

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 = "Barbados"
```

Exposure files:
Exposure_Com_Barbados.csv
Exposure_Ind_Barbados.csv
Exposure_Res_Barbados.csv

Sanity checks and formats

Barbados
Exposure/Exposure/Exposure_Com_Barbados.csv
Exposure/Exposure/Exposure_Ind_Barbados.csv
Exposure/Exposure/Exposure_Res_Barbados.csv
Occupants / Dwellings = 3.4
Reference avg household size (2019) = 2.8
Population (exposure / UN_2021) = 0.97
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	277.8K	74,697	\$9,120.0M	94.72%	71.99%
Ind	0.0K	1,111	\$969.2M	1.41%	7.65%
Com	0.0K	3,054	\$2,578.6M	3.87%	20.36%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	12,468.7K	\$8,515.6M	158	\$1,016
Res	10,491.3K	\$6,404.3M	140	\$869
Ind	447.0K	\$512.0M	402	\$2,168
Com	1,530.4K	\$1,599.4M	501	\$1,685

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Saint Michael	\$3,621.2M	24,542	88.5K	28.59%	31.12%	31.87%
Christ Church	\$2,645.8M	15,478	54.3K	20.89%	19.63%	19.56%
Saint Philip	\$1,440.3M	8,180	30.7K	11.37%	10.37%	11.04%
Saint James	\$1,368.3M	7,687	28.5K	10.80%	9.75%	10.26%
Saint George	\$989.9M	6,065	19.8K	7.81%	7.69%	7.12%
Saint Thomas	\$661.5M	4,019	14.2K	5.22%	5.10%	5.13%
Saint Peter	\$566.8M	3,574	11.3K	4.47%	4.53%	4.07%
Saint Lucy	\$463.0M	2,982	9.7K	3.65%	3.78%	3.50%
Saint John	\$429.9M	2,853	9.0K	3.39%	3.62%	3.23%
Saint Joseph	\$281.5M	1,950	6.6K	2.22%	2.47%	2.38%
Saint Andrew	\$199.6M	1,531	5.1K	1.58%	1.94%	1.85%

Exposure by simplified taxonomy

Adding `MACRO_TAX0` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MCF	\$5,017.9M	14,004	45,168	39.61%	17.76%	16.26%
MR	\$2,886.5M	12,863	50,661	22.79%	16.31%	18.24%
W	\$1,766.4M	27,958	97,176	13.94%	35.45%	34.98%
RC	\$1,454.2M	4,461	17,440	11.48%	5.66%	6.28%
MUR	\$1,133.5M	18,509	66,410	8.95%	23.47%	23.91%
S	\$396.4M	804	0	3.13%	1.02%	0.00%
OT	\$12.9M	262	932	0.10%	0.33%	0.34%

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:2/RES	\$2,118.1M	5,992	18.60%	8.61%
	MCF/LWAL+CDL+DUL/HEX:2/RES	\$1,887.3M	5,339	16.57%	7.67%
MCF	MCF/LWAL+CDL+DUL/HEX:1/RES	\$1,133.7M	5,773	9.96%	8.30%
	MCF/LWAL+CDL+DUL/HEX:3/COM	\$775.1M	370	6.81%	0.53%
	MCF/LWAL+CDL+DUL/HEX:1/IND	\$692.4M	397	6.08%	0.57%
MR	MR/LWAL+CDL+DUL/HEX:1/RES	\$643.6M	6,555	5.65%	9.42%
MUR	MUR/LWAL+DNO/HEX:2/RES	\$614.8M	8,348	5.40%	12.00%
RC	CR/LDUAL+CDH+DUH/HEX:7/COM	\$529.9M	9	4.65%	0.01%
W	W+WS/LPB+CDL+DUL/HEX:1/RES	\$519.0M	10,571	4.56%	15.19%
RC	CR/LDUAL+CDH+DUH/HBET:12,24/COM	\$452.1M	1	3.97%	0.00%
W	W+WLI/LWAL+CDL+DUL/HEX:2/RES	\$426.2M	5,787	3.74%	8.32%
MUR	MUR/LWAL+DNO/HEX:1/RES	\$409.9M	8,348	3.60%	12.00%
	W+WLI/LWAL+CDL+DUL/HEX:2/SOS/RES	\$407.6M	5,535	3.58%	7.96%
W	W+WLI/LWAL+CDL+DUL/HEX:1/RES	\$284.1M	5,787	2.50%	8.32%
MCF	MCF/LWAL+CDL+DUL/HEX:2/COM	\$259.1M	557	2.28%	0.80%
S	S+SR/LFM+CDM+DUM/HEX:1/COM	\$233.7M	201	2.05%	0.29%

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