## **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 = "Bahamas"

Res

**BUILDINGS\_%** 

**BUILDINGS\_%** 

COST\_USD\_%

**OCCUPANTS\_%** 

Exposure files:

Exposure Com Bahamas.csv Exposure Ind Bahamas.csv

Exposure\_Res\_Bahamas.csv

### Sanity checks and formats **Bahamas**

Exposure/Exposure Com Bahamas.csv Exposure/Exposure\_Ind\_Bahamas.csv Exposure/Exposure Res Bahamas.csv Occupants / Dwellings = 4.0Reference avg household size (2019) = 3.4Population (exposure / UN 2021) = 0.99

WARNING: ADM 1 with empty values: **OCCUPANCY** Com Ind

NaN NaN BHS-ADM1-57655419B29758972 Moore's Island Mangrove Cay Mangrove Cay BHS-ADM1-57655419B38364826 NaN BHS-ADM1-57655419B42761212 NaN NaN Rum Cay BHS-ADM1-57655419B4479367 South Abaco NaN South Abaco BHS-ADM1-57655419B45517779 Harbour Island NaN Harbour Island BHS-ADM1-57655419B6070116 Acklins NaN Acklins Grand Cay BHS-ADM1-57655419B62918977 NaN NaN BHS-ADM1-57655419B66050450 NaN NaN Ragged Island BHS-ADM1-57655419B74847134 NaN NaN Spanish Wells Exposure models OK

**Exposure at National level** 

OCCUPANCY

# Summary by occupancy type

### **OCCUPANTS**

occo: Aite:							
Res	391.5K	97,256	\$18,370.5M	94.64%	51.58%		
Ind	0.0K	1,127	\$2,423.7M	1.10%	6.81%		
Com	0.0K	4,377	\$14,821.2M	4.26%	41.61%		
Other metrics to consider							

**BUILDINGS** 

#### **OCCUPANCY**

Total

57,171.0K \$21,790.8M \$623

COST\_USD\_%

AREA\_SQM COST\_BUILDING\_USD AVG\_BUILDING\_AREA\_SQM AVG\_COST\_PER\_AREA\_USD

COST\_USD

Res	48,189.1K	\$11,669.3M	495	\$381		
Ind	4,191.4K	\$1,207.9M	3,719	\$578		
Com	4,790.5K	\$8,913.6M	1,094	\$3,094		
Exposure summary at Admin level 1						

**OCCUPANTS** 

## NAME\_1

**BUILDINGS** 

**COST USD** 

New \$25,142,142.2K 71,743 289,276 70.59% 69.82% 73.90% **Providence** City of 12.96% \$4,614,292.9K 12,485 49,962 12.15% 12.76% Freeport **East Grand** \$1,240,760.3K 3,874 10,482 3.48% 3.77% 2.68% Bahama North \$1,053,326.3K 3,176 8,585 2.96% 3.09% 2.19% **Andros** Central \$779,854.5K 2,662 7,170 2.19% 2.59% 1.83% **Abaco** North \$588,068.9K 1,588 6,402 1.65% 1.55% 1.64% Abaco **Black Point** 3.200 \$356,811.3K 1,184 1.00% 1.15% 0.82% Long \$342,819.3K 1,240 3,379 0.96% 1.21% 0.86% **Island** 2,221 0.91% 0.81% Cat Island \$323,392.5K 830 0.57% North \$323,175.6K 1,165 3,176 0.91% 1.13% 0.81% **Eleuthera Biminis** \$164,434.3K 599 1,623 0.46% 0.58% 0.41% \$119,499.7K Inagua 501 1,351 0.34% 0.49% 0.35% San \$113,724.6K 459 1,256 0.32% 0.45% 0.32% Salvador **Berry** \$89,448.1K 224 605 0.25% 0.22% 0.15% Islands South \$88,191.7K 216 580 0.25% 0.21% 0.15% Abaco **Acklins** \$66,707.3K 185 499 0.19% 0.18% 0.13% Crooked 0.13% \$66,621.4K 185 499 0.19% 0.18% Island Mayaguana \$58,146.1K 134 349 0.16% 0.13% 0.09% South \$30,653.4K 99 270 0.09% 0.10% 0.07% **Andros** Central \$25,152.8K 109 292 0.07% 0.11% 0.07% **Andros Mangrove** \$16,971.8K 46 126 0.05% 0.04% 0.03% Harbour \$2,804.9K 13 35 0.01% 0.01% 0.01% Island

#### COST\_USD **BUILDINGS OCCUPANTS** MACRO\_TAXO

**Exposure by simplified taxonomy** 

\$2,345.4K

\$1,982.2K

\$1,471.4K

\$1,334.9K

\$1,169.0K

12

10

8

7

6

Adding `MACRO TAXO` column

Ragged

Island **Spanish** 

Wells

**Rum Cay** 

Moore's

**Grand Cay** 

**Island** 

RC	\$13,768.6M	2,432	0.0K	38.66%	2.37%	0.00%
W	\$10,385.8M	51,365	142.1K	29.16%	49.99%	<mark>36</mark> .30%
MR	\$6,470.0M	34,254	214.1K	18.17%	<b>33</b> .33%	54.70%
S	\$2,478.4M	1,859	0.0K	6.96%	1.81%	0.00%
ОТ	\$2,363.3M	12,512	35.2K	6.64%	12.18%	9.00%
MCF	\$149.1M	338	0.0K	0.42%	0.33%	0.00%
Exposure by taxonomy						

35

30

22

20

17

0.01%

0.01%

0.00%

0.00%

0.00%

COST\_USD\_%

0.01%

0.01%

0.01%

0.01%

0.01%

**BUILDINGS %** 

0.01%

0.01%

0.01%

0.01%

0.00%

**OCCUPANTS\_%** 

ОТ

Showing only taxonomies that represent 90% of the total `COST\_USD` COST\_USD BUILDINGS COST\_USD\_% BUILDINGS\_%

UNK/UNK+DNO/HEX:1/RES

MACRO_TAXO	TAXONOMY				
W	W+WLI/LWAL+CDL+DUL/HEX:1/RES	\$9,537.1M	50,490	30.49%	51.38%
RC	CR/LFINF+CDM+DUM/HEX:2/COM	\$7,938.0M	350	25.38%	0.36%
MR	MR/LWAL+CDL+DUL/HEX:1/RES	\$6,470.0M	34,254	20.69%	34.86%
RC	CR/LFINF+CDM+DUM/HEX:4/COM	\$4,966.9M	657	15.88%	0.67%

\$2,363.3M

12,512

7.56%

12.73%