Project Report
Tableau dataviz challenge

1. **Introduction**
    - Overview

I took the dataset on horticulture domain on government website titled "Major fruits and vegetable producing countries in the world" which includes various headers like countries, fruit's area, fruit's production, fruit's productivity, vegetable's area, vegetable's production, vegetable's productivity over two continuos year's duration.
With the dataset comes different problem statements which needs to be carefully looked on. In this project i have considered three problem statements which need's to be answered and visualized.

- Purpose

The three problem statements that needs to be vizualised are as:

- Mention the top 5 countries who were able to increase their fruit's productivity.
- Mention the top 5 countries who were able to increase their vegetable's productivity.
- Mention the countries who were able to increase the productivity of both fruits and vegetables.

The purpose of this project is to answer these three problems and then vizualize the maps and charts which helps to plot these problems in a better way such that even a layman can understand and it follows the "5 second rule".

2. **Literature survey**
    - Existing problem

Currently there is a very huge amount of data present which needs to be worked upon and visualized to solve the issues and help the business to grow in future. So I do have a dataset which needs to be looked upon and visualized so that it can help to improve the business.

- Proposed solution

The method that I have implemented on is Tableau which helps in all manner to obtain the desired solution to improve the growth of business.

3. **Experimental Investigation**

After exploring the data I came to an understanding that I need to create two calculated fields i.e. increase in fruits productivity(%) and increase in vegetables productivity over the period of 2009-2010 to 2010-2011.

To do that i used the difference between fruits productivity over the duration and multiplied it with 100 to get the percentage increment in fruits productivity. Similarly for the percentage increment in the vegetables productivity I have used the difference between the vegetables productivity over the duration and multiplied it with 100.

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After this, coming to the first problem statement,

- I used latitudes and longitudes to plot the map in the view.
- Draged the country field on to the label.
- Then draged the first calculated field on to the filters pane.
- Select filter type.
- Select for top 5 countries.
- Exclude the null values.
- Apply some filtes like color, size to apply on to the symbol to apply on to the view.

Repeat the same procedure for the second problem statement with second calculated field.
For the third problem statement, it was required to use both calculated field simultaneously.

- Bring measure names and measure values to the rows and column.
- Drag calculated fieds and country fields into the column.
- Drag both calculated field into the filter as average measure.
- Exclude the null values.
- Apply color filter and use bar chart to visualize the view.

After making the worksheets now preparing the dashboard and story.
Once both were done I downloaded the dashboard as a pdf file and the entire workbook as pdf followed by extracting of data and later publishing the story and dashboard on to the tableau public platform.

