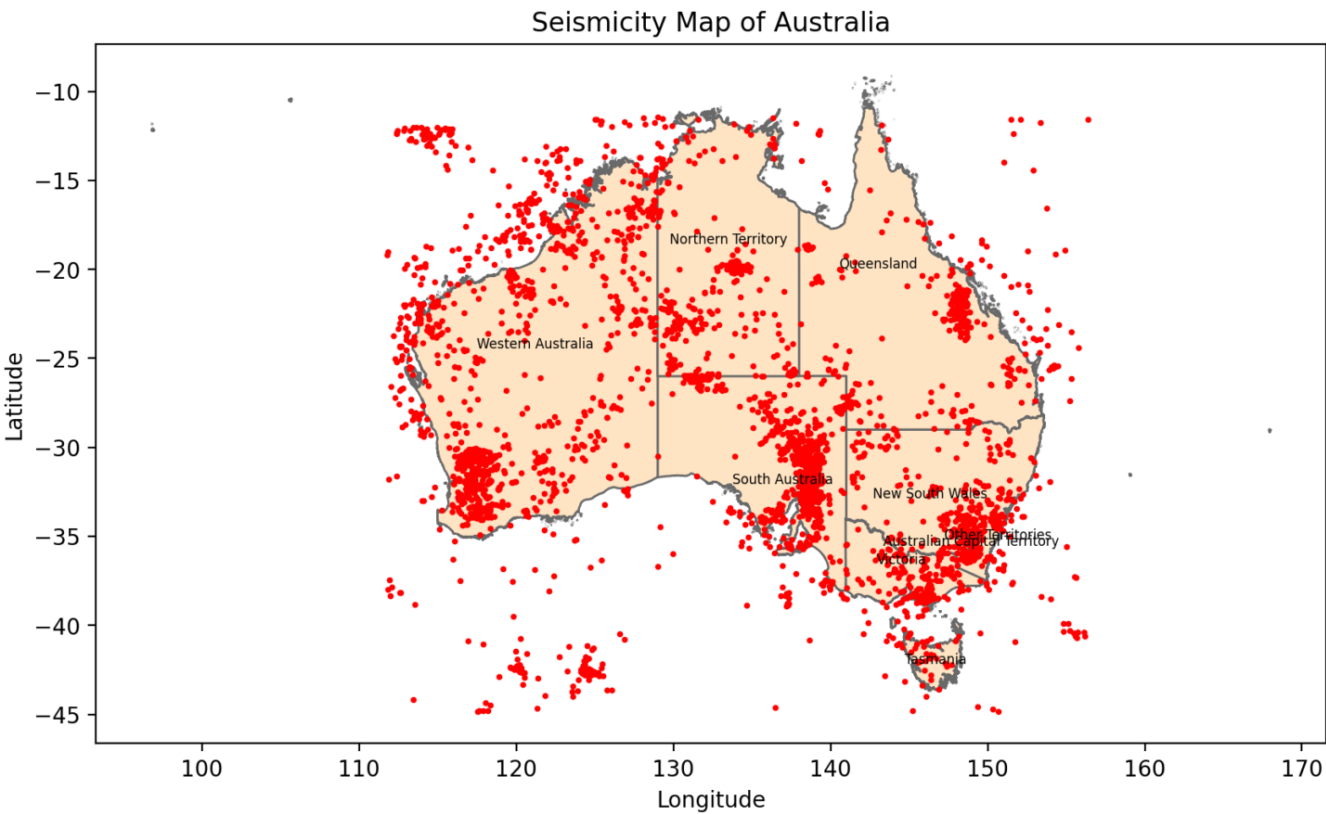


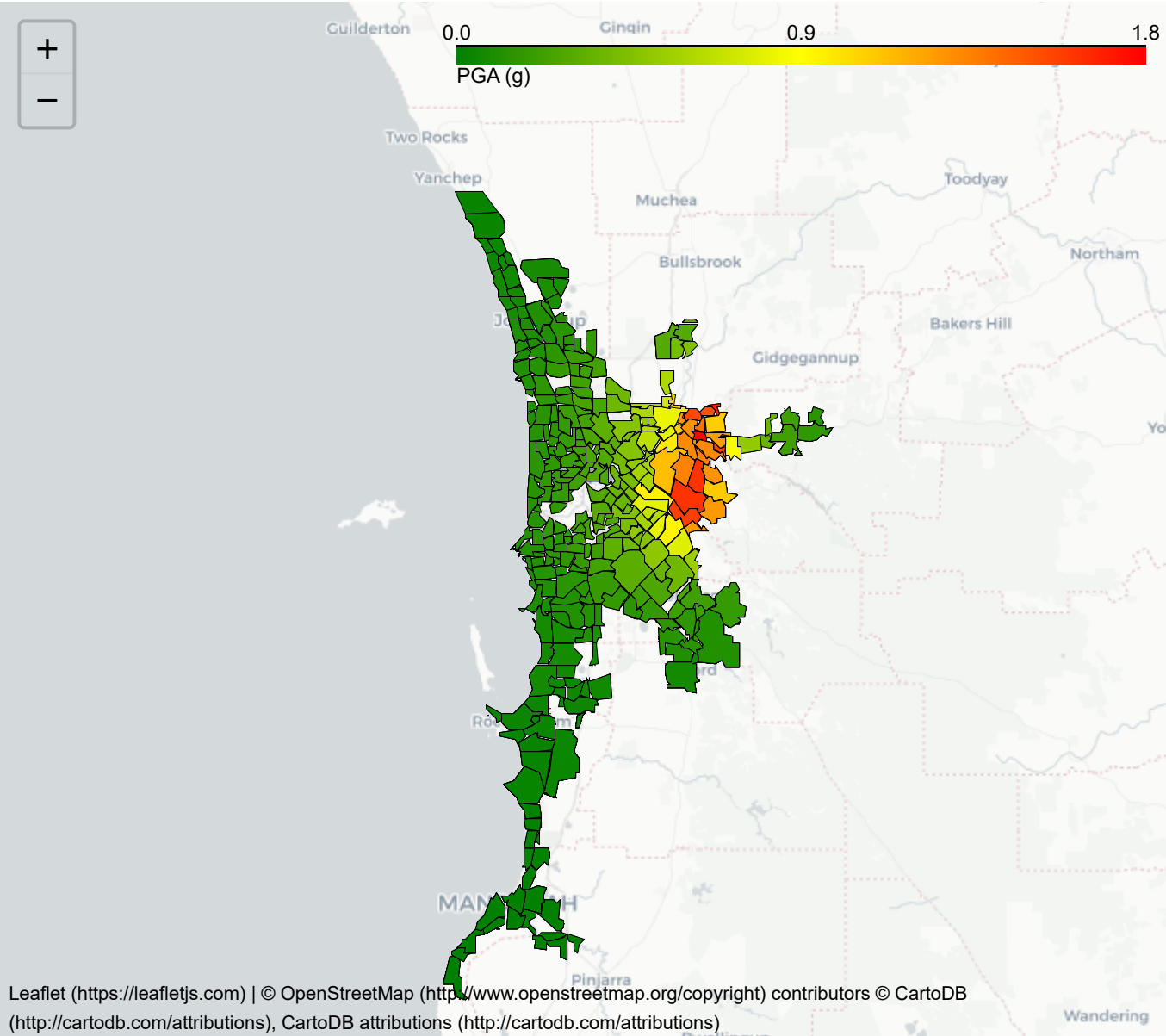
# Seismic Risk Index Map of Perth, Western Australia Based on Building Vulnerability



Perth, which hosts 75% of Western Australia's population, is the largest city in the state and the fourth most populous urban area in Australia. However, the city's rapid population growth in recent years has resulted in a corresponding increase in its vulnerability to natural disasters, including seismic hazards. Seismic hazard in Perth is strongly influence by the south-west seismic zone (SWSZ), a region with high earthquake frequency. The SWSZ is one of the most seismically active areas in Australia, having experienced several earthquakes with local magnitude 5.9 or higher in the past 40 years. This hazard can cause significant damage to buildings and infrastructure, as well as loss of life. In order to mitigate the risk of seismic hazards, we need to understand the physical vulnerability of buildings and infrastructure to these hazards through seismic risk assessment.

