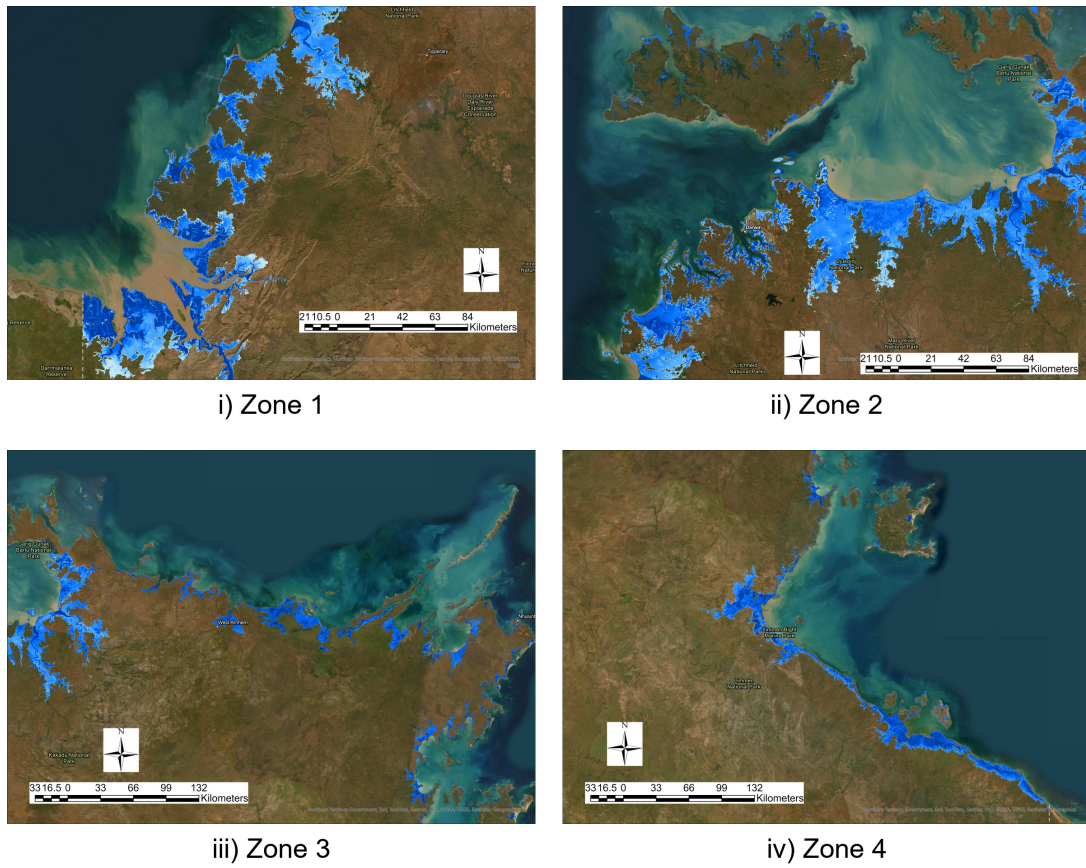
Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2]. Note: Zone1: Southwest, Zone2: Northwest, Zone3: Northeast, Zone4: Southeast.

Table S13: Northern Territory: SLR/S Zones and Sub-Regions

Zones & Sub-Regions	
1	South West Daly, Thamarrurr, Katherine, Victoria River
2	Northwest (2.1) Darwin City Darwin Airport, Darwin City, East Point, Fannie Bay - The Gardens, Larrakeyah, Ludmilla - The Narrows, Parap, Stuart Park, Woolner - Bayview - Winnellie (2.2) Darwin Suburbs Alawa, Anula, Berrimah, Brinkin - Nakara, Buffalo Creek, Charles Darwin, Coconut Grove, East Arm, Jingili, Karama, Leanyer, Lyons (NT), Malak - Marrara, Millner, Moil, Nightcliff, Rapid Creek, Tiwi, Wagaman, Wanguri, Wulagi (2.3) Litchfield & Palmerston Howard Springs, Humpty Doo, Koolpinyah, Virginia, Weddell, Bakewell, Driver, Durack - Marlow Lagoon, Gray, Moulden, Palmerston - North, Palmerston - South, Rosebery - Bellamack, Woodroffe, Tiwi Islands, Alligator
3	Northeast West Arnhem, East Arnhem, Nhulunbuy
4	Southeast Anindilyakwa, Gulf

