COUNTRY EXPOSURE MODEL

Review main statistic of a exposure model and create summaries for a given Country.

```
# Parameters
country = "Congo"
```

```
Exposure files:
    Exposure_Com_Congo.csv
    Exposure_Com_Democratic_Republic_of_the_Congo.csv
    Exposure_Ind_Congo.csv
    Exposure_Ind_Democratic_Republic_of_the_Congo.csv
    Exposure_Res_Congo.csv
    Exposure_Res_Democratic_Republic_of_the_Congo.csv
```

Sanity checks and formats

Congo
```
    Exposure/Exposure/Exposure_Com_Congo.csv
    Exposure/Exposure/Exposure_Ind_Congo.csv
    Exposure/Exposure/Exposure_Res_Congo.csv
    Occupants / Dwellings = 4.3
    Reference avg household size (2019) = 4.3
    Population (exposure / UN_2021) = 0.97
    Exposure models  OK
```

Exposure at National level

Summary by occupancy type

OCCUPANCY	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
Res	5.5M	1,218.8K	$20,035.8M	96.06%	85.88%
Ind	0.0M	15.5K	$1,290.0M	1.22%	5.53%
Com	0.0M	34.5K	$2,004.3M	2.72%	8.59%

Other metrics to consider

OCCUPANCY	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
Total	109,368.9K	$18,687.8M	86	$213
Res	98,486.8K	$16,374.0M	81	$203
Ind	4,403.8K	$842.4M	284	$293
Com	6,478.2K	$1,471.4M	188	$309

Exposure summary at Admin level 1

NAME_1	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
Brazzaville	$7,185.3M	390,358	1,693.0K	30.80%	30.77%	30.77%
Likouala	$6,515.9M	354,039	1,535.5K	27.93%	27.90%	27.90%
Kouilou	$2,099.7M	114,197	495.2K	9.00%	9.00%	9.00%
Bouenza	$1,543.4M	83,963	364.2K	6.62%	6.62%	6.62%
Cuvette	$1,025.4M	55,834	242.1K	4.40%	4.40%	4.40%
Cuvette-Ouest	$991.8M	53,990	234.2K	4.25%	4.26%	4.26%
L�koumou	$925.9M	50,406	218.6K	3.97%	3.97%	3.97%
Niari	$874.3M	47,625	206.4K	3.75%	3.75%	3.75%
Pointe-Noire	$859.7M	46,814	203.0K	3.68%	3.69%	3.69%
Plateaux	$644.4M	35,149	152.5K	2.76%	2.77%	2.77%
Sangha	$620.9M	33,890	147.0K	2.66%	2.67%	2.67%
Pool	$43.3M	2,503	10.8K	0.19%	0.20%	0.20%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

MACRO_TAXO	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
ADO/E	$7,693.7M	482,899	2,076.6K	32.98%	38.06%	37.74%
MUR	$7,103.6M	341,115	1,462.8K	30.45%	26.89%	26.58%
W	$5,855.6M	361,486	1,578.1K	25.10%	28.49%	28.68%
RC	$1,495.0M	30,662	171.6K	6.41%	2.42%	3.12%
MCF	$621.0M	19,008	85.8K	2.66%	1.50%	1.56%
S	$421.2M	3,882	0.0K	1.81%	0.31%	0.00%
OT	$140.1M	29,716	127.8K	0.60%	2.34%	2.32%

Exposure by taxonomy

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

MACRO_TAXO	TAXONOMY	COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
ADO/E	MUR+ADO/LWAL+CDN/H:2/RES	$3,211.9M	168,112	15.33%	14.14%
	MUR+ADO/LWAL+CDN/H:1/RES	$1,950.3M	172,417	9.31%	14.50%
MUR	MUR+CB/LWAL+CDN/H:2/RES	$1,731.7M	81,570	8.27%	6.86%
W	W+WWD/LWAL+CDN/H:1/RES	$1,528.6M	162,158	7.30%	13.64%
MUR	MUR+CL/LWAL+CDN/H:2/RES	$1,487.5M	70,066	7.10%	5.89%
W	W/LWAL+CDL/H:2/RES	$1,344.7M	52,786	6.42%	4.44%
ADO/E	E+ETO/LWAL+CDN/H:1/RES	$1,091.8M	115,826	5.21%	9.74%
W	W+WWD/LWAL+CDN/H:2/RES	$1,078.8M	67,756	5.15%	5.70%
MUR	MUR+CB/LWAL+CDN/H:1/RES	$1,051.5M	83,665	5.02%	7.04%
	MUR+CL/LWAL+CDN/H:1/RES	$903.2M	71,862	4.31%	6.04%
W	W/LWAL+CDL/H:3/RES	$825.9M	21,093	3.94%	1.77%
	W/LWAL+CDL/H:1/RES	$816.5M	54,139	3.90%	4.55%
ADO/E	MUR+ADO/LWAL+CDN/H:2/COM	$468.7M	6,627	2.24%	0.56%
	MUR+ADO/LWAL+CDN/H:1/COM	$456.5M	13,257	2.18%	1.12%
	MUR+ADO/LWAL+CDN/HBET:3-6/RES	$424.6M	2,266	2.03%	0.19%
RC	CR/LFINF+CDL/H:3/RES	$376.1M	8,164	1.80%	0.69%
	CR/LFINF+CDL/H:2/RES	$306.2M	10,216	1.46%	0.86%
MUR	MUR+CL/LWAL+CDN/H:1/IND	$256.6M	4,754	1.22%	0.40%
	MUR+CB/LWAL+CDN/HBET:3-6/RES	$228.9M	1,096	1.09%	0.09%
	MUR+CL/LWAL+CDN/HBET:3-6/RES	$196.5M	946	0.94%	0.08%
	MUR+CL/LWAL+CDN/H:2/IND	$186.6M	1,589	0.89%	0.13%
RC	CR/LFINF+CDL/HBET:4-7/RES	$167.8M	374	0.80%	0.03%
S	S/LFM+CDL/H:1/IND	$148.1M	1,764	0.71%	0.15%
MUR	MUR+CB/LWAL+CDN/H:1/IND	$145.2M	2,685	0.69%	0.23%
	MUR+CB/LWAL+CDN/H:2/COM	$144.4M	1,632	0.69%	0.14%
	MUR+CB/LWAL+CDN/H:1/COM	$140.6M	3,264	0.67%	0.27%
MCF	MCF+CB/LWAL+CDL/H:2/RES	$139.4M	4,375	0.67%	0.37%
	MCF+CL/LWAL+CDL/H:2/RES	$139.4M	4,375	0.67%	0.37%