



# WORLD EVENTS & *CARBON EMISSIONS*

# (a bit of) CONTEXT ...

Carbon (CO<sub>2</sub>) Emissions | Key Global Warming contributor

The Paris Agreement | 2015 International Treaty on Climate Change

Current State of the World | Pandemic -- Coronavirus/COVID-19, since 2020



**Silver Lining** | Global Carbon Emissions are down by 6%, (International Energy Agency, (IEA))

**Back To Reality** | 2021: Global Carbon Emissions are set rebound at a record setting 5% (1.5 billion tonnes) as the World “re-opens”, (IEA)

**Record Setting** | 2010: Carbon Emissions increased by 5.9% (30 billion tonnes, (TIME, Reuters, IEA), at the turn of the Great Recession, 2007-2009

Is there a *link*  
between Carbon  
Emission  
activity and  
World Events?

# FOCUS *AREA(s)*:

- ❑ Carbon Emissions By Geographical Region
- ❑ Time Period: 2007 - 2012
- ❑ World Events:
  - ❑ Great Recession 2007-2009
  - ❑ Economic Crisis of 2012

# (THE) PROCESS

RESEARCH

SOURCE DATA

EDA

FINDINGS

## SOURCE DATA

Data Source | [Our World Data](#)

Initial Dataset | Over 20,000 rows , 60 columns

## RESEARCH

Starting Point | Carbon Emission & Pandemic Information | Review of various articles/reports, data sources

Making Sense (of Research) | Formulate Questions, redefined/"flushed-out" topic specifics & analysis focus

## (E)XPORATORY (D)ATA (A)NALYSIS

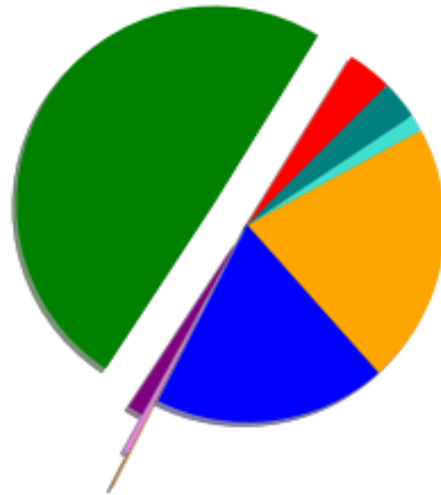
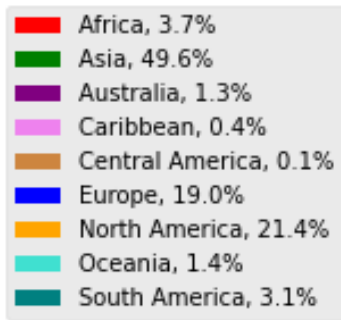
ETL (Extract - Transform - Load) | data clean-up, housed in SQL database,  
Analysis Dataset: 4,000+ Rows, 29 Columns

Testing Code: Trail & Error |  
Data Visualization |

## Methods & Tools

pgAdmin4 v5, PostgreSQL | Python, Python Libraries: Pandas, Matplotlib, SQLAlchemy, Psycopg2  
Microsoft Excel, PowerPoint | Jupyter Notebook | VS Code 1.54.3

