

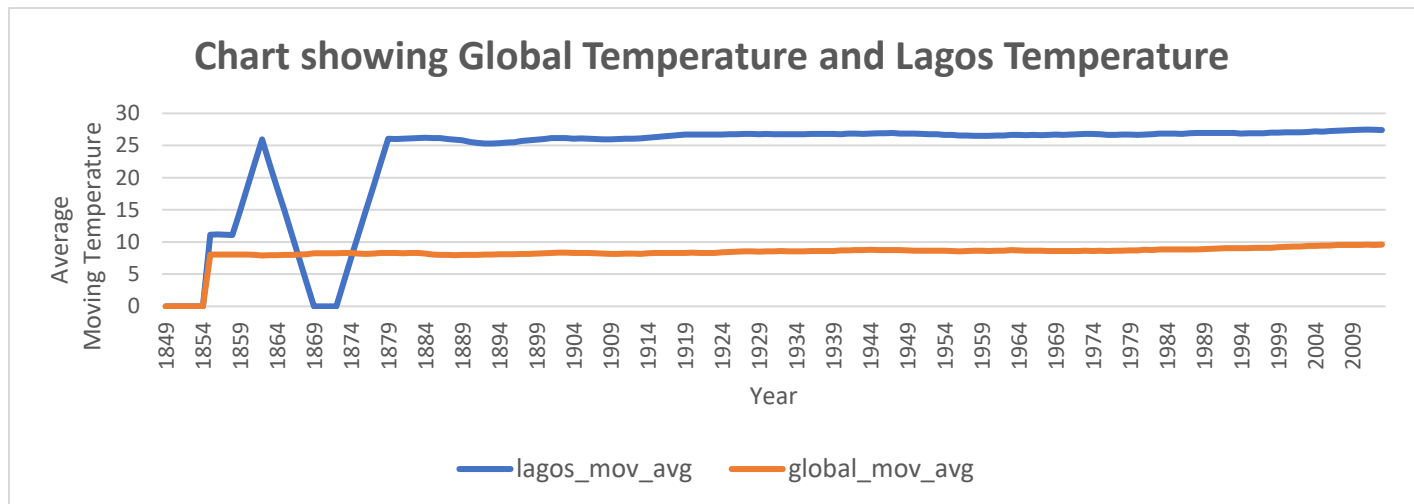
Explore Weather Trends

For this project SQL was used to extract the data. The SQL query is shown below.

```
SELECT
city_data.city,
city_data.year,
city_data.avg_temp as lagos_Temp,
global_data.year,
global_data.avg_temp as Global_Temp
FROM city_data
JOIN global_data
ON city_data.year=global_data.year
WHERE city_data.city='Lagos';
```

The moving averages for both the city temperature and global temperature was calculated. This was done using Microsoft excel. The average was calculated using the average function. The average of 7 days was calculated.

Example “= **AVERAGE (C2:C8)** “. This function was then copied to other cells.

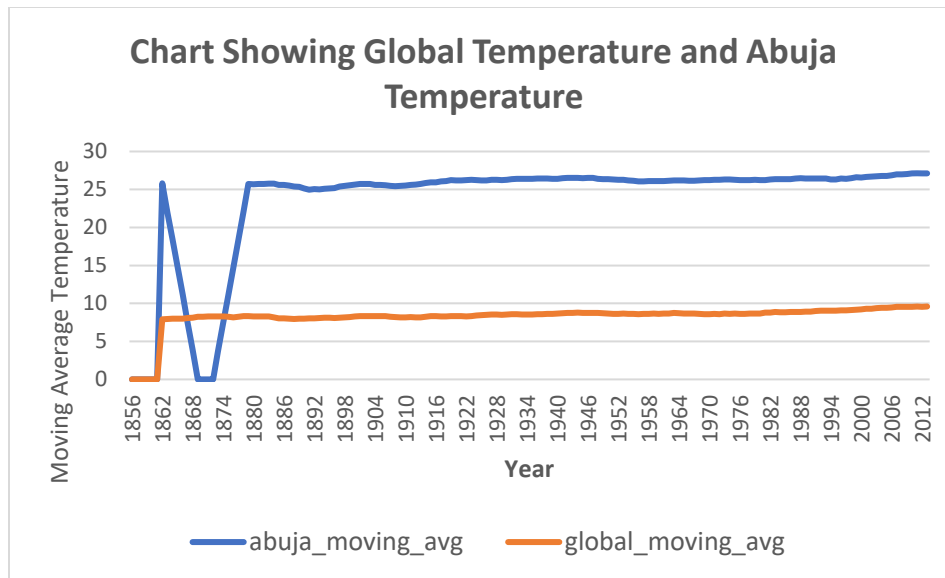


Observations for city of Lagos, Nigeria.

1. The local temperature is higher than the global temperature. The average local temperature is at 24.3 while the average global temperature is 8.55
2. The change in temperature between the global temperature and local temperature has been constant over the year. This was gotten by finding the difference between the local average temperature and global average temperature.
3. From the graph it can be seen that global and local temperature are gradually increasing. This means that the world is getting hotter. This has been the trend for the past 100 years as temperature has been increasing.
4. There were some fluctuations in the local temperature between 1891 and 1915.
5. The changes in the city temperature is very close to that of the global temperature. Averages change in temperature for Lagos is 0.0084 while for global temperature it is 0.0099
6. The correlation coefficient between global temperature and city temperature is 0.296703

Observations for city of Abuja, Nigeria.

1. The local temperature is higher than the global temperature. The average local temperature is at 24.49 while the average global temperature is 8.57
2. The change in temperature between the global temperature and local temperature has been constant over the year. This was gotten by finding the difference between the local average temperature and global average temperature.
3. From the graph it can be seen that global and local temperature are gradually increasing. This means that the world is getting hotter. This has been the trend for the past 100 years as temperature has been increasing.
4. There were some fluctuations in the local temperature between 1891 and 1915.



Observations for city of Warsaw, Nigeria.

1. The local temperature is lower than the global temperature. The average local temperature is at 7.37 while the average global temperature is 8.36
2. The change in temperature from 1758 – 1902 follows the same trend both locally and globally. This trend stops at 1910, where the local temperature begins to fluctuate while the global remains steady. The rise in local temperature may be due to rise in industrialization
3. There is a rapid increase in temperature from 1980 – 2011, which may be due to rise in carbon emission.

