

# 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 = "Comoros"
```

Exposure files:  
Exposure\_Com\_Comoros.csv  
Exposure\_Ind\_Comoros.csv  
Exposure\_Res\_Comoros.csv

## Sanity checks and formats

Comoros  
Exposure/Exposure/Exposure\_Com\_Comoros.csv  
Exposure/Exposure/Exposure\_Ind\_Comoros.csv  
Exposure/Exposure/Exposure\_Res\_Comoros.csv  
Occupants / Dwellings = 5.5  
Reference avg household size (2019) = 5.38  
Population (exposure / UN\_2021) = 0.96  
Exposure models OK

## Exposure at National level

### Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	855.9K	150,929	\$2,490.2M	97.42%	89.06%
Ind	0.0K	1,111	\$99.2M	0.72%	3.55%
Com	0.0K	2,882	\$206.8M	1.86%	7.40%

### Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	12,615.6K	\$2,270.2M	81	\$222
Res	11,758.8K	\$2,058.2M	78	\$212
Ind	313.7K	\$65.5M	282	\$316
Com	543.0K	\$146.5M	188	\$381

## Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Grande Comore	\$1,458.1M	80.7K	445.8K	52.15%	52.09%	52.09%
Moheli	\$1,127.9M	62.5K	345.1K	40.34%	40.31%	40.31%
Anjouan	\$210.2M	11.8K	65.0K	7.52%	7.60%	7.60%

## Exposure by simplified taxonomy

Adding `MACRO\_TAX0` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$1,038.4M	47,220	259.8K	37.13%	30.48%	30.35%
W	\$802.7M	44,502	244.2K	28.71%	28.73%	28.53%
ADO/E	\$697.6M	46,932	262.3K	24.95%	30.29%	30.65%
RC	\$85.3M	1,589	11.1K	3.05%	1.03%	1.29%
MCF	\$69.6M	1,968	11.0K	2.49%	1.27%	1.29%
OT	\$68.0M	12,433	67.5K	2.43%	8.03%	7.88%
S	\$34.7M	278	0.0K	1.24%	0.18%	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				
ADO/E	MUR+ADO/LWAL+CDN/H:2/RES	\$326.0M	14,706	12.97%	9.94%
W	W+WWD/LWAL+CDN/H:1/RES	\$254.8M	23,293	10.14%	15.75%
MUR	MUR+CB/LWAL+CDN/H:2/RES	\$223.0M	9,055	8.87%	6.12%
ADO/E	MUR+ADO/LWAL+CDN/H:1/RES	\$198.0M	15,083	7.88%	10.20%
W	W+WWD/LWAL+CDN/H:2/RES	\$179.8M	9,732	7.15%	6.58%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$144.0M	5,849	5.73%	3.95%
MUR	MUR+CB/LWAL+CDN/H:1/RES	\$135.4M	9,287	5.39%	6.28%
W	W/LWAL+CDL/H:2/RES	\$127.9M	4,324	5.09%	2.92%
MUR	MUR+STRUB/LWAL+CDN/H:2/RES	\$109.3M	5,547	4.35%	3.75%
ADO/E	EWV/LN+CDN/H:1/RES	\$88.6M	16,207	3.53%	10.96%
MUR	MUR+CL/LWAL+CDN/H:1/RES	\$87.5M	5,997	3.48%	4.05%
W	W/LWAL+CDL/H:3/RES	\$78.5M	1,729	3.12%	1.17%
W	W/LWAL+CDL/H:1/RES	\$77.6M	4,437	3.09%	3.00%
MUR	MUR+STRUB/LWAL+CDN/H:1/RES	\$66.4M	5,690	2.64%	3.85%
OT	ME+MEO/LWAL+CDN/H:1/RES	\$50.8M	9,293	2.02%	6.28%
MUR	MUR+STDRE/LWAL+CDN/H:2/RES	\$43.9M	1,781	1.75%	1.20%
ADO/E	MUR+ADO/LWAL+CDN/HBET:3-6/RES	\$43.1M	200	1.71%	0.14%
W	W/LWAL+CDL/H:2/COM	\$32.7M	298	1.30%	0.20%
W	W/LWAL+CDL/H:1/COM	\$31.8M	590	1.27%	0.40%
RC	CR/LFINF+CDL/H:3/RES	\$30.9M	578	1.23%	0.39%
MUR	MUR+CB/LWAL+CDN/HBET:3-6/RES	\$29.5M	122	1.17%	0.08%
MUR	MUR+STDRE/LWAL+CDN/H:1/RES	\$26.7M	1,828	1.06%	1.24%
RC	CR/LFINF+CDL/H:2/RES	\$25.1M	722	1.00%	0.49%
MCF	MCF+CB/LWAL+CDL/H:2/RES	\$24.2M	654	0.96%	0.44%
ADO/E	MUR+ADO/LWAL+CDN/H:2/COM	\$20.0M	242	0.79%	0.16%
W	W/LWAL+CDL/H:3/COM	\$19.6M	99	0.78%	0.07%
ADO/E	MUR+ADO/LWAL+CDN/H:1/COM	\$19.4M	487	0.77%	0.33%
MUR	MUR+CL/LWAL+CDN/HBET:3-6/RES	\$19.0M	78	0.76%	0.05%

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