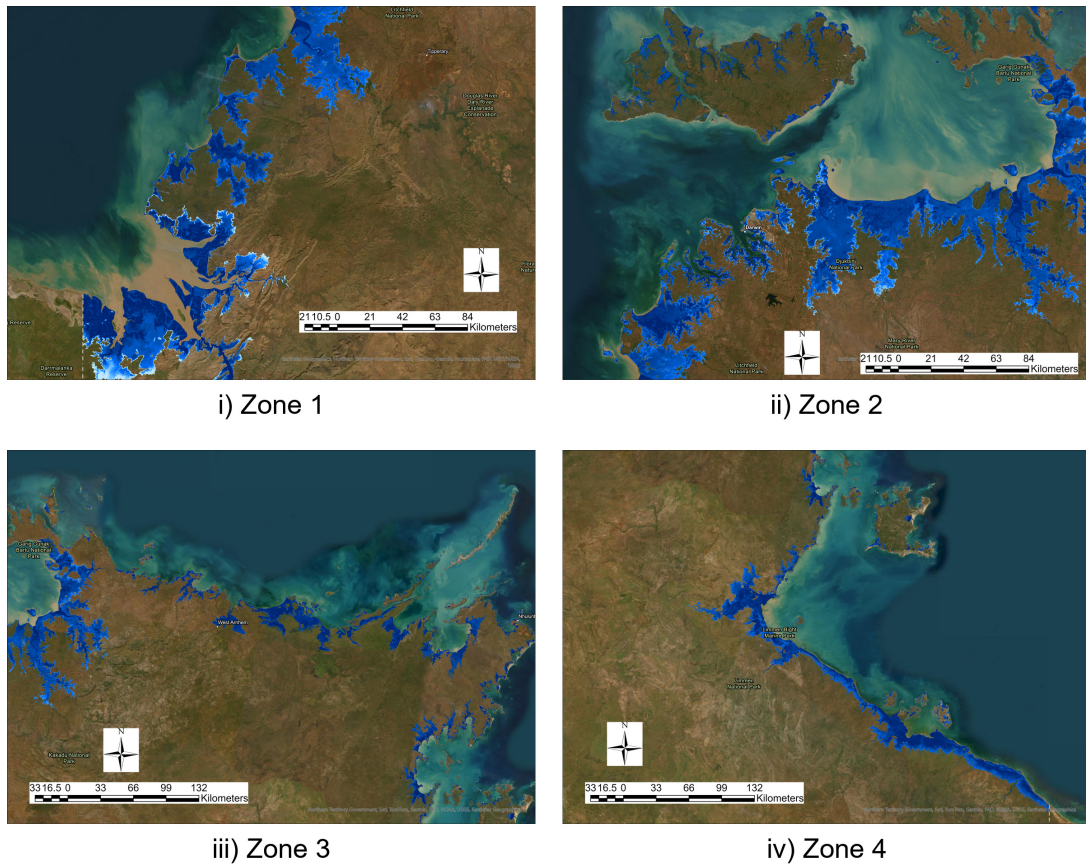
Source: GIS Modelling and [2].

Figure S17: Northern Territory: SLR/S Innundated Areas by RCP4.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone1: Southwest, Zone2: Northwest, Zone3: Northeast, Zone4: Southeast.

Figure S18: Northern Territory: SLR/S Innundated Areas by RCP8.5 in 2100



Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Zone1: Southwest, Zone2: Northwest, Zone3: Northeast, Zone4: Southeast.

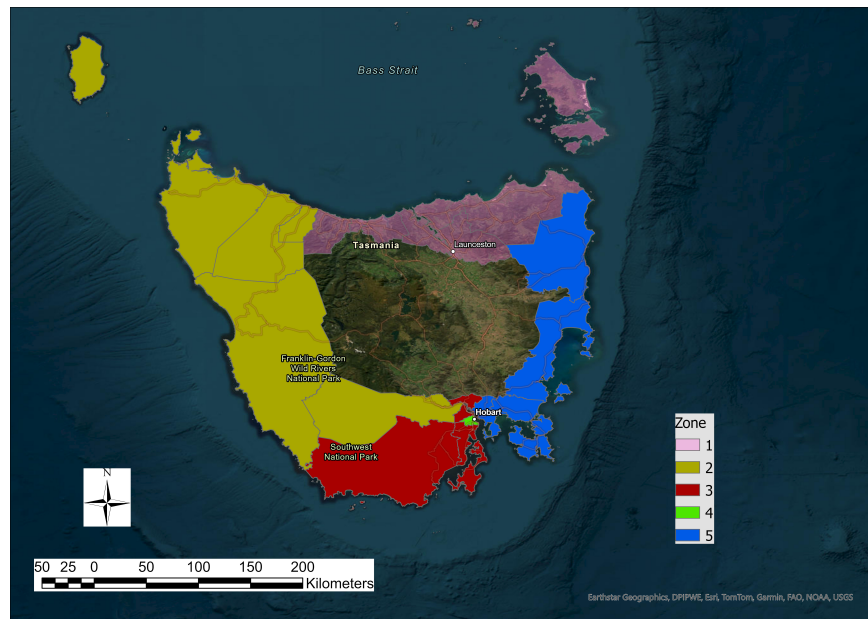
Table S14: Summary of the SLR/S Effects on Land Uses to 2100 in Northern Territory by RCP, **Base Case**