Average of CO2 Emissions by Georgraphical Region, 2007-2012

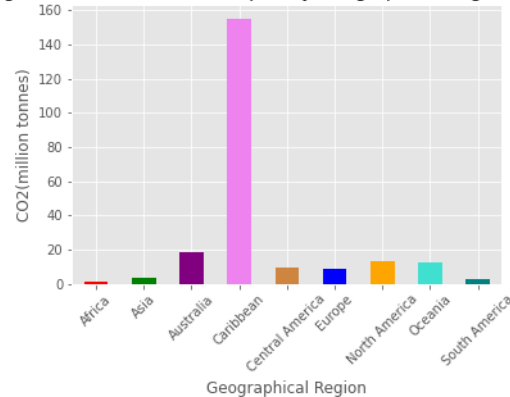


# FINDINGS

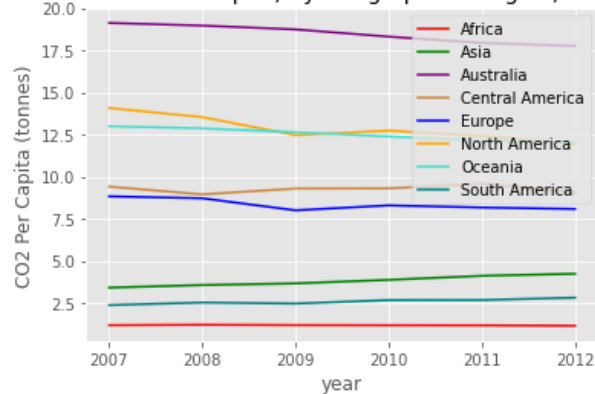
Asia, North America, and Europe ranked among the **Top 3 emitters** of Carbon Emissions

# ADDITIONAL FINDINGS, 2

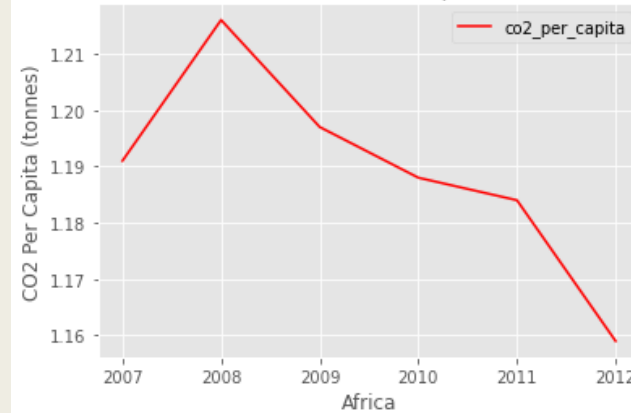
Average of CO2 Emissions Per Capita by Geographical Region, 2007-2012



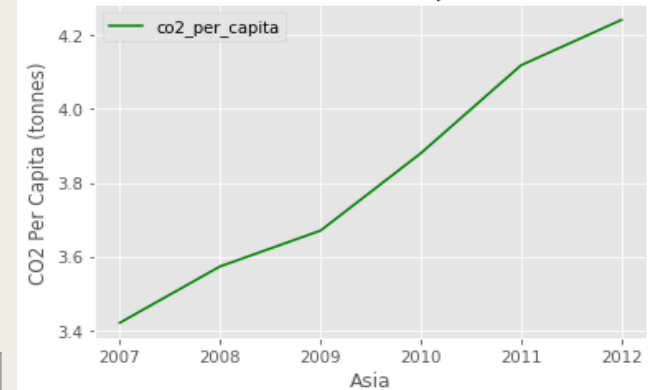
CO2 Emissions Per Capita, By Geographical Region, 2007-2012



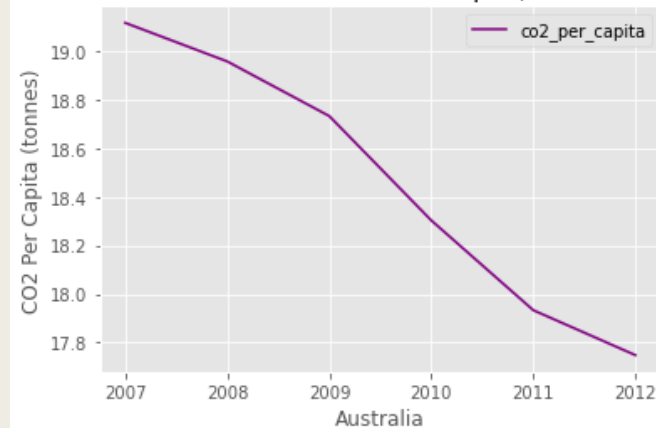
Africa CO2 Emissions Per Capita, 2007-2012