4. **Flowchart**

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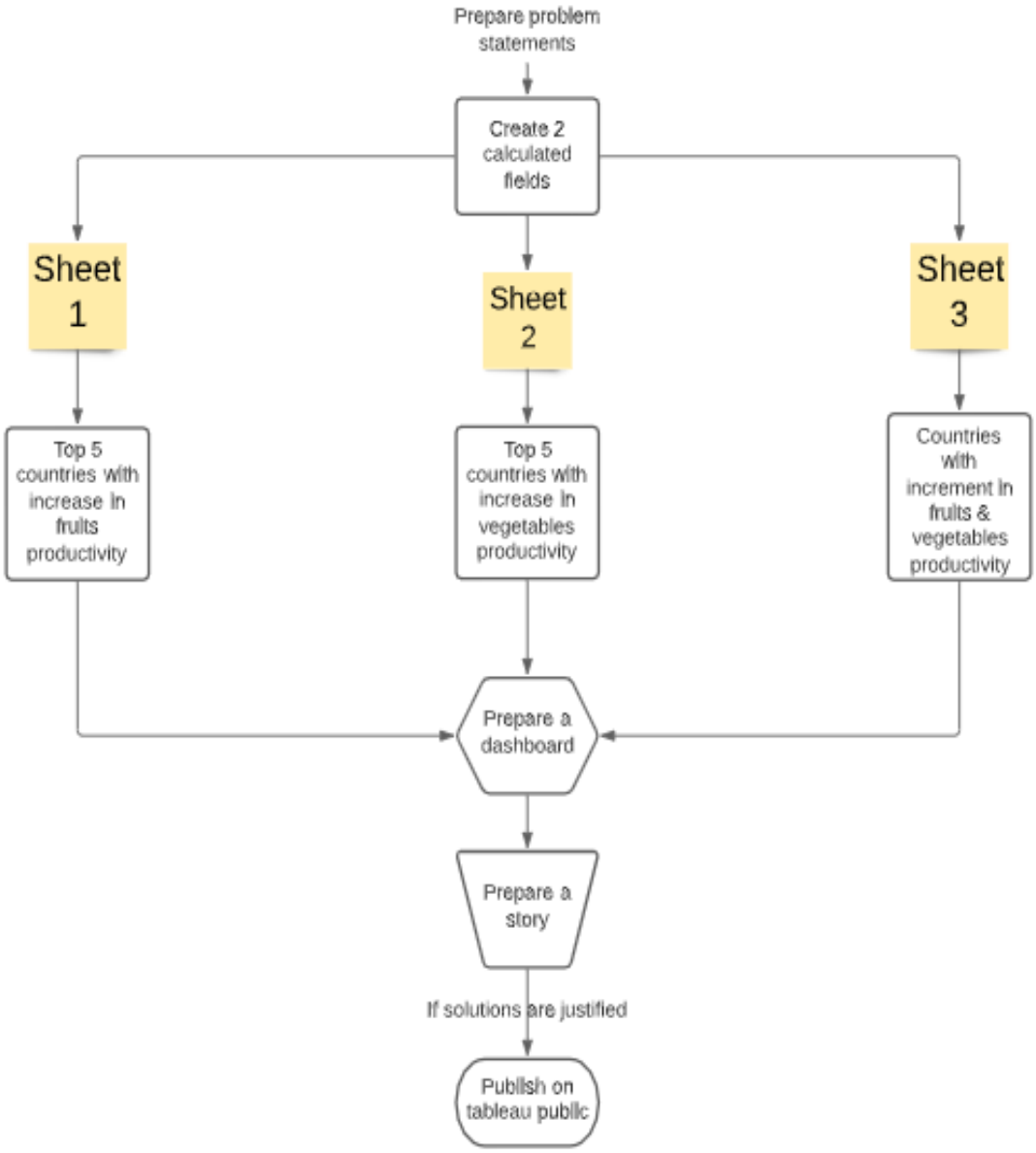

5. **Result**

Upon the successfull completion of the project I came to interpret the following points:

- China, India, Turkey, Spain and Brazil were the top 5 countries in the world with increase the fruits productivity over the duration of 2009-2010 to 2010-2011.
- China, Philippines, Italy, India and Iran were the top 5 countries in the world with increase in vegetable productivity over the duration of 2009-2010 to 2010-2011.
- India, China and Philippines were the only countries who were able to increase their productivity of both fruits and vegetable over the period of 2009-2010 to 2010-2011.

