

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 = "Belize"
```

Exposure files:
Exposure_Com_Belize.csv
Exposure_Ind_Belize.csv
Exposure_Res_Belize.csv

Sanity checks and formats

Belize
Exposure/Exposure/Exposure_Com_Belize.csv
Exposure/Exposure/Exposure_Ind_Belize.csv
Exposure/Exposure/Exposure_Res_Belize.csv
Occupants / Dwellings = 6.4
WARNING - Check avg householde size:
UN 2019 avg household = No data
PRB 2019 avg household = 3.8
WARNING - Check population:
Exposure population = 322.0k
UN 2021 population = 405.0k
Population (exposure / UN_2021) = 0.8
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	322.5K	42,607	\$3,495.9M	87.48%	65.78%
Ind	0.0K	1,243	\$638.7M	2.55%	12.02%
Com	0.0K	4,858	\$1,180.2M	9.97%	22.21%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	7,708.0K	\$3,796.0M	158	\$690
Res	6,412.7K	\$2,693.4M	151	\$545
Ind	369.0K	\$349.1M	297	\$1,731
Com	926.3K	\$753.5M	191	\$1,274

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Belize	\$1,826.0M	16,558	95.3K	34.36%	33.99%	29.55%
Cayo	\$1,140.1M	10,287	75.0K	21.45%	21.12%	23.27%
Orange Walk	\$713.5M	6,718	45.9K	13.42%	13.79%	14.25%
Corozal	\$701.3M	6,368	41.1K	13.20%	13.07%	12.73%
Stann Creek	\$551.7M	4,708	34.3K	10.38%	9.67%	10.65%
Toledo	\$382.0M	4,069	30.8K	7.19%	8.35%	9.55%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MCF	\$1,627.9M	9,802	57.9K	30.63%	20.12%	17.95%
MR	\$1,163.1M	7,201	57.9K	21.88%	14.78%	17.95%
S	\$989.9M	2,350	0.0K	18.63%	4.83%	0.00%
RC	\$746.5M	4,744	45.6K	14.05%	9.74%	14.13%
MUR	\$551.1M	16,194	105.6K	10.37%	33.25%	32.74%
W	\$189.0M	6,678	43.4K	3.56%	13.71%	13.46%
OT	\$47.4M	1,737	12.1K	0.89%	3.57%	3.76%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MCF	MCF/LWAL+CDL+DUL/HEX:2/RES	\$741.1M	3,356	15.68%	8.79%
MR	MR/LWAL+CDL+DUL/HEX:2/RES	\$741.1M	3,356	15.68%	8.79%
MCF	MCF/LWAL+CDL+DUL/HEX:1/RES	\$348.4M	2,840	7.37%	7.43%
MUR	MUR/LWAL+DNO/HEX:2/RES	\$328.9M	8,042	6.96%	21.05%
S	S+SR/LFM+CDM+DUM/HEX:1/IND	\$254.6M	255	5.39%	0.67%
MCF	MCF/LWAL+CDL+DUL/HEX:3/RES	\$247.8M	1,005	5.24%	2.63%
MR	MR/LWAL+CDL+DUL/HEX:3/RES	\$247.8M	1,005	5.24%	2.63%
MUR	MUR/LWAL+DNO/HEX:1/RES	\$222.2M	8,152	4.70%	21.34%
S	S+SR/LFINF+CDM+DUM/HEX:1/IND	\$215.6M	216	4.56%	0.57%
RC	CR/LDUAL+CDH+DUH/HBET:12,24/COM	\$215.1M	2	4.55%	0.00%
S	S+SR/LFBR+CDH+DUH/HBET:12,24/COM	\$215.1M	2	4.55%	0.00%
W	W+WS/LPB+CDL+DUL/HEX:1/RES	\$175.2M	6,426	3.71%	16.82%
MCF	MCF/LWAL+CDL+DUL/HEX:3/COM	\$174.7M	318	3.70%	0.83%
MR	MR/LWAL+CDL+DUL/HEX:1/RES	\$174.2M	2,840	3.69%	7.43%
RC	CR/LDUAL+CDH+DUH/HEX:7/COM	\$147.2M	9	3.12%	0.02%
S	S+SR/LFBR+CDH+DUH/HEX:7/COM	\$147.2M	9	3.12%	0.02%
	S+SR/LFINF+CDM+DUM/HEX:1/COM	\$128.6M	368	2.72%	0.96%

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