Asia CO2 Emissions Per Capita, 2007-2012



Australia CO2 Emissions Per Capita, 2007-2012

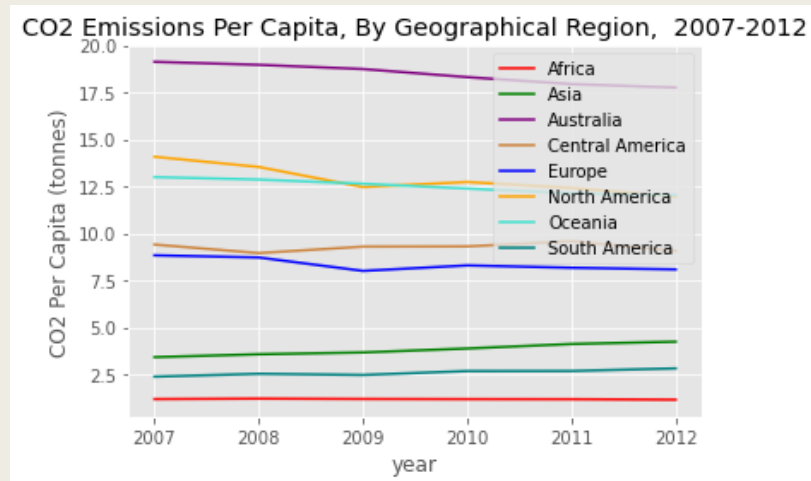
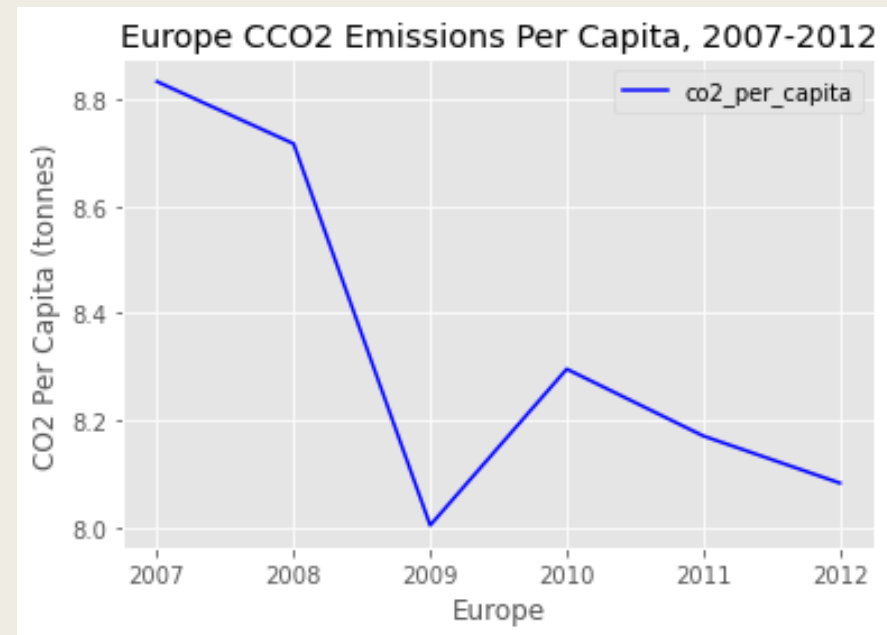
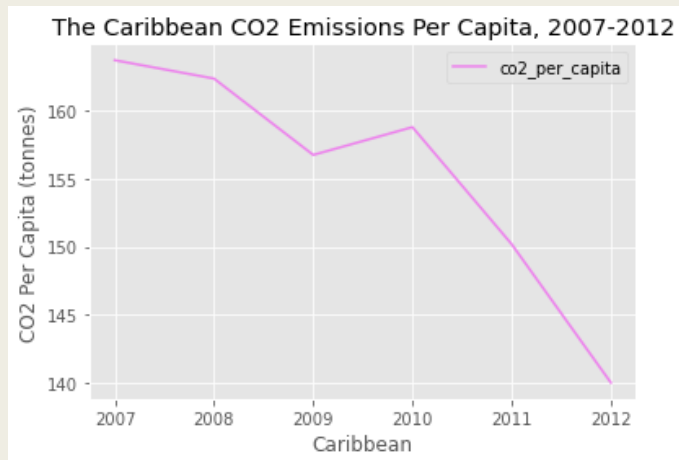