Zone	Total	Land Use Categories								
		LU1-2	LU3	LU4-5	LU6	LU7	LU8	LU9	LU10	LU11
(I) AREA OF AFFECTED LANDS (<i>hectare</i>)										
(i) RCP4.5										
(i) RCP4.5										
1. Southwest	104,088.1	15.9	0.3	57,534.3	139.2	9,057.3	41.1	-	125.7	37,174.1
2. Northwest	91,276.4	831.0	45.2	25,189.8	1,565.8	902.7	34,013.0	1,816.3	5,318.4	21,594.2
3. Northeast	70,939.4	167.3	105.2	4.3	34.8	0.1	1,272.0	529.1	-	68,826.5
4. Southeast	148,503.1	8.2	2.6	74,362.1	522.5	-	8,571.2	2.7	2,464.7	62,569.0
Sum	414,806.9	1,022.4	153.4	157,090.6	2,262.4	9,960.1	43,897.4	2,348.1	7,908.9	190,163.8
(ii) RCP8.5										
1. Southwest	147,501.9	27.7	0.5	77,303.3	226.6	12,745.1	137.7	-	167.2	56,893.8
2. Northwest	158,235.7	1,697.2	70.6	42,037.6	2,135.9	1,298.8	66,184.2	2,644.6	5,952.6	36,214.1
3. Northeast	134,897.7	488.5	243.8	11.0	103.4	0.1	3,152.6	683.6	-	130,214.6
4. Southeast	269,791.1	25.1	17.0	119,569.1	822.1	-	23,432.8	14.7	2,886.2	123,024.1
Sum	710,426.3	2,238.5	331.9	238,921.0	3,288.0	14,044.0	92,907.3	3,342.9	9,006.0	346,346.6
(II) PRESENT VALUE OF DAMAGES FROM SLR/S (<i>\$Million</i>)										
(i) RCP4.5										
1. Southwest	14,127.0	8.2	0.2	7,352.5	30.2	3,527.1	2.8	-	5.7	3,200.2
2. Northwest	10,248.4	897.5	107.1	2,016.2	519.8	490.5	4,725.2	204.5	145.5	1,142.1
3. Northeast	1,801.3	50.1	44.8	0.2	3.6	0.0	41.3	16.6	-	1,644.7
4. Southeast	9,030.6	3.6	2.2	4,574.5	56.6	-	796.8	0.2	53.3	3,543.3
Sum	35,207.3	959.5	154.2	13,943.4	610.2	4,017.6	5,566.2	221.3	204.4	60,884.2
(ii) RCP8.5										
1. Southwest	18,363.8	15.4	0.2	9,895.8	47.6	5,042.6	9.3	-	7.7	3,345.1
2. Northwest	17,674.2	1,563.1	236.8	3,398.0	642.8	655.3	8,990.0	300.1	179.2	1,709.1
3. Northeast	3,455.3	246.6	104.4	0.5	7.4	0.0	82.7	21.6	-	2,992.0
4. Southeast	16,666.9	13.5	14.3	7,343.8	89.1	-	2,177.2	0.8	62.2	6,966.0
Sum	56,160.3		355.7		786.9	5,697.9	11,259.2	322.5	249.1	15,012.3

Source: Authors. Note: LU1: residents; LU2: services; LU3: industrial & manufacturing; LU4: aquaculture; LU5: agriculture; LU6: facilities; LU7: public facilities; LU8: parks, public areas; LU9: nature areas; LU10: nodefined and others; LU11: Traditional indigenous uses.

4.7 Tasmania

Figure S19: Tasmania: SLR/S Zones



Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2]. Note: Zone1: Launceston & North East, Zone2: West & North West, Zone3: South, Zone4: Hobart, Zone5: East.

Table S15: Tasmania: SLR/S Zones and Sub-Regions

Zones & Sub-Regions	
1	Launceston and North East
(1.1)	Central Coast Penguin - Sulphur Creek, Ulverstone, West Ulverstone
(1.2)	Devonport Devonport, Miandetta - Don
(1.3)	Flinders Flinders and Cape Barren Islands
(1.4)	Latrobe East Devonport, Quoiba - Spreyton
(1.5)	Launceston Invermay, Kings Meadows - Punchbowl, Launceston, Mowbray, Newnham - Mayfield, Newstead, Norwood (Tas.), Ravenswood, South Launceston, Waverley - St Leonards
(1.6)	West Tamar Legana, Prospect Vale - Blackstone, Riverside, Trevallyn, West Launceston, Beauty Point - Beaconsfield, Deloraine, Grindelwald - Lanena, Hadspen - Carrick, Westbury, George Town, Port Sorell
2	West and North West
(2.1)	Burnie Acton - Upper Burnie, Burnie - Wivenhoe, Romaine - Havenview
(2.2)	Circular Head Smithton
(2.3)	King Island King Island

