

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 (3.10.0-CAPI-1.16.0). Conversions between both will be slow.
  warnings.warn(
```

```
# Parameters
country = "Sao_Tome_and_Principe"
```

Exposure files:
Exposure_Com_Sao_Tome_and_Principe.csv
Exposure_Ind_Sao_Tome_and_Principe.csv
Exposure_Res_Sao_Tome_and_Principe.csv

Sanity checks and formats

Sao_Tome_and_Principe
../Exposure/Africa/Exposure_Com_Sao_Tome_and_Principe.csv
../Exposure/Africa/Exposure_Ind_Sao_Tome_and_Principe.csv
../Exposure/Africa/Exposure_Res_Sao_Tome_and_Principe.csv
Occupants / Dwellings = 4.0
Reference avg household size (2019) = 4.0
Population (exposure / UN_2021) = 0.96
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	214.8K	51,045	\$2,468.1M	99.62%	94.82%
Ind	0.0K	43	\$38.9M	0.08%	1.50%
Com	0.0K	150	\$95.9M	0.29%	3.69%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	COST_PER_CAPITA	AVG_BUILDING_AREA_SQM	AVG_COST_PER_SQM
OCCUPANCY					
Total	6,928.3K	\$2,099.1M	\$12,117	135	
Res	6,576.8K	\$1,995.7M	\$11,490	129	
Ind	100.8K	\$27.3M	\$181	2,353	
Com	250.8K	\$76.1M	\$447	1,670	

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
São Tomé Province	\$2,500.9M	49,228	206.4K	96.08%	96.08%	96.08%
Príncipe Province	\$102.1M	2,010	8.4K	3.92%	3.92%	3.92%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
ADO/E	\$873.7M	19,192	79,860	33.56%	37.46%	37.18%
MUR	\$822.7M	13,993	59,009	31.60%	27.31%	27.47%
W	\$619.0M	14,651	60,073	23.78%	28.59%	27.96%
RC	\$185.0M	1,349	7,352	7.11%	2.63%	3.42%
MCF	\$73.4M	832	3,676	2.82%	1.62%	1.71%
OT	\$16.7M	1,210	4,846	0.64%	2.36%	2.26%
S	\$12.6M	11	0	0.48%	0.02%	0.00%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
ADO/E	MUR+ADO/LWAL+CDN/H:2/RES	\$383.5M	6,947	16.45%	14.46%
	MUR+ADO/LWAL+CDN/H:1/RES	\$276.0M	7,125	11.83%	14.83%
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$230.0M	3,659	9.86%	7.62%
W	W+WWD/LWAL+CDN/H:1/RES	\$197.8M	6,728	8.48%	14.01%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$183.6M	2,921	7.87%	6.08%
	MUR+CB/LWAL+CDN/H:1/RES	\$165.5M	3,752	7.09%	7.81%
ADO/E	E+ETO/LWAL+CDN/H:1/RES	\$133.0M	4,806	5.70%	10.00%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$132.1M	2,996	5.66%	6.24%
W	W/LWAL+CDL/H:2/RES	\$123.3M	2,101	5.29%	4.37%
	W+WWD/LWAL+CDN/H:2/RES	\$117.8M	2,811	5.05%	5.85%
	W/LWAL+CDL/H:1/RES	\$88.7M	2,155	3.80%	4.49%
	W/LWAL+CDL/H:3/RES	\$83.0M	840	3.56%	1.75%
RC	CR/LFINF+CDL/H:3/RES	\$60.7M	376	2.60%	0.78%
	CR/LFINF+CDL/H:2/RES	\$45.1M	470	1.93%	0.98%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$31.0M	94	1.33%	0.20%
	MUR+ADO/LWAL+CDN/H:1/COM	\$22.2M	40	0.95%	0.08%
	MUR+ADO/LWAL+CDN/H:2/COM	\$20.4M	40	0.88%	0.08%
RC	CR/LWAL+CDL/H:3/RES	\$20.2M	125	0.87%	0.26%
MUR	MUR+CB/LWAL+CDN/HBET:3-6/RES	\$18.6M	49	0.80%	0.10%

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