## Hazards

### Peak Ground Acceleration (PGA) Map



Select a suburb

All suburbs

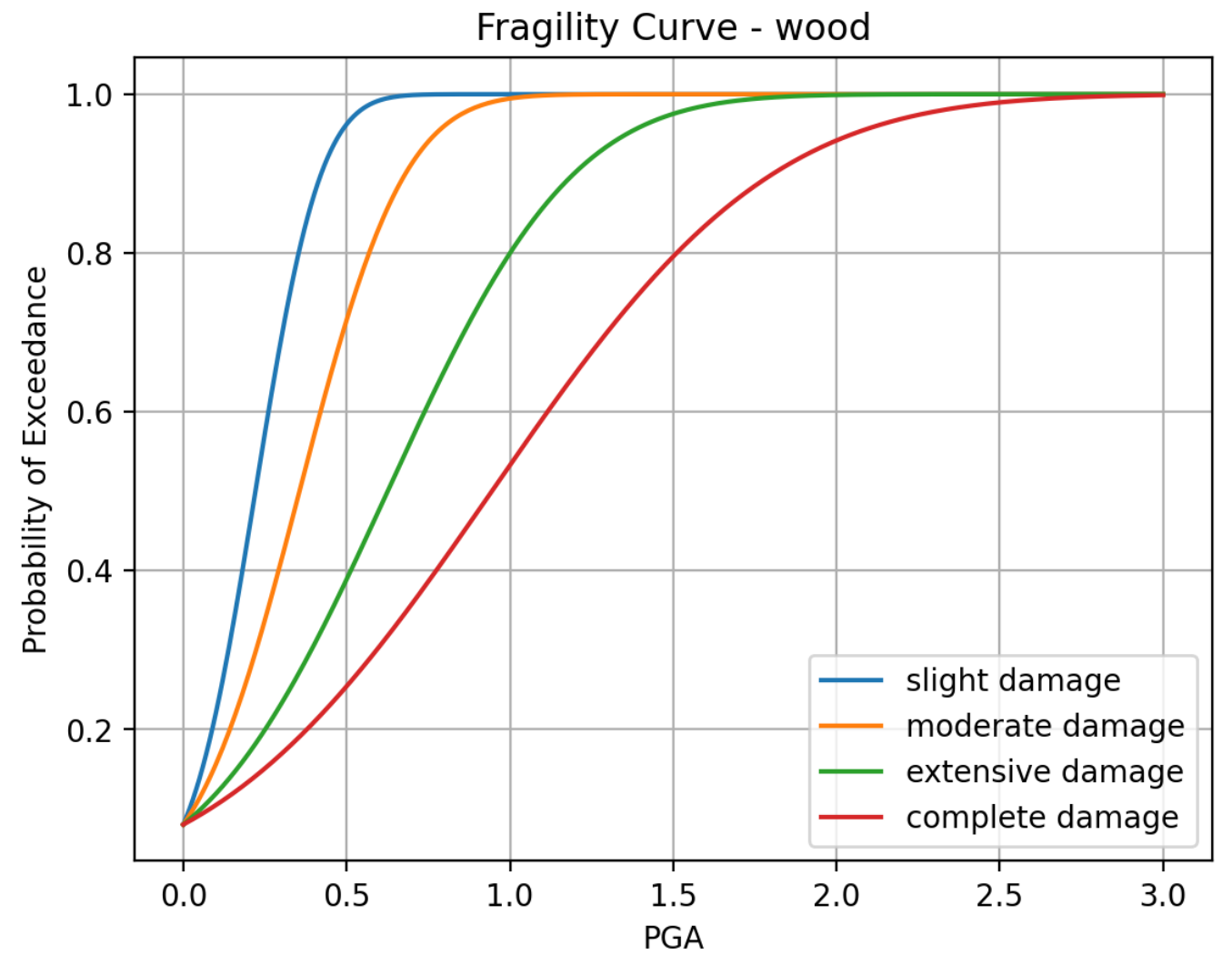
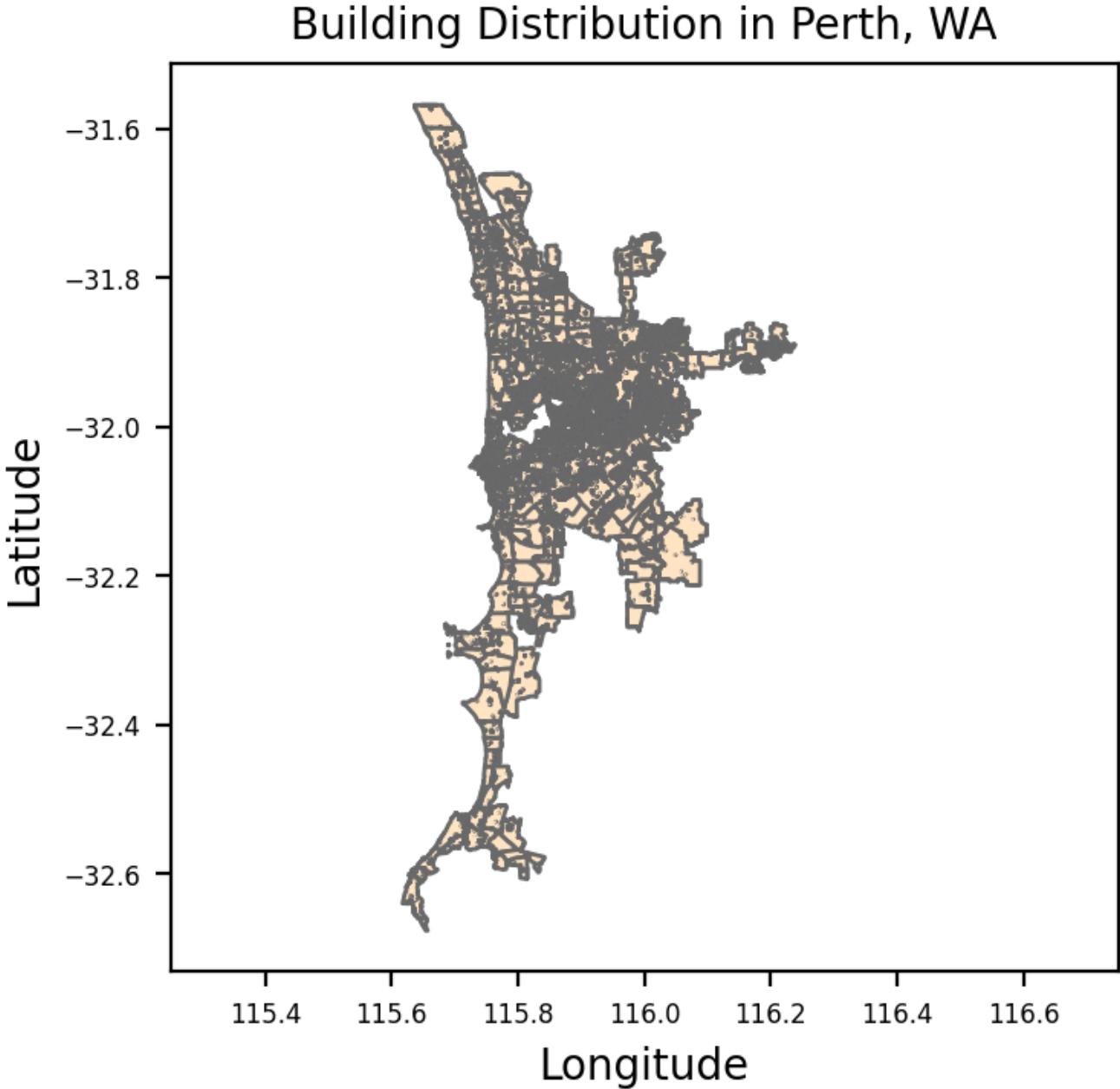
	custom_site_id	lon	lat	suburb	PGA
0	qd63g91e	115.82	-32.03	Alfred Cove	0.2045
1	qd6hpvt4	115.66	-31.61	Alkimos	0.0527
2	qd6k01um	115.67	-31.63	Alkimos	0.061
3	qd6k03gt	115.68	-31.63	Alkimos	0.0572
4	qd6k0med	115.68	-31.61	Alkimos	0.0561
5	qd6k09fv	115.69	-31.63	Alkimos	0.06
6	qd6k0efb	115.69	-31.62	Alkimos	0.0573
7	qd6k0tdf	115.69	-31.61	Alkimos	0.0552
8	qd6k0x6u	115.69	-31.6	Alkimos	0.0534
9	qd6k0cfj	115.7	-31.63	Alkimos	0.0602