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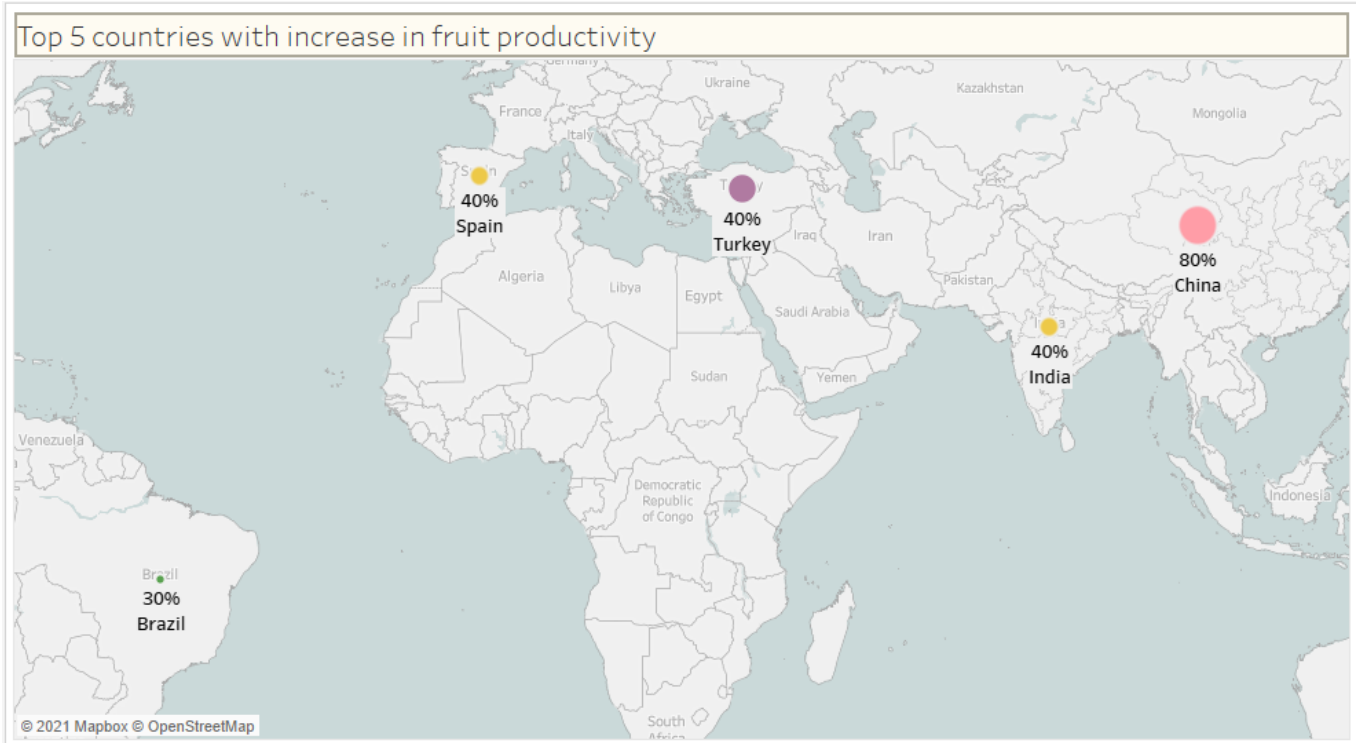
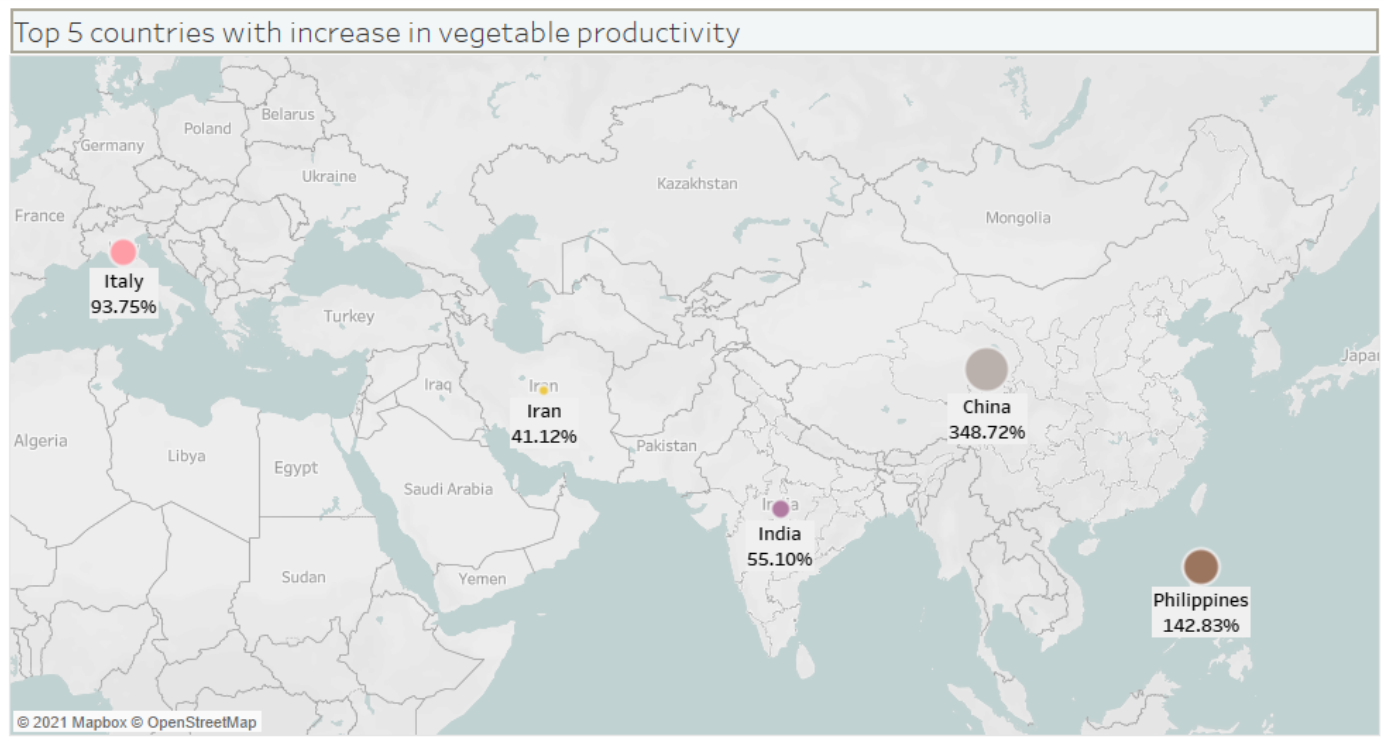
Sheets:





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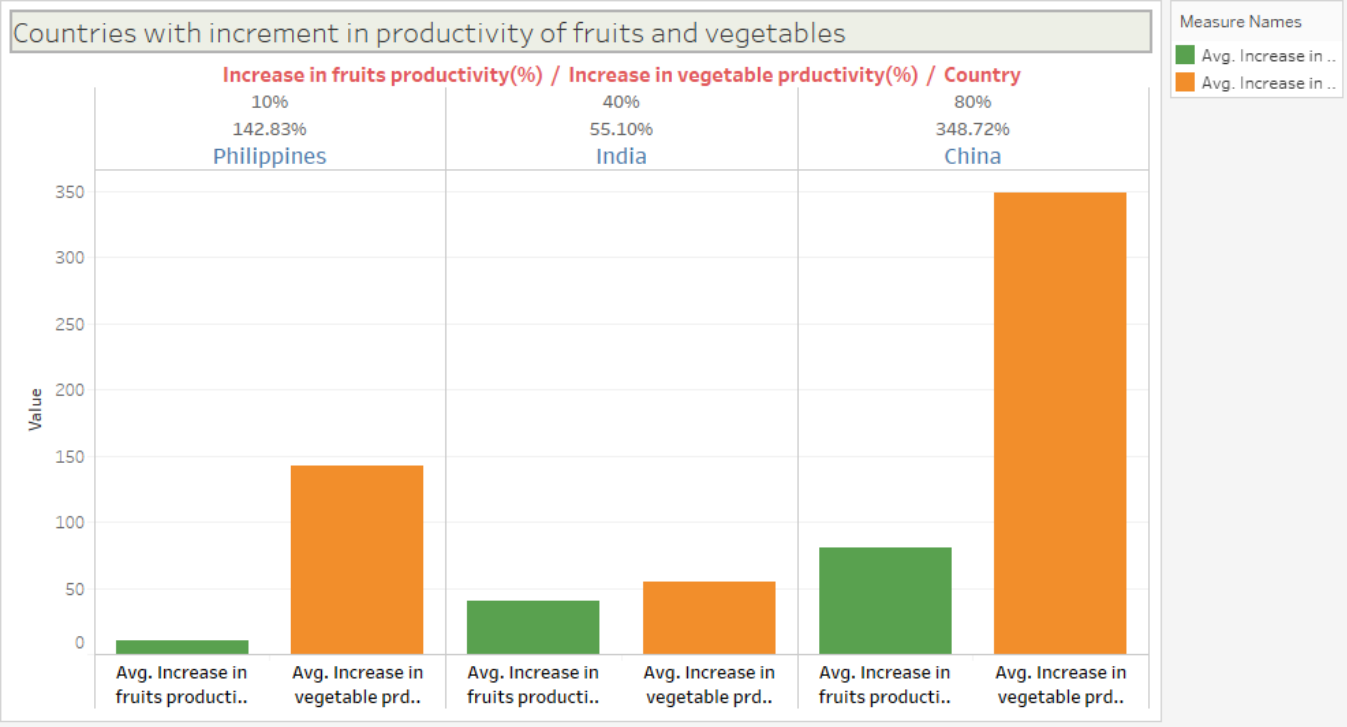
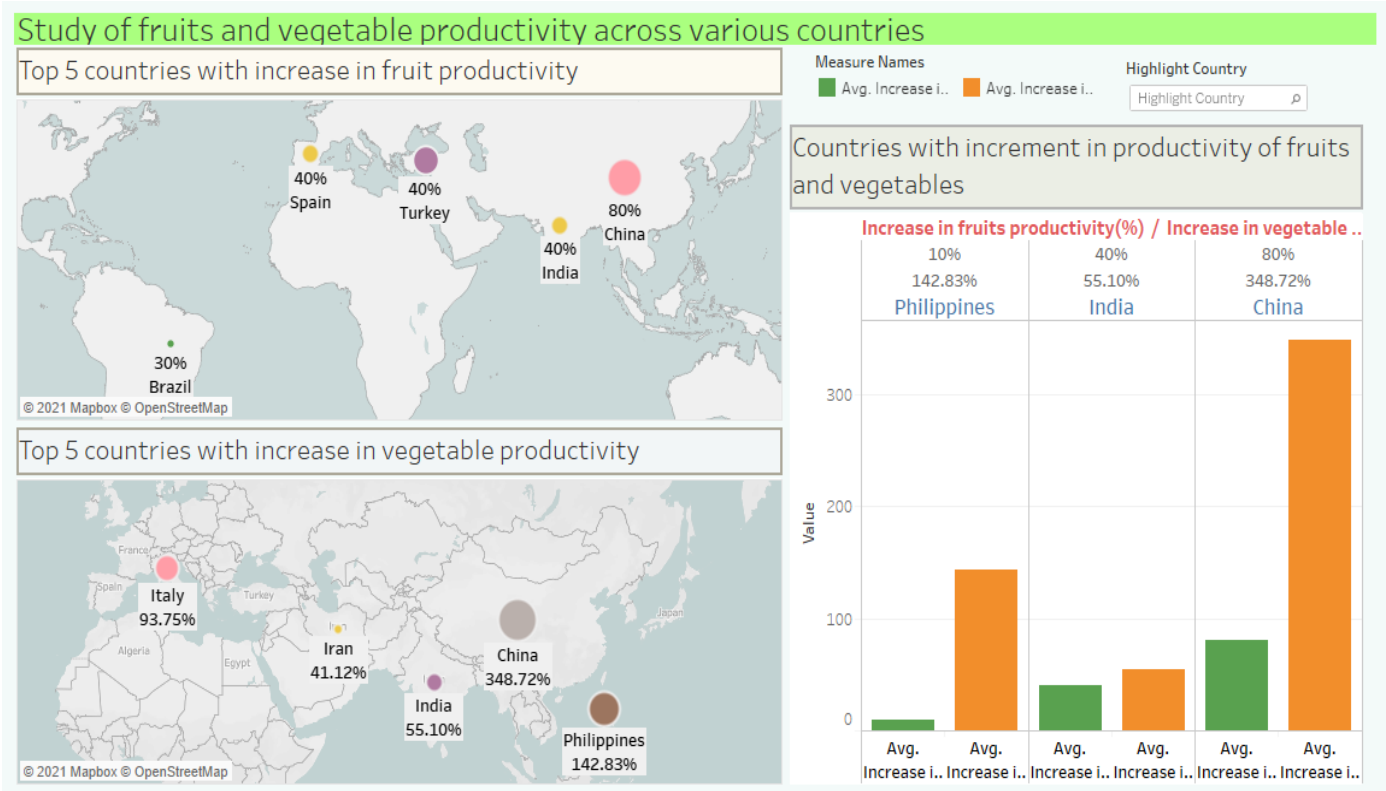