Table S15 – continued from previous page

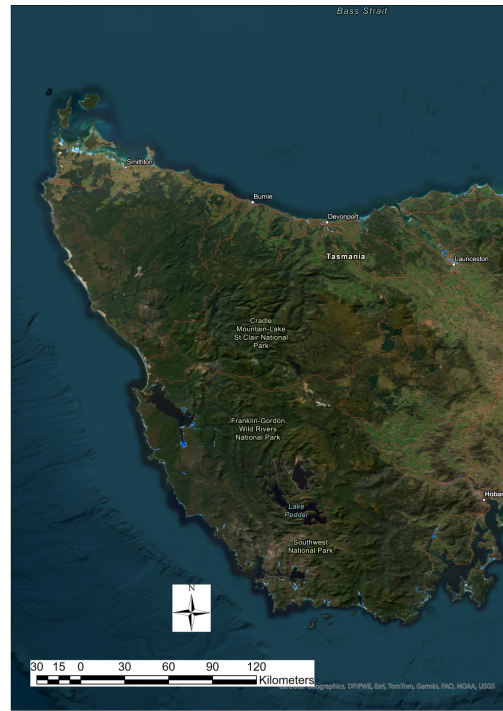
(2.4) Waratah-Wynyard		Burnie - Ulverstone Surrounds, Parklands - Camdale, Somerset, Wynyard
(2.5) West Coast		Central Highlands, Wilderness - East, Sheffield - Railton, North West, Waratah, West Coast (Tas.), Wilderness - West
3	South	
(3.1) Glenorchy		Austins Ferry - Granton, Berriedale - Chigwell, Claremont (Tas.), Montrose - Rosetta, New Norfolk
(3.2) Huon Valley		Geeveston - Dover
(3.3) Kingborough		Kingston - Huntingfield, Kingston Beach - Blackmans Bay, Margate - Snug, Mount Wellington, Taroona - Bonnet Hill, Mount Nelson - Dynnyrne, Sandy Bay, South Hobart - Fern Tree, Bruny Island - Kettering, Cygnet, Huonville - Franklin
4	Hobart	
(4.1) Hobart		Derwent Park - Lutana, Glenorchy, Moonah, West Moonah, Hobart, Lenah Valley - Mount Stuart, New Town, West Hobart
5	East	
(5.1) Break O'Day		Dilston - Lilydale, Northern Midlands, St Helens - Scamander, Scottsdale - Bridport, Triabunna - Bicheno
(5.2) Clarence		Old Beach - Otago, Bellerive - Rosny, Geilston Bay - Risdon, Howrah - Tranmere, Lindisfarne - Rose Bay, Mornington - Warrane, Risdon Vale, Rokeby, South Arm
(5.3) Sorell		Cambridge, Dodges Ferry - Lewisham
(5.4) Tasman		Dodges Ferry - Lewisham, Forestier - Tasman

Source: *GIS Modelling and [2]*.

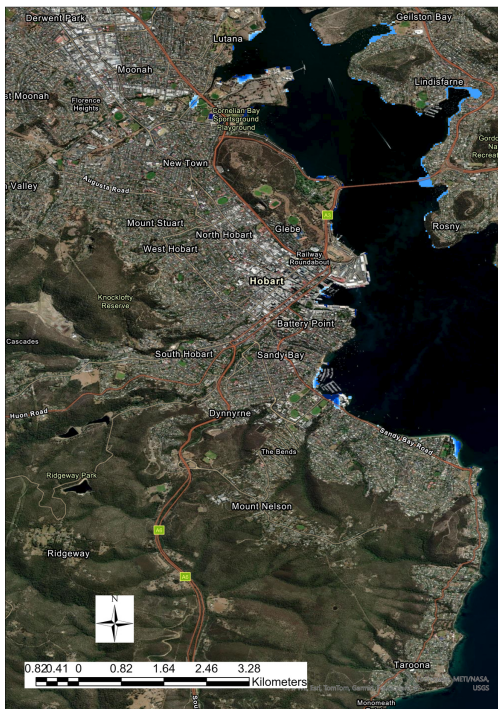
Figure S20: Tasmania: SLR/S Innundated Areas by RCP4.5 in 2100



