

# Analysis of country-by-country indicators related to climate change

The data frame includes the indicator and country\_code. The indicators are selected such that they are related to the climate change. A few countries are randomly selected from the country\_code. Different statistical analysis was conducted, and the findings area discussed below:

There are plenty of factors that affect the climate around us. A few of the indicators were taken into consideration to find out how does they affect the climate in different countries. And also, how these findings are different from that of the whole countries taken into account.

The countries that were taken into account are Australia, China, Canada, France, India, Maldives, Russia, New Zealand, Germany, USA and Argentina.

id	value
EG.ELC.ACCS.ZS	Access to electricity (% of population)
AG.LND.ARBL.ZS	Arable land (% of land area)
EG.USE.ELEC.KH.PC	Electric power consumption (kWh per capita)
AG.LND.FRST.ZS	Forest area (% of land area)
4 elements	

The above table shows the indicator id's and what does it correspond to.

The information corresponding to the indicator ids are selected of a time period from 2011 to 2020.

Summary statistics were analysed on how the access to the electricity and how much electric power were consumed by the people living in an India and Australia. (Fig 1)

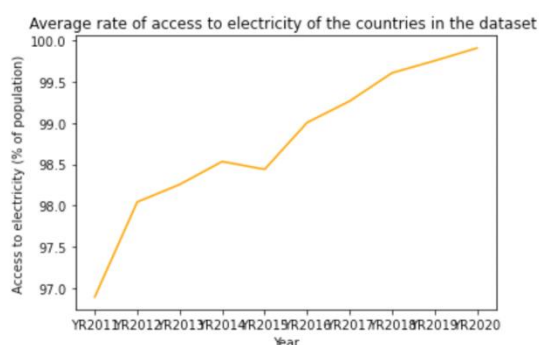


Fig 1

The average rate of the access to electricity were calculated and plotted. During the time period from 2011 to 2020, more people got access to electricity and it was significantly increased from 96.89% to 99.90%.

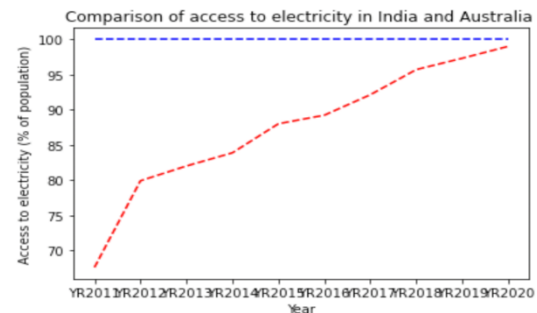


Fig 2

The average was calculated and the values of India were cross compared with that of Australia. In Australia (blue dotted line), all the people living there has access to electricity but in India (red dotted line) during the year 2011, only 67.59% of the people had the access to electricity. But it increased to a rate of 99% of the people having access to the electricity by the year 2020. (Fig 2)

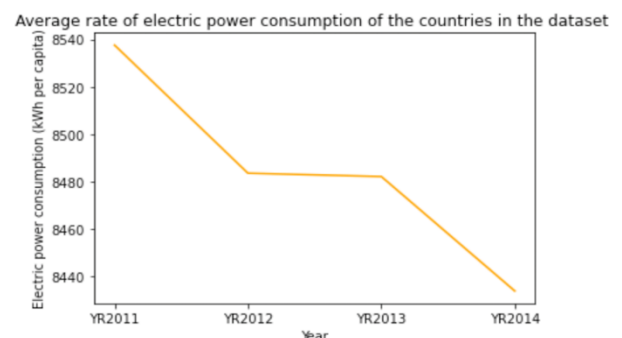


Fig 3

The average rate of the electric power consumed were calculated and plotted. As more people got access to the electricity, the consumption of the electric power decreased from an average of 8537 kWh to 8433 kWh from during the time period from 2011 to 2014. (Fig 3)

In India, as more people got access to electricity, the power consumption also increased from an average rate of 696kWh in 2011 to 804.5kWh in 2014. But the scenario in Australia was quite different. The average consumption of electricity dropped from 10627 kWh in 2011 to 10071 kWh in 2014. (Fig 4)

