

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 = "Saint_Lucia"
```

Exposure files:
Exposure_Com_Saint_Lucia.csv
Exposure_Ind_Saint_Lucia.csv
Exposure_Res_Saint_Lucia.csv

Sanity checks and formats

Saint_Lucia
Exposure/Exposure/Exposure_Com_Saint_Lucia.csv
Exposure/Exposure/Exposure_Ind_Saint_Lucia.csv
Exposure/Exposure/Exposure_Res_Saint_Lucia.csv
Occupants / Dwellings = 4.6
WARNING - Check avg householde size:
UN 2019 avg household = No data
PRB 2019 avg household = 2.8
Population (exposure / UN_2021) = 0.95
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	175.1K	36,608	\$2,326.5M	92.73%	82.56%
Ind	0.0K	1,004	\$125.8M	2.54%	4.47%
Com	0.0K	1,865	\$365.5M	4.72%	12.97%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	10,071.6K	\$2,056.9M	255	\$280
Res	9,206.5K	\$1,743.0M	251	\$253
Ind	334.8K	\$69.6M	333	\$376
Com	530.3K	\$244.3M	284	\$689

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Castries	\$502.3M	7,123	32.0K	17.83%	18.04%	18.30%
Gros Islet	\$491.1M	6,907	31.1K	17.43%	17.50%	17.77%
Micoud	\$426.4M	6,034	26.5K	15.13%	15.28%	15.15%
Dennerly	\$400.3M	5,606	24.9K	14.20%	14.20%	14.21%
Soufriere	\$238.7M	3,393	15.0K	8.47%	8.59%	8.54%
Vieux Fort	\$210.2M	2,828	12.6K	7.46%	7.16%	7.18%
Anse la Raye	\$200.2M	2,744	11.9K	7.11%	6.95%	6.82%
Laborie	\$143.9M	1,930	8.4K	5.11%	4.89%	4.77%
Choiseul	\$108.7M	1,533	6.7K	3.86%	3.88%	3.82%
Canaries	\$95.8M	1,379	6.0K	3.40%	3.49%	3.44%

Exposure by simplified taxonomy

Adding `MACRO_TAX0` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MR	\$1,805,998.6K	29,809	128,196	64.09%	75.51%	73.20%
RC	\$532,669.6K	4,711	23,841	18.90%	11.93%	13.61%
W	\$342,606.1K	3,673	22,888	12.16%	9.30%	13.07%
S	\$110,758.4K	953	0	3.93%	2.41%	0.00%
MCF	\$23,871.3K	301	0	0.85%	0.76%	0.00%
OT	\$1,842.0K	30	198	0.07%	0.08%	0.11%

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	\$1,806.0M	29,809	73.14%	80.60%
RC	CR/LFINF+CDL+DUL/HEX:2/RES	\$219.1M	2,783	8.87%	7.52%
W	W+WLI/LWAL+CDM+DUM/HEX:1/RES	\$170.4M	2,811	6.90%	7.60%
	W+WLI/LWAL+CDM+DUM/HEX:2/COM	\$158.4M	634	6.42%	1.71%
RC	CR/LFINF+CDM+DUM/HEX:3/RES	\$115.3M	947	4.67%	2.56%

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