

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 = "Isle_of_Man"
```

Exposure files:
Exposure_Com_Isle_of_Man.csv
Exposure_Ind_Isle_of_Man.csv
Exposure_Res_Isle_of_Man.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	85.0K	15,624	\$5,151.5M	78.48%	54.81%
Ind	34.0K	908	\$529.1M	4.56%	5.63%
Com	34.0K	3,376	\$3,719.0M	16.96%	39.57%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	3,412.7K	\$6,192.4M	171	\$2,754
Res	2,617.4K	\$4,121.2M	168	\$1,968
Ind	109.0K	\$211.7M	120	\$4,854
Com	686.2K	\$1,859.5M	203	\$5,419

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Isle_of_Man	\$9.4B	19.9K	153.0K	100.00%	100.00%	100.00%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$7,135.6M	17,896	104.4K	75.91%	89.89%	68.26%
RC	\$1,915.3M	1,404	25.8K	20.38%	7.05%	16.85%
S	\$348.8M	609	22.8K	3.71%	3.06%	14.89%

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+CL/LWAL+CDN/HBET:1-3/RES	\$5,094.1M	15,571	61.84%	84.82%
	MUR+CL/LWAL+CDN/H:2/COM	\$1,119.7M	1,259	13.59%	6.86%
RC	CR/LFINF+CDM/HBET:3-5/COM	\$1,101.3M	461	13.37%	2.51%
MUR	MUR+CL/LWAL+CDN/H:1/COM	\$921.8M	1,066	11.19%	5.81%

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