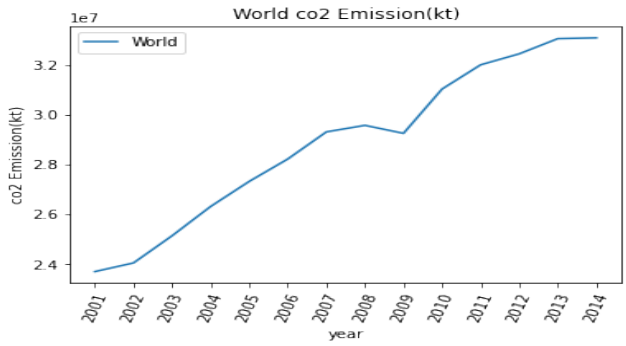
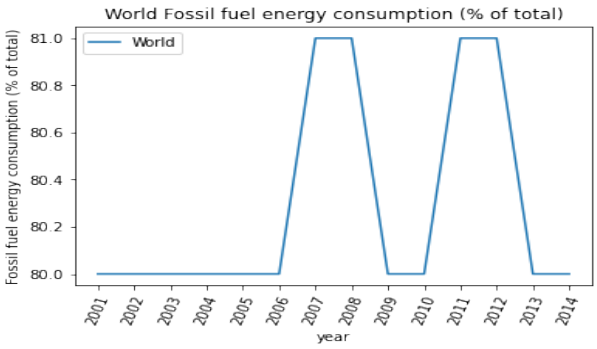
# Effect of Fossil fuel on Co2 Emission

Fossil fuel has been the main source of energy to humankind since the beginning of civilization from firewood during the stone age and oil in the modern Era. Fossil fuel is used in all our day-to-day activities from electricity to transportation. Burning of fossil fuel has remained the highest source of co2 Emission on the planet.

Using Data from the world bank database we will discuss how burning of fossil fuel has affected the emission of co2 in some regions over a period of 14 years 2001 – 2014.

Below is a graph of Co2 emission(KT) and percentage of fossil fuel in total energy around the world from 2001 to 2014.




From the graph we can see that over 80% of the world total energy is gotten from Fossil fuel. In other to reduce the kT of co2 Emission humankind needs a new sources of reliable and renewable energy other than fossil fuel.

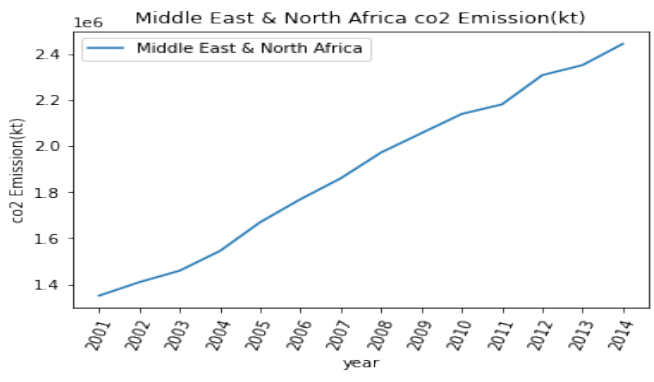
Below are list of region and their respective fossil fuel to co2 emission correlation .

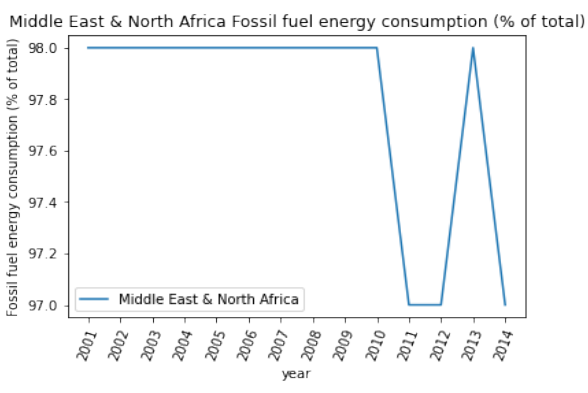
| Region | |
|---|---|
| **Europe & Central Asia** | 0.637510 |
| **Latin America & Caribbean** | 0.009037 |
| **Middle East & North Africa** | -0.613066 |
| **North America** | 0.842089 |
| **Sub-Saharan Africa** | 0.181465 |
| **South Asia** | 0.982419 |
| **East Asia & Pacific** | 0.972389 |
| **World** | 0.392781 |

Asia Region has a strong positive correlation between fossil fuel and co2 emission they are densely populated and mostly settle for the energy source that is cheap and available.

