

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 S
hapely GEOS version (3.9.1-CAPI-1.14.2) is incompatible with the GEOS version PyGEOS was compil
ed with (3.10.1-CAPI-1.16.0). Conversions between both will be slow.
  warnings.warn(
```

```
# Parameters
country = "Mauritania"
```

Exposure files:
Exposure_Com_Mauritania.csv
Exposure_Ind_Mauritania.csv
Exposure_Res_Mauritania.csv

Sanity checks and formats

Mauritania
Exposure/Exposure/Exposure_Com_Mauritania.csv
Exposure/Exposure/Exposure_Ind_Mauritania.csv
Exposure/Exposure/Exposure_Res_Mauritania.csv
Occupants / Dwellings = 4.0
Reference avg household size (2019) = 4.0
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	4,616.3K	1,097.6K	\$15,907.8M	96.27%	86.07%
Ind	0.0K	11.7K	\$834.9M	1.03%	4.52%
Com	0.0K	30.8K	\$1,739.5M	2.70%	9.41%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	98,363.3K	\$15,184.2M	86	\$188
Res	89,172.6K	\$13,364.6M	81	\$178
Ind	3,324.5K	\$548.5M	284	\$251
Com	5,866.1K	\$1,271.0M	190	\$297

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Nouakchott	\$5,590.2M	344.6K	1,395.2K	30.25%	30.22%	30.22%
Hodh Ech Chargi	\$2,534.7M	156.3K	632.7K	13.71%	13.71%	13.71%
Gorgol	\$1,672.0M	103.1K	417.4K	9.05%	9.04%	9.04%
Assaba	\$1,613.5M	99.5K	402.8K	8.73%	8.73%	8.73%
Brakna	\$1,499.1M	92.5K	374.4K	8.11%	8.11%	8.11%
Hodh El Gharbi	\$1,487.9M	91.8K	371.6K	8.05%	8.05%	8.05%
Guidimakha	\$1,408.1M	86.9K	351.6K	7.62%	7.62%	7.62%
Trarza	\$1,152.1M	71.1K	287.8K	6.23%	6.23%	6.23%
Dakhlet-Nouadhibou	\$566.1M	35.0K	141.7K	3.06%	3.07%	3.07%
Tagant	\$348.4M	21.6K	87.3K	1.89%	1.89%	1.89%
Tiris-Zemmour	\$253.1M	15.7K	63.7K	1.37%	1.38%	1.38%
Adrar	\$249.3M	15.5K	62.7K	1.35%	1.36%	1.36%
Inchiri	\$107.6M	6.8K	27.3K	0.58%	0.59%	0.59%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$9,553.6M	543,866	2,159.6K	51.69%	47.70%	46.78%
W	\$2,632.3M	120,644	494.0K	14.24%	10.58%	10.70%
ADO/E	\$2,586.1M	206,625	847.5K	13.99%	18.12%	18.36%
RC	\$1,465.5M	35,090	179.8K	7.93%	3.08%	3.89%
MCF	\$1,200.9M	43,574	179.8K	6.50%	3.82%	3.89%
OT	\$767.9M	187,348	755.6K	4.15%	16.43%	16.37%
S	\$276.0M	2,926	0.0K	1.49%	0.26%	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				
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$4,061.6M	219,994	24.53%	20.42%
	MUR+CB/LWAL+CDN/H:1/RES	\$2,466.3M	225,634	14.89%	20.94%
ADO/E	MUR+ADO/LWAL+CDN/H:2/RES	\$1,214.3M	73,082	7.33%	6.78%
W	W/LWAL+CDL/H:2/RES	\$1,063.7M	48,013	6.42%	4.46%
ADO/E	MUR+ADO/LWAL+CDN/H:1/RES	\$737.4M	74,953	4.45%	6.96%
OT	MATO/RES	\$712.1M	173,722	4.30%	16.13%
W	W/LWAL+CDL/H:3/RES	\$653.4M	19,187	3.95%	1.78%
	W/LWAL+CDL/H:1/RES	\$645.9M	49,240	3.90%	4.57%
MCF	MCF/LWAL+CDL/H:2/RES	\$563.6M	20,354	3.40%	1.89%
MUR	MUR+CB/LWAL+CDN/HBET:3-6/RES	\$537.0M	2,964	3.24%	0.28%
RC	CR/LFINF+CDL/H:3/RES	\$506.9M	12,649	3.06%	1.17%
	CR/LFINF+CDL/H:2/RES	\$412.6M	15,832	2.49%	1.47%
MUR	MUR+CB/LWAL+CDN/H:2/COM	\$393.2M	5,115	2.37%	0.47%
	MUR+CB/LWAL+CDN/H:1/COM	\$383.0M	10,230	2.31%	0.95%
MCF	MCF/LWAL+CDL/H:1/RES	\$342.3M	20,874	2.07%	1.94%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$337.3M	18,271	2.04%	1.70%
RC	CR/LFINF+CDL/HBET:4-7/RES	\$226.2M	579	1.37%	0.05%
ADO/E	EWV/LN+CDN/H:1/RES	\$211.0M	51,467	1.27%	4.78%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$204.8M	18,738	1.24%	1.74%
	MUR+CB/LWAL+CDN/H:1/IND	\$173.3M	3,684	1.05%	0.34%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$160.5M	984	0.97%	0.09%
MCF	MCF/LWAL+CDL/HBET:3-6/RES	\$157.3M	580	0.95%	0.05%
MUR	MUR+STDRE/LWAL+CDN/H:2/RES	\$146.3M	7,922	0.88%	0.74%
	MUR+CB/LWAL+CDN/H:2/IND	\$126.0M	1,225	0.76%	0.11%
ADO/E	MUR+ADO/LWAL+CDN/H:2/COM	\$124.2M	2,017	0.75%	0.19%