Africa's CO<sub>2</sub> output were *quite strong* in 2008

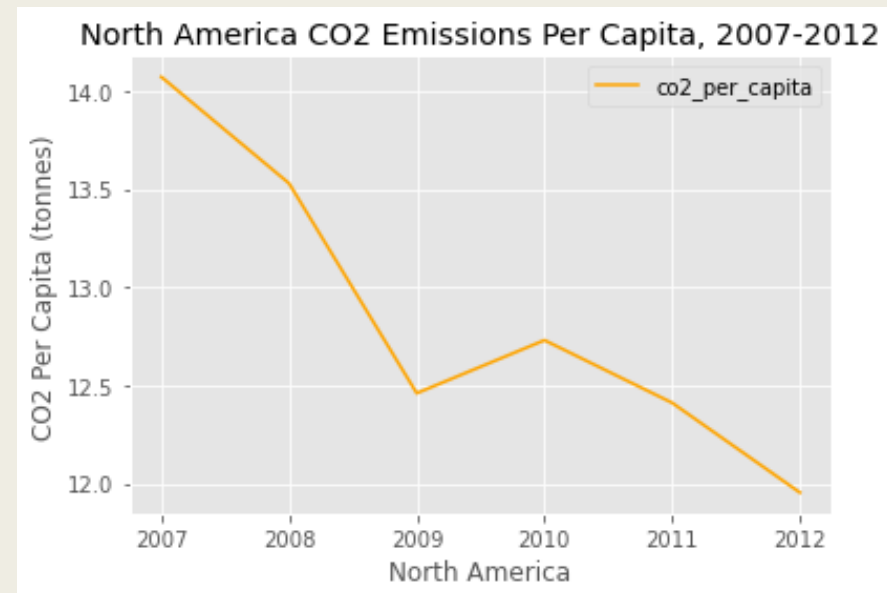
Asia had a *slight dip* in 2009

While high levels on record, Australia too, has seen *carbon emissions decline*

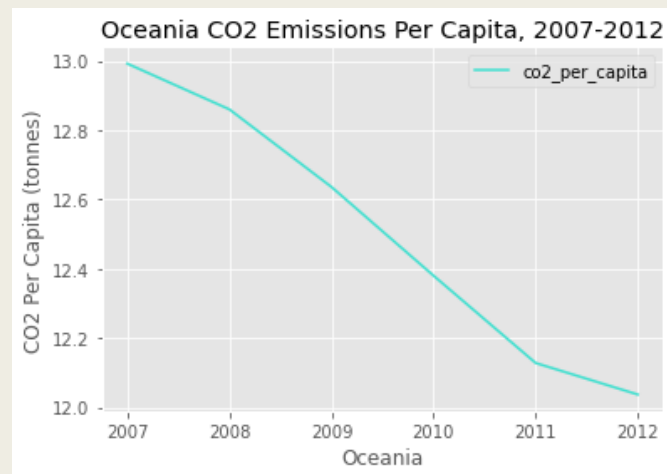
# ADDT'L FINDINGS, 3



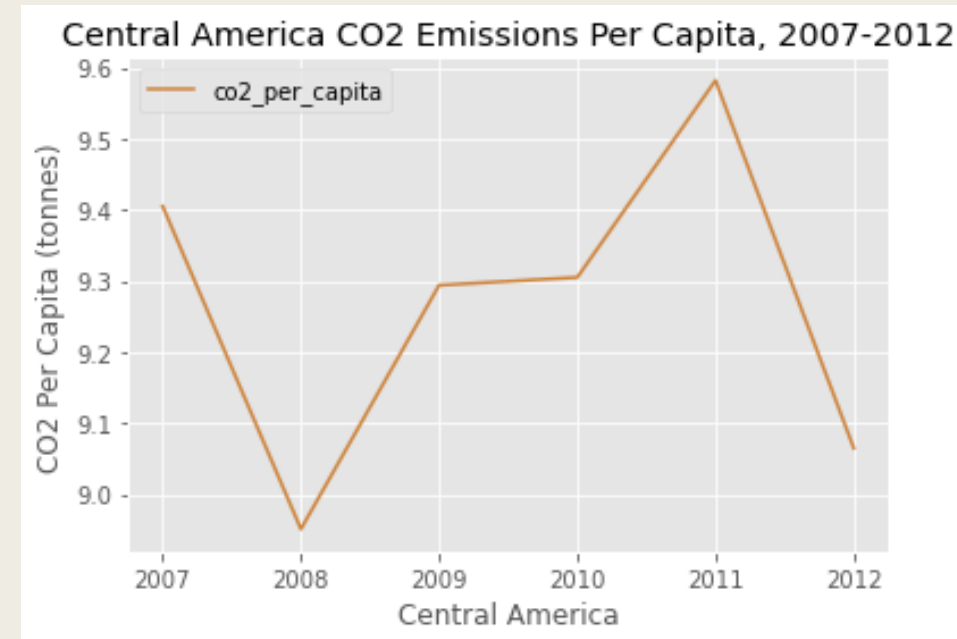
The Caribbean,  
North America &  
Europe, *peaked*  
emissions in  
2010, but  
showed steady  
decline the  
following year



