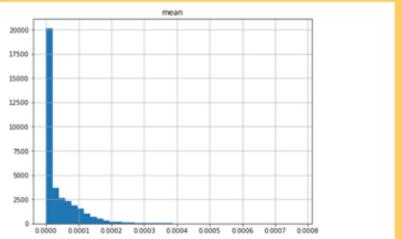


## INTRODUCTION

As we know the world is developing at greater pace. This change is good but it affects our environment at bigger extent. Mother nature is no exception. While we are busy to build our civilization , Nature is being destroyed slowly. Climate change is one of the major phenomenons caused by this. Now as an element of climate change we are going to discuss the change in precipitation. The frame of reference for our project is India, a developing country.

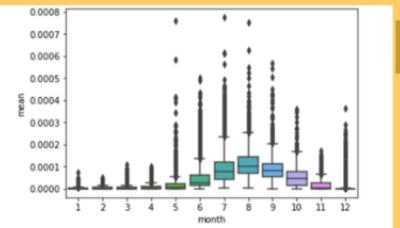
## ANALYSIS

## INDIA'S PRECIPITATION



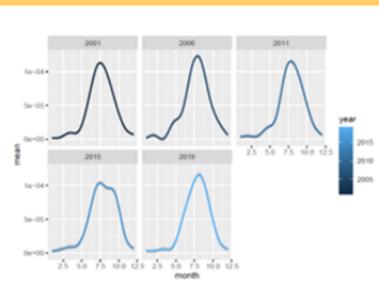
This gives us the idea of the versatility of India . From this we can see that India's precipitation is far from uniform . It's diverse depending upon the geographical situation, land quality etc.

In the both the graphs, we can see the nature of the precipitation in India. Now as the line shows a central tendency and slightly positive skew as well, we can conclude that mostly precipitation occurs in the month of June, July and August. For a country of northern hemisphere it's quite natural.

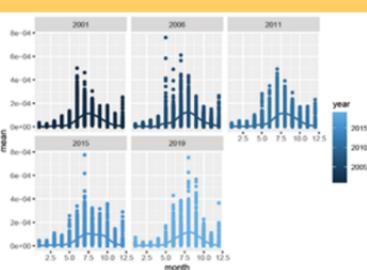


This result shows us that the precipitation is actually in the somewhat middle of the year unlike the country of the southern hemisphere.

## VARIATION VS TIME

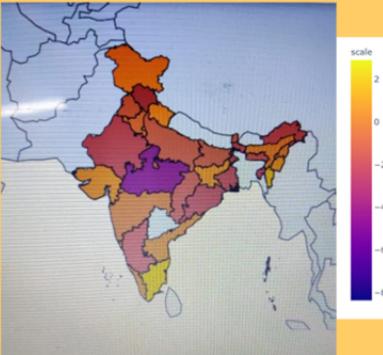
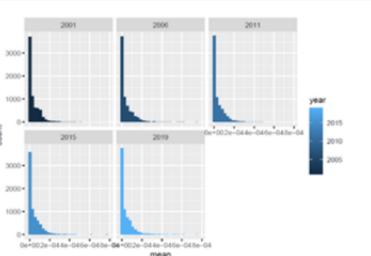


The graph is flattening with the increase in year. It depicts the deviation of precipitation from Rainy season.



The skewness is shifting towards right, which means the major precipitation is going to the end of the year.

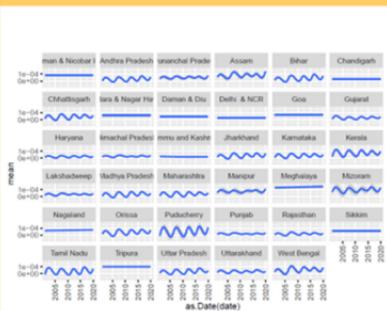
In this histogram we can see that the no of days with no precipitation is very high in India. As India is a country away from equator , this phenomenon is natural . But beside this we also can see the graph is extended to a quite good extend. This is because of the outliers like Meghalaya,Sikkim .



This is a graph of the number of occurrence of the precipitation quantity. Here we can see that the number of zero precipitation is pretty high in each graph. But if we look closely then we can see that the number of zero precipitation is slightly increasing with the passing years. And the number is very high in 2019 compared to 2015 and slightly higher than 2001, 2006 and 2011.

So as per the data we plotted a colour map according to states in india. Here we can have a brief idea about the relationship between the precipitation rate and the geographical variables. As we can see that the seaside states having more precipitation than the middle land states.

## VARIATION VS STATE



In most states the peak value as well as overall value is decreasing. The precipitation rate of Meghalaya is quite high as expected as an outlier. For the middle portion of India the precipitation rate is low but consistent compared to others.

## CONCLUSION

With all the graphs we can see that effect of climate change upon precipitation is not that the precipitation rate is decreasing rapidly. It's the distribution of precipitation throughout the year which is being affected by it.

In all the graphs the peak value is not changing significantly as for the regions like Meghalaya and some east side states the precipitation rate is not changing that much. But it doesn't mean every state is in a good condition. We can observe that also in the state wise data analysis