Download CSV

# Exposure and Physical Vulnerability

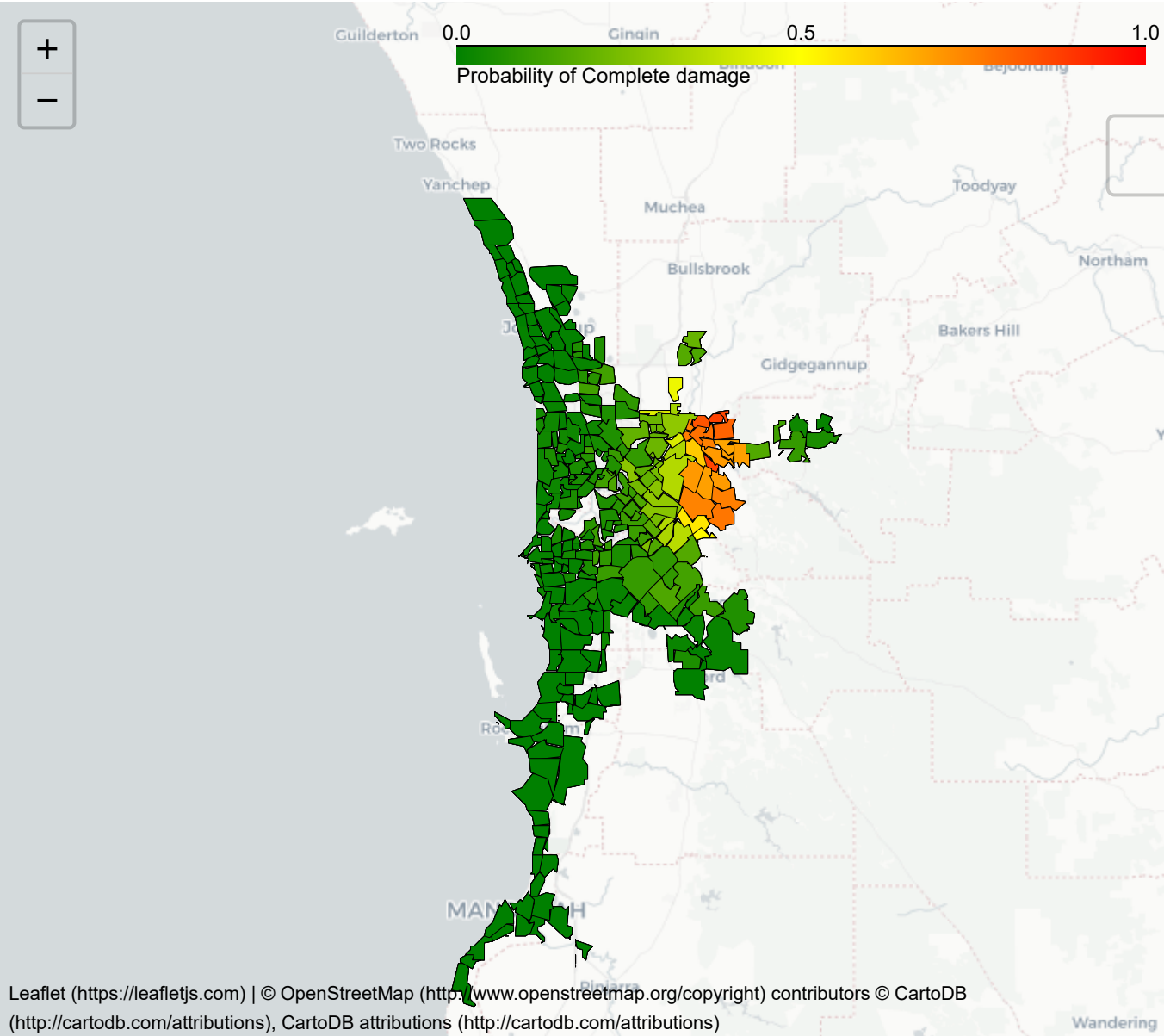
Select fragility function

wood



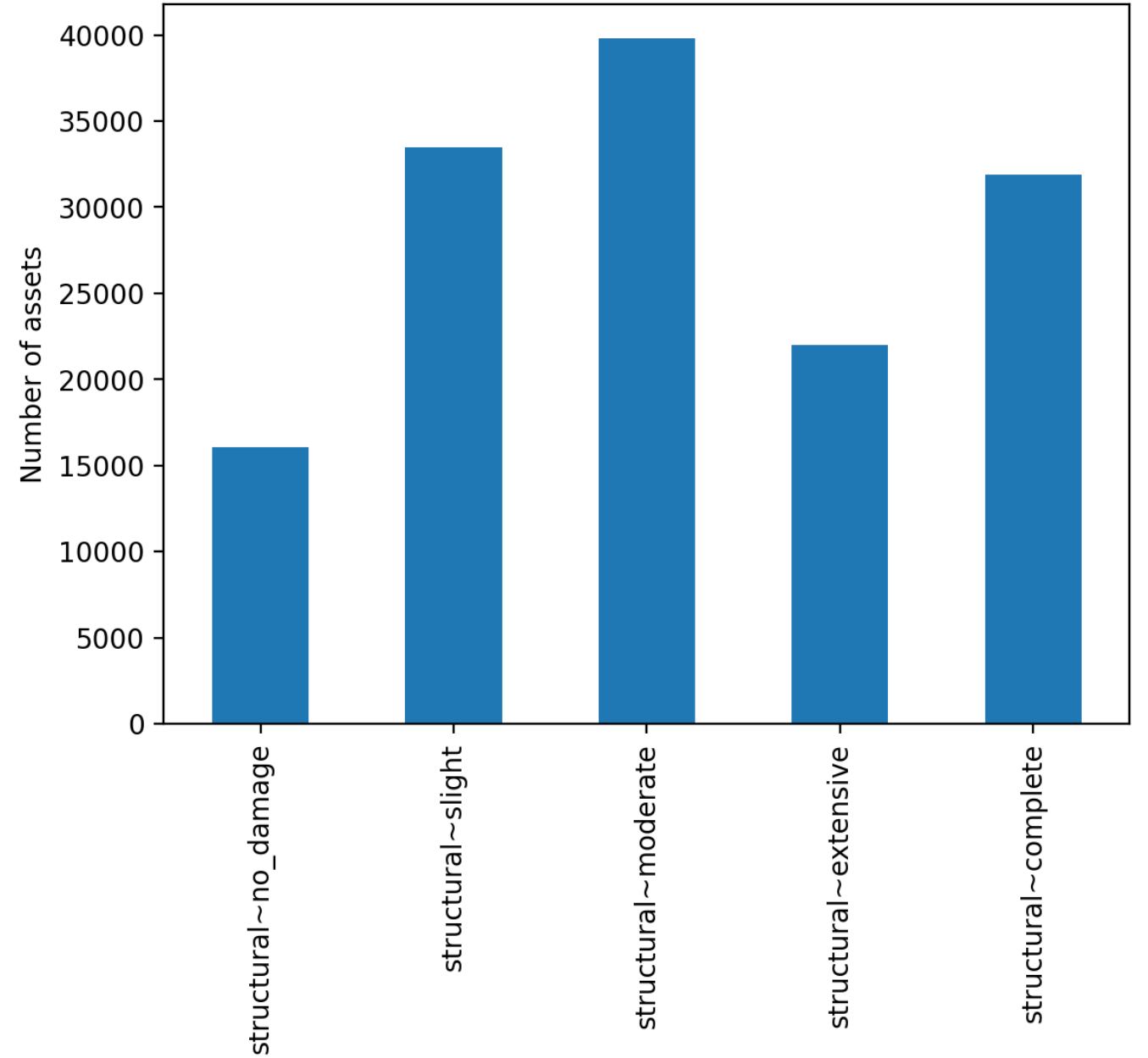
# Perth Seismic Risk Index

## Probability of Damage Map



Select taxonomy

All taxonomy



Select a suburb

All suburbs

	suburb	lat	lon	prob_of_no_damage	prob_of_slight_damage	prob_of_moderate_damage	prob_of_extensive_damage	prob_of_complete_damage
0	Alexander Heights	-31.83	115.85	0.1075	0.3656	0.3844	0.1132	0.0293
1	Alfred Cove	-32.03	115.82	0.1441	0.4087	0.3338	0.0833	0.0301
2	Alkimos	-31.6165	115.6906	0.721	0.2405	0.0346	0.0031	0.0007
3	Applecross	-32.0097	115.8395	0.1552	0.3565	0.2929	0.1136	0.0818
4	Ardross	-32.029	115.8392	0.1301	0.3908	0.3544	0.0974	0.0274
5	Armadale (WA)	-32.1535	116.0103	0.1973	0.4378	0.2867	0.061	0.0172
6	Ascot (WA)	-31.9343	115.9342	0.0197	0.1316	0.3926	0.2706	0.1855
7	Ashby (WA)	-31.74	115.8	0.2897	0.4701	0.2091	0.0278	0.0032
8	Ashfield (WA)	-31.9137	115.94	0.0168	0.1168	0.3711	0.2807	0.2146
9	Attadale	-32.0218	115.8013	0.2003	0.4303	0.2833	0.0658	0.0203

Download CSV