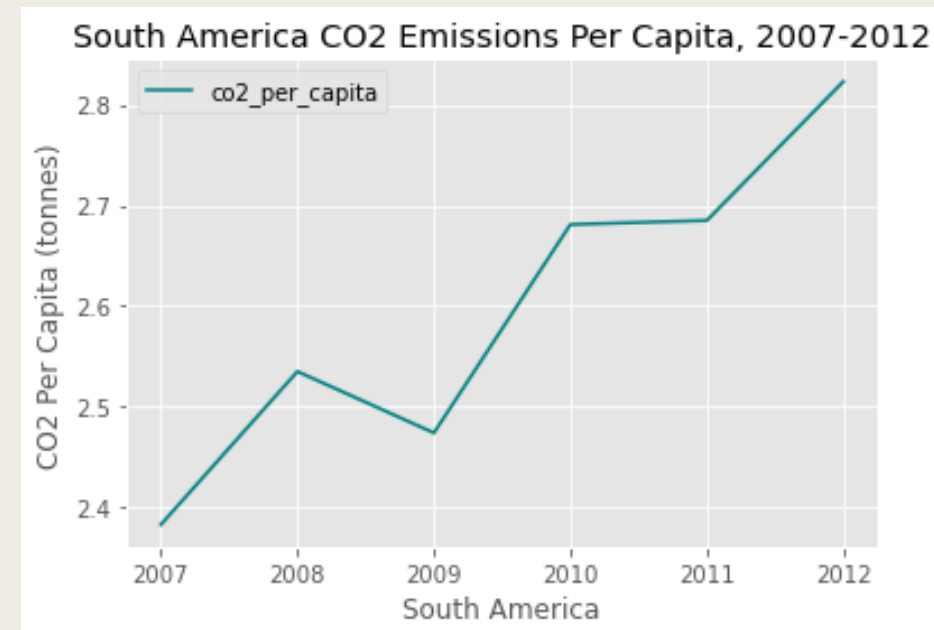
# ADDT'L FINDINGS, 4



Oceania has showcased a *steady decline*, since 2007

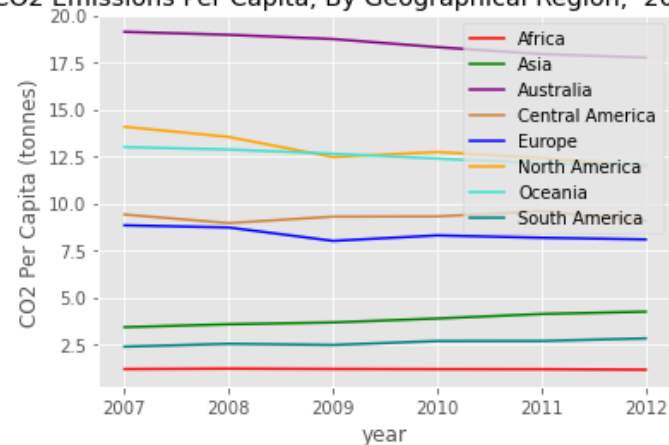


Central America's emissions *increased in 2009*, and remained in 2010



While South America presented a *step-shaped progression* between 2009 - 2011

CO2 Emissions Per Capita, By Geographical Region, 2007-2012





NEXT *ITERATION OF ANALYSIS*

# FOCUS AREA(s):

- ❑ Carbon Emissions By Geographical Region
  - ❑ By Carbon Emissions Type
- ❑ Time Period: 2007-2012
- ❑ World Events:
  - ❑ Great Recession 2007-2009
  - ❑ Economic Crisis of 2012

# ... REWIND

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**World Events Impacting Carbon Emissions** | Carbon Emissions are dependent on human behavior. If there is an event that alters the former, human activity, positively or negatively, Carbon Emission will, too, become affected.

**Old Habits Die Hard** | Many industries and countries still rely heavy on traditional sources of energy for production, trade, and consumption.



Is there a *link*  
between Carbon  
Emission  
activity and  
World Events?

Short answer  
-- *yes!*

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