

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 = "Uganda"
```

Exposure files:
Exposure_Com_Uganda.csv
Exposure_Ind_Uganda.csv
Exposure_Res_Uganda.csv

Sanity checks and formats

Uganda
Exposure/Exposure/Exposure_Com_Uganda.csv
Exposure/Exposure/Exposure_Ind_Uganda.csv
Exposure/Exposure/Exposure_Res_Uganda.csv
Occupants / Dwellings = 4.5
Reference avg household size (2019) = 4.52
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	45.7M	9,620.5K	\$157.1B	97.28%	90.10%
Ind	0.0M	66.0K	\$5.5B	0.67%	3.15%
Com	0.0M	203.0K	\$11.8B	2.05%	6.74%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	843.3M	\$142,057.0M	85	\$207
Res	786.3M	\$129,686.6M	82	\$200
Ind	18.8M	\$3,604.4M	285	\$293
Com	38.3M	\$8,766.0M	189	\$307

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Central Region	\$48.5B	2,749.5K	12.7M	27.80%	27.80%	27.80%
Eastern Region	\$45.6B	2,583.9K	11.9M	26.13%	26.13%	26.13%
Western Region	\$44.4B	2,518.3K	11.6M	25.46%	25.46%	25.46%
Northern Region	\$35.9B	2,037.8K	9.4M	20.61%	20.61%	20.61%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
ADO/E	\$74,427.3M	4,289.7K	20,067.2K	42.68%	43.38%	43.93%
MUR	\$41,007.7M	2,004.7K	8,863.7K	23.52%	20.27%	19.41%
W	\$32,835.9M	2,842.0K	13,188.2K	18.83%	28.74%	28.87%
RC	\$13,781.8M	291.4K	1,590.7K	7.90%	2.95%	3.48%
MCF	\$9,899.6M	316.4K	1,394.3K	5.68%	3.20%	3.05%
S	\$1,808.8M	16.5K	0.0K	1.04%	0.17%	0.00%
OT	\$611.3M	128.8K	573.3K	0.35%	1.30%	1.26%

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	\$38,918.3M	2,023,079	24.99%	21.87%
	MUR+ADO/LWAL+CDN/H:1/RES	\$23,632.0M	2,074,955	15.17%	22.43%
W	W+WWD/LWAL+CDN/H:1/RES	\$18,838.6M	1,984,899	12.10%	21.46%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$16,714.0M	781,955	10.73%	8.45%
W	W+WWD/LWAL+CDN/H:2/RES	\$13,296.1M	829,404	8.54%	8.97%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$10,149.1M	802,006	6.52%	8.67%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$5,145.3M	27,300	3.30%	0.30%
MCF	MCF/LWAL+CDL/H:2/RES	\$3,835.0M	119,611	2.46%	1.29%
RC	CR/LFINF+CDL/H:3/RES	\$3,813.4M	82,200	2.45%	0.89%
	CR/LFINF+CDL/H:2/RES	\$3,103.9M	102,859	1.99%	1.11%
ADO/E	MUR+ADO/LWAL+CDN/H:2/COM	\$3,090.9M	43,403	1.98%	0.47%
	MUR+ADO/LWAL+CDN/H:1/COM	\$3,010.3M	86,808	1.93%	0.94%
MCF	MCF/LWAL+CDL/H:1/RES	\$2,328.7M	122,677	1.50%	1.33%
MUR	MUR+CL/LWAL+CDN/HBET:3-6/RES	\$2,209.7M	10,552	1.42%	0.11%
RC	CR/LFINF+CDL/HBET:4-7/RES	\$1,701.4M	3,767	1.09%	0.04%
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$1,672.7M	78,257	1.07%	0.85%
	MUR+CL/LWAL+CDN/H:1/IND	\$1,658.3M	30,471	1.06%	0.33%
	MUR+CL/LWAL+CDN/H:2/COM	\$1,325.0M	14,884	0.85%	0.16%
	MUR+CL/LWAL+CDN/H:1/COM	\$1,290.4M	29,768	0.83%	0.32%

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