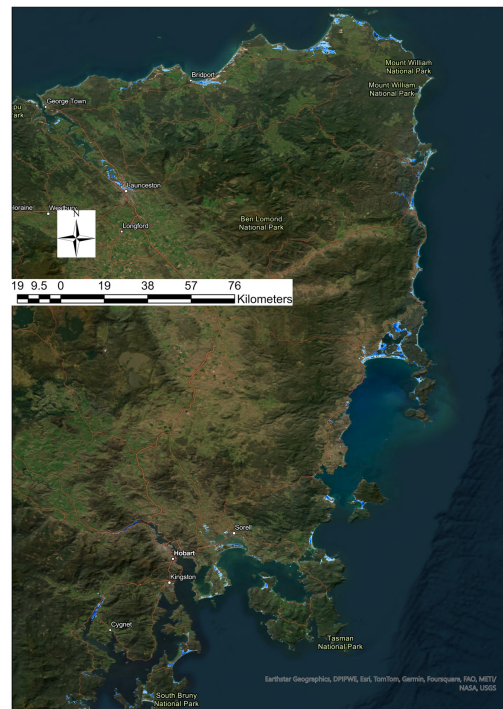
i) Area 1



ii) Area 2



iii) Area 3



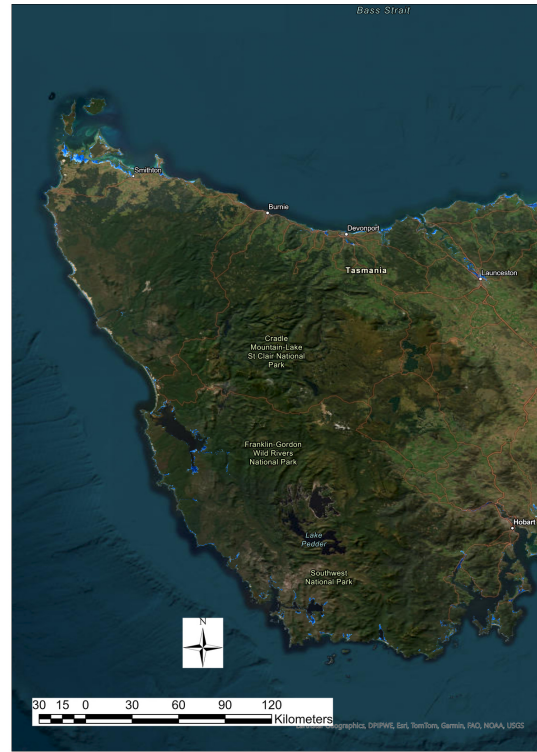
iv) Area 4

Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Area 1: Southwest, Area 2: Northwest, Area 3: Northeast, Area 4: Southeast.

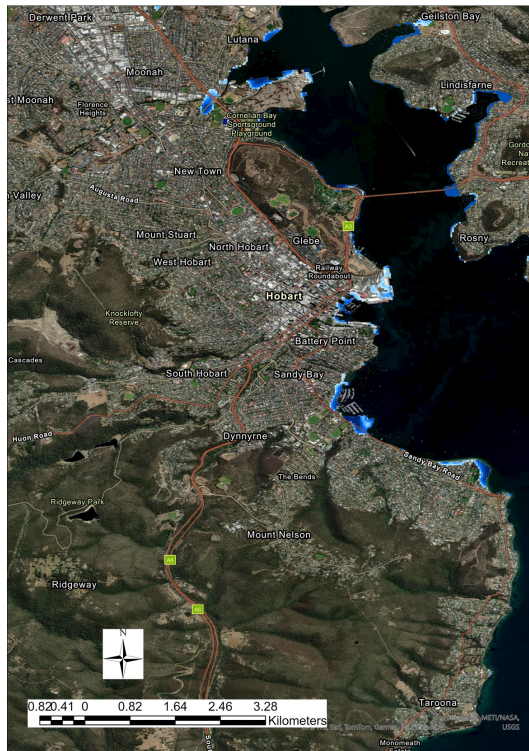
Figure S21: Tasmania: SLR/S Innundated Areas by RCP8.5 in 2100



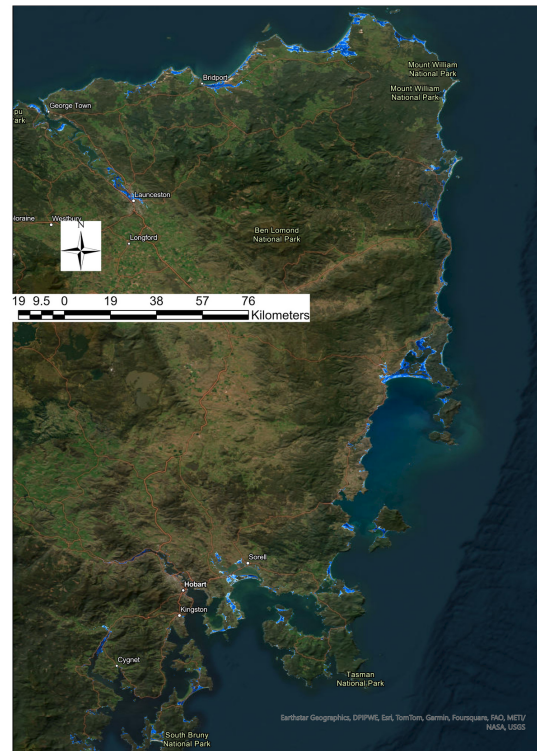
i) Area 1



ii) Area 2



iii) Area 3



iv) Area 4

Source: Authors' model output; map generated using ArcGIS Pro 3.7 [18] with supporting data from [2], [19], and [20]; Note: Area 1: Southwest, Area 2: Northwest, Area 3: Northeast, Area 4: Southeast.

Table S16: Summary of the SLR/S Effects on Properties and Land Uses to 2100 in Tasmania by RCP, **Base Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (<i>no</i>)	Land Use (<i>ha</i>)	Sum (<i>\$Mill</i>)	Properties (<i>\$Mill</i>)	Land Use (<i>\$Mill</i>)
(i) RCP4.5						
1	Launceston & North East	1,224	21,321.0	3,259.1	439.3	2,819.8
2	West & North West	161	7,386.5	965.7	55.6	910.1
3	South	511	3,874.2	1,114.5	209.6	904.9
4	Hobart	21	8.0	13.5	6.0	7.5
5	East	781	6,886.4	2,522.3	373.7	2,148.6
Total		2,698	39,476.1	7,875.2	1,084.2	6,790.9
Average/year		36	526.3	105.0	14.5	90.5
(i) RCP8.5						
1	Launceston & North East	4,856	41,942.0	10,162.0	1,838.8	8,323.2
2	West & North West	840	19,124.1	3,271.8	279.8	2,992.0
3	South	1,522	7,827.8	3,058.1	610.4	2,447.7
4	Hobart	128	31.2	67.9	36.8	31.1
5	East	2,396	13,896.4	6,912.9	976.1	5,936.8
Total		9,742	82,821.4	23,472.7	3,741.8	19,730.9
Average/year		130	1,104.3	313.0	49.9	263.1

Source: Authors. Note: The present value is estimated using a 5% discounted rate per year.

