

COUNTRY EXPOSURE MODEL

Review main statistic of a exposure model and create summaries for a given Country.

```
/home/risk/venvs/py38w/lib/python3.8/site-packages/geopandas/_compat.py:111: UserWarning: The Shapely GEOS version (3.9.1-CAPI-1.14.2) is incompatible with the GEOS version PyGEOS was compiled with (3.10.1-CAPI-1.16.0). Conversions between both will be slow.
  warnings.warn(
```

```
# Parameters
country = "Solomon_Islands"
```

Exposure files:
Exposure_Com_Solomon_Islands.csv
Exposure_Ind_Solomon_Islands.csv
Exposure_Res_Solomon_Islands.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	513.8K	157,034	\$3,597.6M	96.28%	73.63%
Ind	0.0K	517	\$236.3M	0.32%	4.84%
Com	0.0K	5,547	\$1,052.0M	3.40%	21.53%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	4,676.9K	\$3,444.8M	29	\$1,045
Res	3,588.6K	\$2,615.4M	23	\$1,003
Ind	171.6K	\$136.1M	332	\$1,377
Com	916.7K	\$693.4M	165	\$1,148

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Honiara	\$1,858.1M	10,396	63,418	38.03%	6.37%	12.34%
Guadalcanal	\$922.6M	30,571	93,613	18.88%	18.74%	18.22%
Western	\$806.3M	25,433	76,646	16.50%	15.59%	14.92%
Malaita	\$696.0M	47,745	136,730	14.24%	29.27%	26.61%
Central	\$194.5M	9,025	26,051	3.98%	5.53%	5.07%
Makira Ulawa	\$122.7M	12,928	40,419	2.51%	7.93%	7.87%
Isabel	\$105.3M	9,288	26,158	2.16%	5.69%	5.09%
Choiseul	\$101.4M	8,594	26,372	2.08%	5.27%	5.13%
Temotu	\$57.0M	8,049	21,362	1.17%	4.94%	4.16%
Rennell and Bellona	\$22.0M	1,069	3,041	0.45%	0.66%	0.59%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column						
	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
W	\$2,979.7M	152,575	481,821	60.99%	93.55%	93.77%
RC	\$1,000.3M	1,851	7,772	20.47%	1.13%	1.51%
MCF	\$721.0M	7,444	21,852	14.76%	4.56%	4.25%
S	\$184.9M	1,228	2,365	3.78%	0.75%	0.46%

Exposure by taxonomy

Showing only taxonomies that represent 90% of the total `COST_USD`

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
W	W+WLI/LFBR+DUH/H:1/RES	\$973.7M	29,001	22.53%	18.51%
	W+WLI/LPB+DUH/H:1/RES	\$726.4M	10,713	16.81%	6.84%
RC	CR+CIP/LWAL+DUH/HBET:2-3/RES	\$572.2M	1,309	13.24%	0.84%
	CR+CIP/LWAL+DUH/HBET:2-3/COM	\$405.3M	519	9.38%	0.33%
MCF	MCF/LWAL+DUM/H:1/RES	\$368.7M	5,268	8.53%	3.36%
W	W+WLI/LFBR+DUH/EWW+WOL/HBET:2-3/RES	\$357.1M	1,692	8.26%	1.08%
	W+WLI/LPB+DUH/EWV/RWO5/HBET:1-2/RES	\$333.4M	103,736	7.72%	66.21%
MCF	MCF/LWAL+DUM/H:1/COM	\$330.6M	2,111	7.65%	1.35%
W	W+WLI/LFBR+DUH/HBET:2-3/RES	\$133.2M	524	3.08%	0.33%
	W+WLI/LFBR+DUH/H:1/COM	\$120.4M	1,812	2.79%	1.16%
