

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 = "El_Salvador"
```

Exposure files:
Exposure_Com_El_Salvador.csv
Exposure_Ind_El_Salvador.csv
Exposure_Res_El_Salvador.csv

Sanity checks and formats

El_Salvador
Exposure/Exposure/Exposure_Com_El_Salvador.csv
Exposure/Exposure/Exposure_Ind_El_Salvador.csv
Exposure/Exposure/Exposure_Res_El_Salvador.csv
Occupants / Dwellings = 4.1
Reference avg household size (2019) = 3.84
Population (exposure / UN_2021) = 0.88
Exposure models OK

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	5.7M	1,259.8K	\$85.2B	90.26%	73.82%
Ind	0.0M	19.1K	\$13.1B	1.37%	11.38%
Com	0.0M	116.8K	\$17.1B	8.37%	14.80%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	202.1M	\$83.8B	145	\$571
Res	156.1M	\$65.9B	124	\$546
Ind	22.3M	\$7.1B	1,167	\$589
Com	23.7M	\$10.8B	203	\$722

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
San Salvador	\$31,706.9M	347.1K	1,567.1K	27.46%	24.87%	27.42%
La Paz	\$15,793.1M	121.7K	308.1K	13.68%	8.72%	5.39%
La Libertad	\$14,037.6M	158.0K	648.1K	12.16%	11.32%	11.34%
Santa Ana	\$9,662.4M	129.1K	523.5K	8.37%	9.25%	9.16%
San Miguel	\$6,611.0M	101.4K	433.9K	5.73%	7.27%	7.59%
Sonsonate	\$6,249.4M	98.9K	451.0K	5.41%	7.09%	7.89%
Usulután	\$4,906.7M	78.7K	327.6K	4.25%	5.64%	5.73%
Cabañas	\$4,629.6M	43.3K	149.3K	4.01%	3.10%	2.61%
Ahuachapán	\$4,462.9M	73.3K	319.4K	3.87%	5.25%	5.59%
Chalatenango	\$4,083.8M	50.1K	184.0K	3.54%	3.59%	3.22%
San Vicente	\$3,724.7M	42.0K	161.6K	3.23%	3.01%	2.83%
La Unión	\$3,481.8M	57.5K	235.8K	3.02%	4.12%	4.13%
Cuscatlán	\$3,218.8M	51.3K	231.4K	2.79%	3.67%	4.05%
Morazán	\$2,888.6M	43.2K	174.3K	2.50%	3.10%	3.05%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MCF	\$38,046.5M	303.6K	1,206.5K	32.95%	21.76%	21.11%
MR	\$30,643.8M	259.2K	1,229.3K	26.54%	18.57%	21.51%
S	\$15,352.8M	44.2K	0.0K	13.30%	3.17%	0.00%
MUR	\$10,202.9M	344.0K	1,446.3K	8.84%	24.64%	25.31%
RC	\$9,275.9M	27.5K	104.1K	8.03%	1.97%	1.82%
W	\$5,634.5M	172.0K	650.2K	4.88%	12.32%	11.38%
ADO/E	\$5,412.1M	209.2K	922.7K	4.69%	14.99%	16.15%
OT	\$888.6M	35.9K	155.8K	0.77%	2.57%	2.73%

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	\$13,578.6M	86,434	13.10%	6.56%
MR	MR/LWAL+CDL+DUL/HEX:2/RES	\$10,529.5M	67,025	10.16%	5.09%
	MR/LWAL+CDM+DUM/HEX:2/RES	\$9,465.3M	60,251	9.13%	4.57%
MCF	MCF/LWAL+CDM+DUM/HEX:2/RES	\$7,683.5M	48,909	7.41%	3.71%
	MCF/LWAL+CDL+DUL/HEX:1/RES	\$6,405.4M	73,392	6.18%	5.57%
MUR	MUR/LWAL+DNO/HEX:1/RES	\$5,111.3M	206,699	4.93%	15.69%
	MUR/LWAL+DNO/HEX:2/RES	\$5,091.6M	137,267	4.91%	10.42%
ADO/E	MUR+ADO/LWAL+DNO/HEX:1/RES	\$4,698.6M	190,008	4.53%	14.42%
MR	MR/LWAL+CDM+DUM/HEX:1/RES	\$3,951.6M	45,277	3.81%	3.44%
	MR/LWAL+CDL+DUL/HEX:1/RES	\$3,341.4M	67,563	3.22%	5.13%
S	S+SR/LFM+CDL+DUL/HEX:1/IND	\$2,686.8M	1,546	2.59%	0.12%
	S+SR/LFINF+CDL+DUL/HEX:1/IND	\$2,632.8M	568	2.54%	0.04%
MCF	MCF/LWAL+CDM+DUM/HEX:1/RES	\$2,175.8M	24,930	2.10%	1.89%
W	W+WS/LPB+CDL+DUL/HEX:1/RES	\$2,068.5M	83,649	2.00%	6.35%
MCF	MCF/LWAL+CDL+DUL/HEX:3/RES	\$1,872.7M	10,675	1.81%	0.81%
MR	MR/LWAL+CDL+DUL/HEX:3/RES	\$1,872.7M	10,675	1.81%	0.81%
MCF	MCF/LWAL+CDL+DUL/HEX:2/COM	\$1,839.8M	15,661	1.77%	1.19%
RC	CR/LDUAL+CDL+DUL/HEX:7/COM	\$1,822.5M	689	1.76%	0.05%
	CR/LDUAL+CDL+DUL/HBET:12,24/COM	\$1,514.8M	205	1.46%	0.02%
MR	MR/LWAL+CDM+DUM/HEX:3/RES	\$1,483.2M	8,455	1.43%	0.64%
RC	CR+PCPS/LFM+CDL+DUL/HEX:1/IND	\$1,430.8M	227	1.38%	0.02%
S	S+SL/LFM+CDL+DUL/HEX:1/COM	\$1,403.2M	20,884	1.35%	1.58%
MCF	MCF/LWAL+CDM+DUM/HEX:3/RES	\$1,402.2M	7,993	1.35%	0.61%
W	W+WWD/LWAL+CDL+DUL/HEX:1/RES	\$1,365.0M	55,201	1.32%	4.19%
	W+WLI/LWAL+CDL+DUL/HEX:1/COM	\$1,194.4M	16,378	1.15%	1.24%
S	S+SR/LFINF+CDL+DUL/HEX:1/COM	\$1,150.5M	3,752	1.11%	0.28%
	S+SR/LFM+CDL+DUL/HEX:1/COM	\$1,150.5M	3,752	1.11%	0.28%
	S+SR/LFM+CDL+DUL/HEX:2/IND	\$966.5M	381	0.93%	0.03%
	S+SR/LFINF+CDL+DUL/HEX:2/IND	\$939.5M	136	0.91%	0.01%
OT	UNK/UNK+DNO/HEX:1/RES	\$888.6M	35,936	0.86%	2.73%
ADO/E	MUR+ADO/LWAL+DNO/HEX:2/RES	\$713.5M	19,236	0.69%	1.46%
MCF	MCF/LWAL+CDL+DUL/HEX:3/COM	\$637.1M	3,482	0.61%	0.26%
	MCF/LWAL+CDL+DUL/HEX:1/COM	\$613.3M	10,442	0.59%	0.79%

--