Appendix: Sensitivity Analysis

A5 Sensitivity Analysis of Low and High Cases of the SLR/S Effects

Table A1: The SLR/S Effects on Properties and Land Uses in Australia by RCPs, 2100, **Low Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (<i>no</i>)	Land Use (<i>ha</i>)	Sum (<i>\$Mill</i>)	Properties (<i>\$Mill</i>)	Land Use (<i>\$Mill</i>)
(i) RCP4.5						
1	Queensland	81,150	502,298.5	193,715.3	89,933.8	103,781.5
2	New South Wales	64,370	146,315.4	132,737.9	33,565.4	99,172.5
3	Victoria	15,271	147,182.0	146,802.3	75,823.6	70,978.7
4	Western Australia	46,283	558,257.1	219,778.8	32,075.4	187,703.5
5	South Australia	27,978	62,391.5	43,722.6	9,987.3	33,735.3
6	Northern Territory	-	393,232.5	32,548.0	-	32,548.0
7	Tasmania	2,547	37,341.1	7,530.5	1,013.9	6,516.6
Total		237,600	1,847,018.0	776,835.5	242,399.4	534,436.1
(ii) RCP8.5						
1	Queensland	245,841	1,070,913.6	469,817.8	248,116.3	221,701.5
2	New South Wales	176,991	279,640.6	385,816.4	102,833.6	282,982.8
3	Victoria	43,052	213,888.3	269,280.0	160,817.1	108,462.9
4	Western Australia	68,321	908,479.5	354,009.3	48,755.3	305,254.0
5	South Australia	92,344	148,207.5	120,788.6	37,192.7	83,595.9
6	Northern Territory	-	681,393.3	54,958.2	-	54,958.2
7	Tasmania	8,507	79,673.2	22,186.9	3,398.0	18,789.0
Total		635,055	3,382,196.0	1,676,857.3	601,113.0	1,075,744.3

Source: Authors. Note: The discount rate is 5%/year; the projected growth rate of AUS's GSP is included.

Table A2: Average Losses **Per Year** in Australia from the SLR/S Cost to 2100: **Low Case**

		Property		Land		Total	Compared
		Properties	Assets costs	Land Loss	Land costs	Capital Costs	to GSP
		(No)	(\$Mill)	(No)	(\$Mill)	(\$Mill)	%
RCP4.5							
1	Queensland	1,097	1,215.3	6,787.8	1,402.5	2,617.8	1.32
2	New South Wales	870	453.6	1,977.2	1,340.2	1,793.8	0.57
3	Victoria	206	1,024.6	1,988.9	959.2	1,983.8	0.87
4	Western Australia	625	433.5	7,544.0	2,536.5	2,970.0	1.66
5	South Australia	378	135.0	843.1	455.9	590.8	1.03
6	Northern Territory	-	-	5,314.0	439.8	439.8	3.42
7	Tasmania	34	13.7	504.6	88.1	101.8	0.62
Australia		3,211	3,275.7	24,959.7	7,222.1	10,497.8	1.05
RCP8.5							
1	Queensland	3,322	3,352.9	14,471.8	2,996.0	6,348.9	3.21
2	New South Wales	2,392	1,389.6	3,778.9	3,824.1	5,213.7	1.67
3	Victoria	582	2,173.2	2,890.4	1,465.7	3,638.9	1.59
4	Western Australia	923	658.9	12,276.8	4,125.1	4,783.9	2.68
5	South Australia	1,248	502.6	2,002.8	1,129.7	1,632.3	2.85
6	Northern Territory	-	-	9,208.0	742.7	742.7	5.78
7	Tasmania	115	46	1,076.7	253.9	299.8	1.82
Australia		8,581.8	8,123.1	45,705.4	14,537.1	22,660.2	2.26

Source: Authors. Note: The column 'Compared to GSP' measures the share of total damages as a fraction of state and territory GSP per year; and overall as total damages as a fraction of Australian GDP per year.

Table A3: The SLR/S Effects on Properties and Land Uses in Australia by RCP, 2100: **High Case**

Zone		Quantity		Present Value of SLR Costs (\$ Mill)		
		Properties (<i>no</i>)	Land Use (<i>ha</i>)	Sum (<i>\$Mill</i>)	Properties (<i>\$Mill</i>)	Land Use (<i>\$Mill</i>)
(i) RCP4.5						
1	Queensland	115,730	679,797.7	259,286.7	125,403.1	133,883.5
2	New South Wales	81,635	191,816.2	174,281.7	42,182.6	132,099.1
3	Victoria	19,225	184,158.4	232,691.1	120,189.7	112,501.4
4	Western Australia	54,909	665,203.6	258,015.9	38,922.9	219,093.0
5	South Australia	35,846	79,022.3	57,249.7	15,485.5	41,764.2
6	Northern Territory	-	475,255.0	40,585.8	-	40,585.8
7	Tasmania	3,082	41,352.3	8,382.9	1,255.0	7,128.0
Total		310,426	2,316,605.4	1,030,493.9	343,438.9	687,055.0
(ii) RCP8.5						
1	Queensland	344,103	1,412,341.0	629,866.7	345,611.7	284,255.0
2	New South Wales	230,298	371,151.8	502,007.6	130,742.3	371,265.3
3	Victoria	55,022	260,149.5	403,353.1	241,023.5	162,329.7
4	Western Australia	83,626	1,215,696.4	466,627.4	60,366.5	406,260.8
5	South Australia	114,256	177,157.9	154,815.8	55,591.2	99,224.6
6	Northern Territory	-	750,278.5	58,322.4	-	58,322.4
7	Tasmania	10,708	94,147.0	26,622.2	4,242.6	22,379.6
Total		838,013	4,280,922.1	2,241,615.1	837,577.9	1,404,037.3

