

# 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 = "Bolivia"
```

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

## Sanity checks and formats

## Exposure at National level

### Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	11.8M	3,019.0K	\$137,422.9M	95.56%	83.64%
Ind	0.0M	13.0K	\$2,739.7M	0.41%	1.67%
Com	0.0M	127.4K	\$24,137.3M	4.03%	14.69%

### Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	271,230.7K	\$123,958.1M	86	\$606
Res	235,613.0K	\$105,811.3M	78	\$583
Ind	4,177.2K	\$1,483.3M	321	\$656
Com	31,440.6K	\$16,663.5M	247	\$768

## Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Santa Cruz	\$42,146.2M	770.3K	3,363.0K	25.65%	24.38%	28.43%
La Paz	\$41,084.7M	880.4K	3,064.4K	25.01%	27.86%	25.91%
Cochabamba	\$27,120.9M	574.1K	2,095.8K	16.51%	18.17%	17.72%
Potosi	\$15,615.4M	274.4K	864.1K	9.50%	8.68%	7.30%
Chuquisaca	\$10,815.8M	178.2K	642.2K	6.58%	5.64%	5.43%
Oruro	\$10,751.1M	178.6K	537.4K	6.54%	5.65%	4.54%
Tarija	\$8,996.5M	154.3K	584.4K	5.48%	4.88%	4.94%
Beni	\$5,955.5M	116.4K	535.6K	3.62%	3.68%	4.53%
Pando	\$1,813.6M	32.9K	142.3K	1.10%	1.04%	1.20%

## Exposure by simplified taxonomy

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$52,301.1M	1,336,320	5,076.0K	31.83%	42.30%	42.91%
MCF	\$52,246.8M	465,380	1,931.7K	31.80%	14.73%	16.33%
ADO/E	\$35,454.2M	980,438	3,371.4K	21.58%	31.03%	28.50%
W	\$13,626.2M	296,339	1,129.7K	8.29%	9.38%	9.55%
RC	\$8,480.1M	32,644	139.8K	5.16%	1.03%	1.18%
OT	\$2,014.2M	46,999	180.5K	1.23%	1.49%	1.53%
S	\$177.3M	1,351	0.0K	0.11%	0.04%	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/LWAL+DNO/H:1/RES	\$34,303.8M	914.8K	23.47%	31.17%
ADO/E	MUR+ADO/LWAL+DNO/H:1/RES	\$31,517.4M	840.5K	21.56%	28.64%
MCF	MCF/LWAL+DNO/H:1/RES	\$16,504.6M	211.6K	11.29%	7.21%
W	W+WO/LN+DNO/H:1/RES	\$11,464.2M	248.4K	7.84%	8.47%
MCF	MCF/LWAL+DNO/H:2/RES	\$10,955.6M	70.2K	7.50%	2.39%
MUR	MUR/LWAL+DNO/H:2/RES	\$9,325.4M	331.6K	6.38%	11.30%
MCF	MCF/LWAL+DNO/H:2/COM6	\$7,787.7M	34.3K	5.33%	1.17%
MUR	MUR/LWAL+DNO/H:2/COM6	\$5,240.9M	23.1K	3.59%	0.79%
ADO/E	MUR+ADO/LWAL+DNO/H:2/RES	\$3,936.7M	140.0K	2.69%	4.77%
MCF	MCF/LWAL+DNO/H:1/COM6	\$3,932.9M	34.6K	2.69%	1.18%
RC	CR/LFINF+DNO/HBET:1-3/COM6	\$3,676.0M	17.2K	2.52%	0.59%
	MCF/LWAL+DNO/H:3/RES	\$3,089.4M	26.4K	2.11%	0.90%
MCF	MCF/LWAL+DUL/H:2/RES	\$2,323.9M	14.9K	1.59%	0.51%
	MCF/LWAL+DUL/H:1/RES	\$2,094.5M	26.9K	1.43%	0.92%

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