

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 = "Grenada"
```

Exposure files:
Exposure_Com_Grenada.csv
Exposure_Ind_Grenada.csv
Exposure_Res_Grenada.csv

Sanity checks and formats

Grenada
Exposure/Exposure/Exposure_Com_Grenada.csv
Exposure/Exposure/Exposure_Ind_Grenada.csv
Exposure/Exposure/Exposure_Res_Grenada.csv
Occupants / Dwellings = 3.4
No refence household size data available
Population (exposure / UN_2021) = 0.98
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	110.9K	31,022	\$2,804.9M	94.01%	82.12%
Ind	0.0K	628	\$159.9M	1.90%	4.68%
Com	0.0K	1,348	\$450.7M	4.09%	13.20%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	11,145.9K	\$2,321.3M	338	\$306
Res	10,388.4K	\$1,963.4M	335	\$270
Ind	360.2K	\$80.2M	574	\$444
Com	397.3K	\$277.8M	295	\$1,134

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Saint Andrew	\$938.6M	8,928	29.2K	27.48%	27.06%	26.34%
Saint George	\$696.4M	6,835	23.7K	20.39%	20.71%	21.36%
Saint Patrick	\$503.2M	4,930	16.4K	14.73%	14.94%	14.80%
Saint David	\$405.4M	3,795	12.9K	11.87%	11.50%	11.66%
Saint John	\$370.6M	3,640	12.3K	10.85%	11.03%	11.09%
Southern Grenadine Islands	\$260.8M	2,532	8.2K	7.64%	7.67%	7.37%
Saint Mark	\$240.5M	2,338	8.2K	7.04%	7.09%	7.39%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MR	\$2,061.5M	24,239	77,565	60.36%	73.46%	69.97%
RC	\$708.6M	4,521	18,631	20.75%	13.70%	16.81%
W	\$444.3M	3,390	14,328	13.01%	10.27%	12.92%
S	\$171.9M	593	0	5.03%	1.80%	0.00%
MCF	\$23.7M	189	0	0.69%	0.57%	0.00%
OT	\$5.6M	66	332	0.16%	0.20%	0.30%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MR	MR/LWAL+CDL+DUL/HEX:1/RES	\$2,061.5M	24,239	67.24%	77.20%
RC	CR/LFINF+CDL+DUL/HEX:2/RES	\$303.3M	2,743	9.89%	8.74%
W	W+WLI/LWAL+CDM+DUM/HEX:1/RES	\$233.2M	2,740	7.61%	8.73%
	W+WLI/LWAL+CDM+DUM/HEX:2/COM	\$201.7M	539	6.58%	1.72%
RC	CR/LFINF+CDM+DUM/HEX:3/RES	\$191.9M	1,123	6.26%	3.58%
	CR/LFINF+CDM+DUM/HEX:2/COM	\$74.4M	13	2.43%	0.04%
