

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 = "American_Samoa"
```

Exposure files:
Exposure_Com_American_Samoa.csv
Exposure_Ind_American_Samoa.csv
Exposure_Res_American_Samoa.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	54.5K	17,017	\$6,620.9M	96.27%	88.32%
Ind	0.0K	224	\$380.8M	1.27%	5.08%
Com	0.0K	435	\$494.4M	2.46%	6.60%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	3,143.5K	\$5,094.7M	178	\$2,385
Res	2,868.7K	\$4,785.4M	169	\$2,308
Ind	98.4K	\$102.0M	439	\$3,872
Com	176.5K	\$207.3M	406	\$2,802

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Eastern	\$4,071.9M	8,256	24,351	54.32%	46.71%	44.67%
Western	\$3,197.8M	8,831	28,941	42.66%	49.96%	53.10%
Manu'a	\$226.3M	589	1,216	3.02%	3.33%	2.23%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$3,514.0M	8,073	24,531	46.88%	45.67%	45.00%
MUR	\$3,459.7M	8,607	27,319	46.15%	48.69%	50.12%
W	\$380.5M	886	2,658	5.08%	5.01%	4.88%
S	\$141.9M	110	0	1.89%	0.62%	0.00%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MUR	MUR/LWAL+DNO/HBET:1-2/RES	\$3,295.2M	8,475	49.88%	49.88%
RC	CR+CIP/LWAL+DUL/HBET:1-2/RES	\$2,982.3M	7,669	45.15%	45.14%
W	W+WLI/LPB+DUL/HBET:1-2/RES	\$328.3M	847	4.97%	4.98%