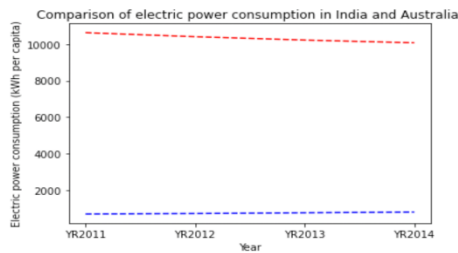


Fig 4

Another analysis done was to check how much of area of land were turned into forest and how much were turned into arable lands in Russia and New Zealand. We know that Russia is a much bigger country when compared to New Zealand.

When the average of the forest area was calculated among the countries in account altogether, we see that on each year more area was covered with forest. It got increased from 31.02% of the total area of the country in 2011 to 31.32% of the total area in 2018. (Fig 5)

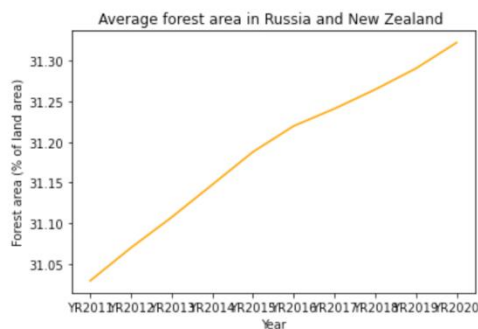


Fig 5

In Russia (blue dotted line), the forest area has been varying between 49.76% and 49.77% from the year 2011 to 2016 but the area got increased to 49.78% of the total area and remained same from 2017 to 2020. But in New Zealand (red dotted line), initially the area acquired by the forest decreased from 37.40% to 37.39% from 2011 to 2016. From 2017 to 2020, the area increased from 37.41% to 37.57%. (Fig 6)

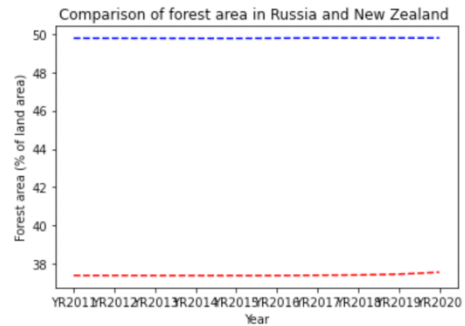


Fig 6

The average area of arable lands by taking account of all the countries, as whole, there is an increase from 15.34% to 15.37% from 2011 to 2014. But even though the area of forest kept on increasing, the area of arable lands decreased from 15.33% to 15.31% in the year 2015 to 2018. (Fig 7)

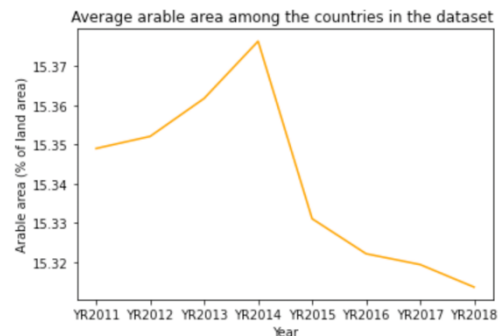


Fig 7

Even though the forest area in Russia decreased and then increased, the area covered by the arable lands (blue dotted line) remained same at an average rate of 7.42% from 2011 to 2018. But in New Zealand (red dotted line), as the average area of the forest kept varying, so did the area of arable lands. It kept on varying between 1.78% and 2.24% from 2011 to 2018. (Fig 8)

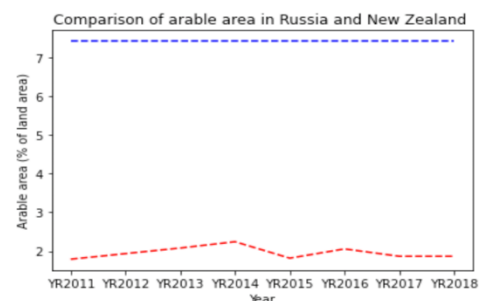


Fig 8