

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 = "Niue"
```

Exposure files:
Exposure_Com_Niue.csv
Exposure_Ind_Niue.csv
Exposure_Res_Niue.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	1,611	919	\$199,839.6K	90.90%	82.80%
Ind	0	9	\$3,919.4K	0.89%	1.62%
Com	0	83	\$37,579.2K	8.21%	15.57%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	129,231	\$167,140.8K	128	\$1,867
Res	107,245	\$140,594.6K	117	\$1,863
Ind	3,377	\$2,372.4K	375	\$1,161
Com	18,609	\$24,173.8K	224	\$2,019

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Niue	\$241.3M	1,011	1,611	100.00%	100.00%	100.00%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
W	\$119,272.0K	534	829	49.42%	52.82%	51.47%
MCF	\$108,944.6K	457	761	45.14%	45.20%	47.23%
RC	\$10,276.9K	11	16	4.26%	1.09%	0.98%
S	\$2,844.8K	9	5	1.18%	0.89%	0.33%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MCF	MCF/LWAL+DUL/H:1/RES	\$95.4M	434	44.40%	44.88%
W	W+WLI/LFBR+DUL/H:1/RES	\$90.7M	458	42.21%	47.36%
	W+WLI/LFBR+DUL/H:1/COM	\$15.5M	54	7.23%	5.58%
MCF	MCF/LWAL+DUL/H:1/COM	\$13.2M	21	6.16%	2.17%

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