Dashboard:



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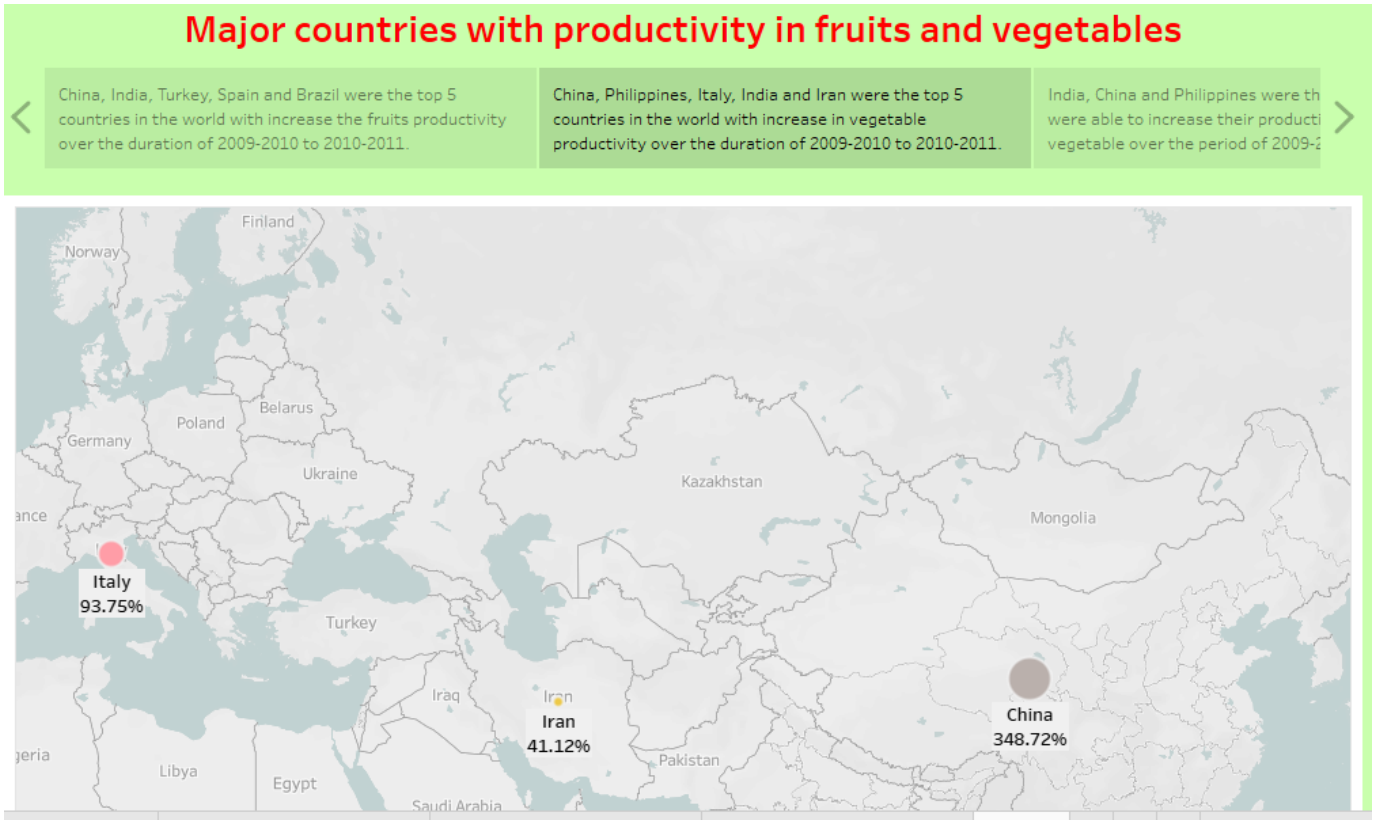
Story:



