

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 = "Burkina_Faso"
```

Exposure files:
Exposure_Com_Burkina_Faso.csv
Exposure_Ind_Burkina_Faso.csv
Exposure_Res_Burkina_Faso.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	20.9M	3,520.5K	\$43,048.1M	94.90%	80.20%
Ind	0.0M	59.8K	\$4,367.7M	1.61%	8.14%
Com	0.0M	129.4K	\$6,256.9M	3.49%	11.66%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	299.0M	\$43,132.2M	81	\$180
Res	257.9M	\$35,565.2M	73	\$167
Ind	17.1M	\$2,884.7M	285	\$256
Com	24.0M	\$4,682.3M	185	\$261

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Centre	\$9,923.8M	685.8K	3,862.8K	18.49%	18.49%	18.49%
Hauts-Bassins	\$5,831.9M	403.1K	2,270.2K	10.87%	10.86%	10.86%
Est	\$4,777.0M	330.1K	1,859.6K	8.90%	8.90%	8.90%
Boucle du Mouhoun	\$4,557.7M	315.0K	1,774.2K	8.49%	8.49%	8.49%
Centre-Nord	\$4,082.1M	282.1K	1,589.1K	7.61%	7.61%	7.61%
Centre-Est	\$4,062.0M	280.7K	1,581.3K	7.57%	7.57%	7.57%
Centre-Ouest	\$4,031.9M	278.7K	1,569.6K	7.51%	7.51%	7.51%
Nord	\$3,744.2M	258.8K	1,457.6K	6.98%	6.98%	6.98%
Sahel	\$3,539.9M	244.7K	1,378.1K	6.60%	6.60%	6.60%
Cascades	\$2,682.3M	185.4K	1,044.3K	5.00%	5.00%	5.00%
Sud-Ouest	\$2,200.2M	152.1K	856.8K	4.10%	4.10%	4.10%
Plateau Central	\$2,170.9M	150.1K	845.4K	4.04%	4.05%	4.05%
Centre-Sud	\$2,068.8M	143.1K	806.0K	3.85%	3.86%	3.86%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column						
	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
ADO/E	\$28,231.7M	2,316,834	13,123.2K	52.60%	62.45%	62.81%
MUR	\$14,475.4M	710,528	3,815.5K	26.97%	19.15%	18.26%
W	\$5,748.4M	562,228	3,284.4K	10.71%	15.16%	15.72%
RC	\$2,054.5M	45,865	328.6K	3.83%	1.24%	1.57%
MCF	\$1,681.8M	56,829	328.6K	3.13%	1.53%	1.57%
S	\$1,470.3M	14,970	0.0K	2.74%	0.40%	0.00%
OT	\$10.5M	2,475	14.5K	0.02%	0.07%	0.07%

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	E+ETO/LWAL+CDN/H:1/RES	\$11,249.5M	1,322,694	23.44%	37.88%
	MUR+ADO/LWAL+CDN/H:2/RES	\$6,974.8M	404,601	14.53%	11.59%
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$5,342.6M	278,927	11.13%	7.99%
ADO/E	MUR+ADO/LWAL+CDN/H:1/RES	\$4,235.2M	414,976	8.82%	11.88%
W	W+WWD/LWAL+CDN/H:1/RES	\$3,320.5M	390,423	6.92%	11.18%
MUR	MUR+CB/LWAL+CDN/H:1/RES	\$3,244.1M	286,076	6.76%	8.19%
W	W+WWD/LWAL+CDN/H:2/RES	\$2,343.6M	163,141	4.88%	4.67%
ADO/E	MUR+ADO/LWAL+CDN/H:2/COM	\$2,145.4M	33,610	4.47%	0.96%
	MUR+ADO/LWAL+CDN/H:1/COM	\$2,089.5M	67,242	4.35%	1.93%
MUR	MUR+CB/LWAL+CDN/H:1/IND	\$1,365.5M	27,999	2.84%	0.80%
	MUR+CB/LWAL+CDN/H:2/IND	\$993.1M	9,334	2.07%	0.27%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$922.1M	5,460	1.92%	0.16%
MCF	MCF/LWAL+CDL/H:2/RES	\$750.1M	26,107	1.56%	0.75%
MUR	MUR+CB/LWAL+CDN/HBET:3-6/RES	\$706.3M	3,766	1.47%	0.11%
RC	CR/LFINF+CDL/H:3/RES	\$674.6M	16,229	1.41%	0.46%
MUR	MUR+CB/LWAL+CDN/H:2/COM	\$555.5M	6,959	1.16%	0.20%
RC	CR/LFINF+CDL/H:2/RES	\$549.1M	20,303	1.14%	0.58%
MUR	MUR+CB/LWAL+CDN/H:1/COM	\$541.0M	13,930	1.13%	0.40%

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