Source: Authors. Note: The discount rate is 5%/year; the projected growth rate of AUS's GSP is included.

Table A4: Average Losses **Per Year** from the SLR/S Cost to 2100: **High Case**

		Property		Land		Total	Compared
		Properties	Assets costs	Land Loss	Land costs	Capital Costs	to GSP
		(No)	(\$Mill)	(No)	(\$Mill)	(\$Mill)	%
RCP4.5							
1	Queensland	1,564	1,694.6	9,186.5	1,809.2	3,503.9	1.77
2	New South Wales	1,103	570.0	2,592.1	1,785.1	2,355.2	0.75
3	Victoria	260	1,624.2	2,488.6	1,520.3	3,144.5	1.38
4	Western Australia	742	526.0	8,989.2	2,960.7	3,486.7	1.95
5	South Australia	484	209.3	1,067.9	564.4	773.6	1.35
6	Northern Territory	-	-	6,422.4	548.5	548.5	4.27
7	Tasmania	42	17.0	558.8	96.3	113.3	0.69
Australia		4,195	4,641.1	31,305.5	9,284.5	13,925.6	1.39
RCP8.5							
1	Queensland	4,650	4,670.4	19,085.7	3,841.3	8,511.7	4.30
2	New South Wales	3,112	1,766.8	5,015.6	5,017.1	6,783.9	2.17
3	Victoria	744	3,257.1	3,515.5	2,193.6	5,450.7	2.39
4	Western Australia	1,130	815.8	16,428.3	5,490.0	6,305.8	3.53
5	South Australia	1,544	751.2	2,394.0	1,340.9	2,092.1	3.66
6	Northern Territory	-	-	10,138.9	788.1	788.1	6.14
7	Tasmania	145	57	1,272.3	302.4	359.8	2.19
Australia		11,324.5	11,318.6	57,850.3	18,973.5	30,292.1	3.02

Source: Authors. Note: The column 'Compared to GSP' measures the share of total damages as a fraction of state and territory GSP per year; and overall as total damages as a fraction of Australian GDP per year.

A6 Sensitivity Analysis of Discount Rate

Table A5: Present Value of Costs of SLR/S on Properties and Land Use in Australia by RCPs, 2100 with iscount Rate Sensitivity (\$Mill)

		d=3%			d=5%			d=7%		
		Total	Prop.	Land Use	Total	Prop.	Land Use	Total	Prop.	Land Use
RCP4.5										
1	Queensland	377,208	177,204	200,003	214,493	100,765	113,729	140,561	66,033	74,528
2	New South Wales	265,093	65,991	199,101	150,741	37,525	113,216	98,783	24,591	74,192
3	Victoria	293,888	150,484	143,405	167,115	85,570	81,545	109,513	56,075	53,438
4	Western Australia	405,298	61,657	343,641	230,467	35,060	195,406	151,028	22,975	128,053
5	South Australia	86,532	25,316	61,217	49,205	14,395	34,810	32,245	9,433	22,811
6	Northern Territory	61,915	-	61,915	35,207	-	35,207	23,072	-	23,072
7	Tasmania	13,849	1,907	11,943	7,875	1,084	6,791	5,161	711	4,450
Australia		1,503,784	482,559	1,021,225	855,104	274,400	580,704	560,362	179,818	380,544
RCP8.5										
1	Queensland	921,690	507,742	413,948	524,105	288,720	235,385	343,454	189,202	154,252
2	New South Wales	760,434	197,056	563,377	432,409	112,053	320,356	283,364	73,430	209,934
3	Victoria	576,457	345,349	231,108	327,794	196,378	131,416	214,808	128,689	86,119
4	Western Australia	714,569	96,440	618,128	406,329	54,839	351,489	266,273	35,937	230,336
5	South Australia	244,002	87,989	156,013	138,748	50,034	88,714	90,924	32,788	58,136
6	Northern Territory	98,763	-	98,763	56,160	-	56,160	36,803	-	36,803
7	Tasmania	41,279	6,580	34,699	23,473	3,742	19,731	15,382	2,452	12,930
Australia		3,357,194	1,241,158	2,116,037	1,909,017	705,765	1,203,252	1,251,008	462,499	788,509

Table A6: Average Losses **Per Year** from the SLR/S Cost to 2100: **Discount Rate Sensitivity**

