

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 = "Montserrat"
```

Exposure files:
Exposure_Com_Montserrat.csv
Exposure_Ind_Montserrat.csv
Exposure_Res_Montserrat.csv

Sanity checks and formats

Montserrat
Exposure/Exposure/Exposure_Com_Montserrat.csv
Exposure/Exposure/Exposure_Ind_Montserrat.csv
Exposure/Exposure/Exposure_Res_Montserrat.csv
Occupants / Dwellings = 2.4
No reference 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	4,867	1,928	\$104.2M	78.95%	56.66%
Ind	0	34	\$7.4M	1.39%	4.04%
Com	0	480	\$72.3M	19.66%	39.29%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	609.2K	\$126,551.7K	249	\$302
Res	497.3K	\$75,184.8K	258	\$210
Ind	17.9K	\$4,113.9K	525	\$416
Com	94.1K	\$47,253.0K	196	\$768

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Saint Anthon	\$88.2M	1,073	1,896	47.93%	43.94%	38.96%
Saint Georges	\$50.0M	609	1,339	27.18%	24.94%	27.51%
Saint Peter	\$45.8M	760	1,632	24.88%	31.12%	33.53%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$71,499.4K	539	981	38.88%	22.07%	20.16%
W	\$53,606.6K	867	1,853	29.15%	35.50%	38.07%
MR	\$43,018.2K	837	2,009	23.39%	34.28%	41.28%
S	\$14,322.3K	179	0	7.79%	7.33%	0.00%
MCF	\$936.6K	10	0	0.51%	0.41%	0.00%
OT	\$519.5K	10	24	0.28%	0.41%	0.49%

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	\$43.0M	837	28.14%	41.29%
W	W+WLI/LWAL+CDM+DUM/HEX:1/RES	\$39.3M	763	25.68%	37.64%
	CR/LFINF+CDM+DUM/HEX:4/COM	\$22.5M	24	14.69%	1.18%
RC	CR/LFINF+CDL+DUL/HEX:2/RES	\$20.2M	302	13.19%	14.90%
	CR/LFINF+CDM+DUM/HEX:2/COM	\$14.0M	5	9.18%	0.25%
W	W+WLI/LWAL+CDM+DUM/HEX:2/COM	\$13.9M	96	9.12%	4.74%

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