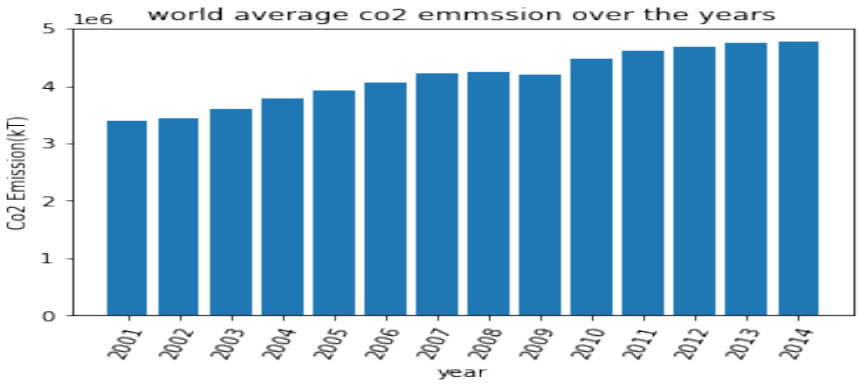
The weak correlation in the Sub Saharan Africa and Latin America is as a result of low level of industrialization.

The main source of fossil fuel as we know it is oil. And one of the richest oil region in the world is the Middle east and North Africa. The graph below describes how many percent of their energy is gotten from fossil fuel and how it has affected co2 Emission in the region over time.

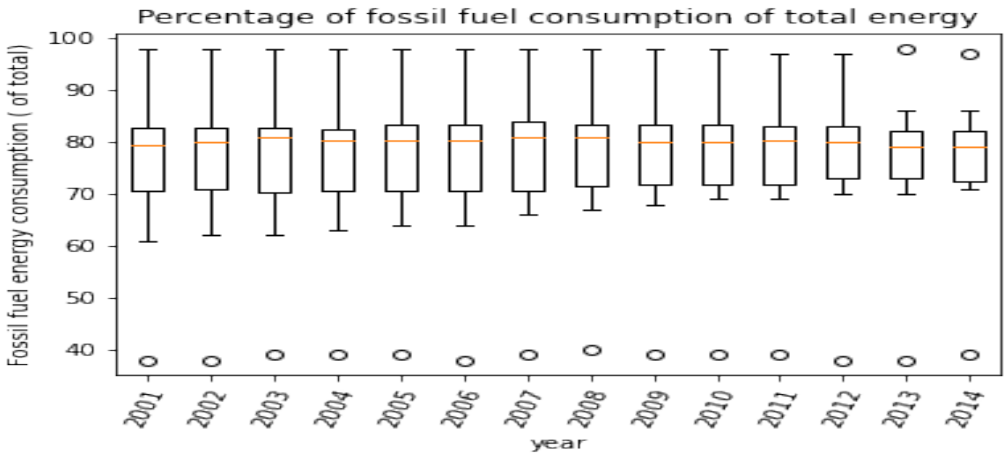


From the graph we see that 97-98% of their total energy has been gotten from burning of fossil fuel which has been as a result of the arid nature of the region (no source of water for hydro power plant) , security instability in the area (Nuclear power plant can't be built). Thus, increasing their co2 emission over time.
Below is a chart of the yearly average co2 Emission




We can see from the graph above that yearly average co2 Emission of the world has been on an increasing trend over the years.




Also the box plot above shows how many percentage of the world average total energy consumption each year is from fossil fuel . Here we can observe the distribution as been shrinking with time. Which means some countries in the world are looking into other source of energy.
Despite the measures taken by so many countries in the world to reduce our carbon foot print (Green gas Emission) on the planet. It is evident that fossil fuel will still be the most reliable and available source of energy for the foreseeable future .
Conventional Burning of fossil fuel is relatively cheaper than harnessing energy from cleaner and renewable energy source. Therefore, co2 emission will continue to increase.

https://github.com/Ayoola17/applied-data-science-course-work.git