State	d=3%		d=5%		d=7%	
	Total Capital Loss	Compared to GSP	Total Capital Loss	Compared to GSP	Total Capital Loss	Compared to GSP
	<i>(\$Mill/year)</i>	<i>(%)</i>	<i>(\$Mill/year)</i>	<i>(%)</i>	<i>(\$Mill/year)</i>	<i>(%)</i>
RCP4.5						
1 Queensland	5,097.4	2.57	2,898.6	1.46	1,899.5	0.96
2 New South Wales	3,582.3	1.15	2,037.0	0.65	1,334.9	0.43
3 Victoria	3,971.5	1.74	2,258.3	0.99	1,479.9	0.65
4 Western Australia	5,477.0	3.07	3,114.4	1.74	2,040.9	1.14
5 South Australia	1,169.4	2.04	664.9	1.16	435.7	0.76
6 Northern Territory	836.7	6.51	475.8	3.70	311.8	2.43
7 Tasmania	187.2	1.14	106.4	0.65	69.7	0.42
Australia	20,321.4	2.02	11,555.5	1.15	7,572.5	0.75
RCP8.5						
1 Queensland	12,455.3	6.29	7,082.5	3.58	4,641.3	2.34
2 New South Wales	10,276.1	3.29	5,843.4	1.87	3,829.2	1.23
3 Victoria	7,790.0	3.41	4,429.6	1.94	2,902.8	1.27
4 Western Australia	9,656.3	5.41	5,490.9	3.08	3,598.3	2.02
5 South Australia	3,297.3	5.76	1,875.0	3.28	1,228.7	2.15
6 Northern Territory	1,334.6	10.39	758.9	5.91	497.3	3.87
7 Tasmania	557.8	3.39	317.2	1.93	207.9	1.26
Australia	45,367.5	4.52	25,797.5	2.57	16,905.5	1.68

References

- [1] GA. Australia's Coasts and Estuaries. Geoscience of Australia. Available at <https://www.ga.gov.au/>, 2025.
- [2] ABS. Digital Boundary Files: Australian Statistical Geography Standard (ASGS) Edition 3. Australian Bureau of Statistics (ABS). Available at <https://www.abs.gov.au/statistics/>, 2026.
- [3] CLUM. Data Package-Catchment Scale Land Use of Australia. Australian Government. Data Package of Land Use. Available at <https://data.gov.au/data/>, 2025.
- [4] DCS. Spatial Data of New South Wales. Departement of Spatial Service of New South Wales (DCS). Available at <https://www.spatial.nsw.gov.au/>, 2024.
- [5] Allhomes. Real Estate and Properties for Sale in Australia . Allhomes. Available at <https://www.allhomes.com.au/>, 2025.
- [6] RealEstate. Houses and Lands For Sale in Australia. Real Estate of Australia. Available at <https://www.bing.com/homes/>, 2025.
- [7] Domain. Houses and Lands For Sale in Australia. Domain Real Estate of Australia. Available at <https://www.domain.com/>, 2025.
- [8] T Kompas and et al. Economic Impacts of Sea Level Rise and Storm Tide in Victoria Over the 21st Century. Report prepared for the Victorian Marine and Coastal Council (VMACC), with support from the Department of Energy, Environment and Climate Action (DEECA) and Life Saving Victoria and Climate Risk Pty Ltd, Sydney., 2022.
- [9] Home Guide. How Much Does It Cost To Clear Land? Land Clearing Cost. Available at <https://homeguide.com/costs/>, 2025.
- [10] BITRE. Time Series Statistics of International Airline Activities. Report. Available at <https://www.bitre.gov.au>, 2025.
- [11] Sherwin Rosen. Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition. *Journal of Political Economy*, 82(1):34–55, 1974.
- [12] Bureau of Infrastructure, Transport and Regional Economics (BITRE). Australian Infrastructure Statistics Yearbook, 2019. ABS-4940.0, 4-17 Apr 2020. Available at www.abs.gov.au, 2025.
- [13] UDIavic. Residential Development Index. Urban Development Institute of Australia . Available at <https://www.udiavic.com.au>, 2019.
- [14] Wei-Shiuen Ng and Robert Mendelsohn. The impact of sea level rise on Singapore. *Environment and Development Economics*, 10:201–15, 5 2005.
- [15] Timothy Saunders and Peter Tulip. A model of the australian housing market, 2019.
- [16] Franz Fuerst and Georgia Warren-Myers. Pricing climate risk: Are flooding and sea level rise risk capitalised in australian residential property? *Climate Risk Management*, 34:100361, 2021.
- [17] Edwin Crow and Kunio Shimizu. *Lognormal Distributions: Theory and Applications*. Taylor & Francis eBooks, 2017.

- [18] Esri. ArcGIS Pro 3.7, 2026. Geographic information system (GIS) software.
- [19] E Kirezci, I.R Young, R Ranasinghe, and et.al. Projections of global-scale extreme sea levels and resulting episodic coastal flooding over the 21st Century. *Scientific Reports*, 10, 11629:1–12, 2020.
- [20] J Gallant, N Wilson, T Dowling, A Read, and C Inskeep. SRTM-derived 1 Second Digital Elevation Models Version 1.0. Geoscience of Australia. Available at <https://ecat.ga.gov.au/>, 2010.