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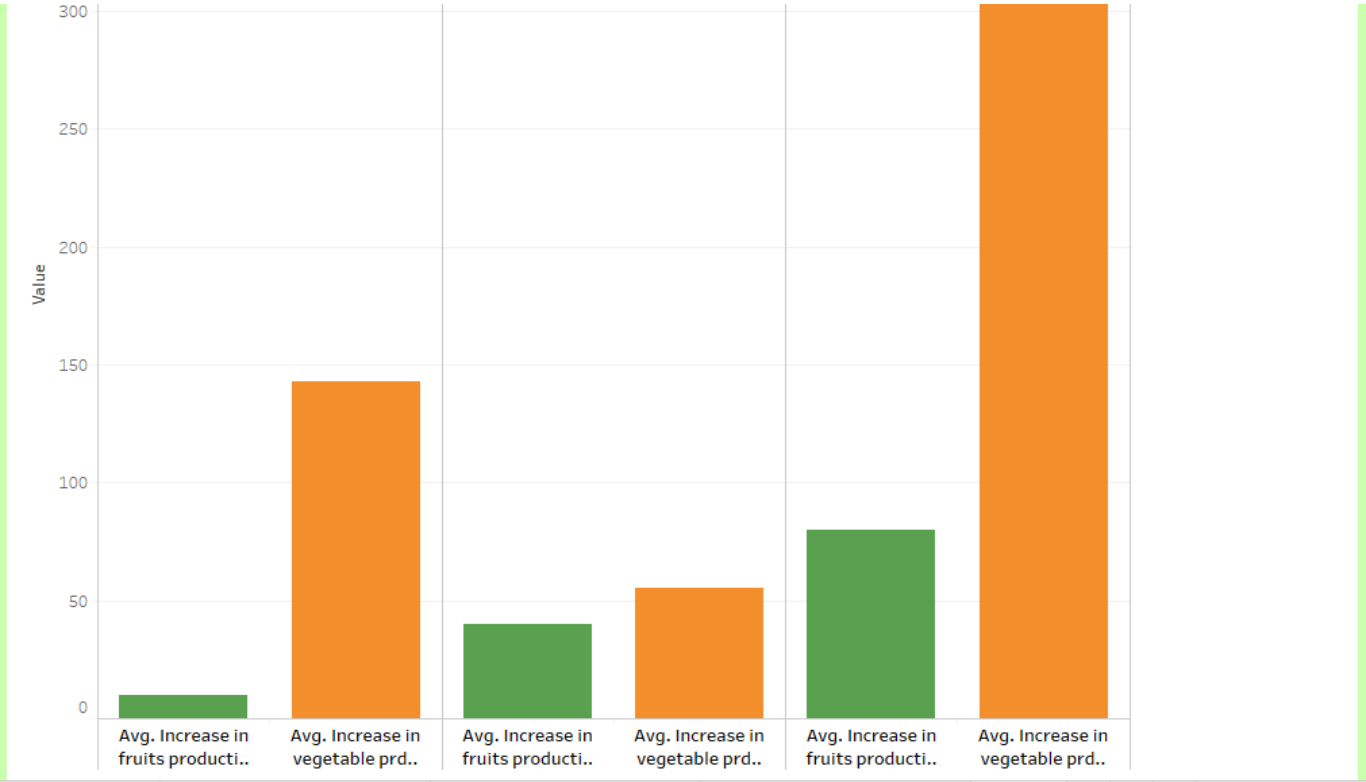

6. **Advantages**

- Paper free solution
- Smart visualization
- Business solution
- Follows "5 seconds" rule
- Easy to understand

7. **Application**

- Improving the business in farming domain.
- Improves trading of farming goods.
- Provides the economic growth.

8. **Conclusion**
   - China, India, Turkey, Spain and Brazil were the top 5 countries in the world with increase the fruits productivity over the duration of 2009-2010 to 2010-2011.
   - China, Philippines, Italy, India and Iran were the top 5 countries in the world with increase

in vegetable productivity over the duration of 2009-2010 to 2010-2011.

- India, China and Philippines were the only countries who were able to increase their productivity of both fruits and vegetable over the period of 2009-2010 to 2010-2011.

9. Future Scope

In future there would be a huge increment in the data and it's quality with which the amount of problem statements would increase with its quality so thereby increases the improvement in the visualization and the involved analytics.

10. **Bibliography**

With succesful completion of a project, involves various helps from differents sources which are as stated:

- https://smartinternz.com/tableau-dataviz-challenge-2021
- https://data.gov.in/catalogsv2?format=json&offset=0&limit=9&filters[ogpl_module_domain_name]=data.gov.in&filters[field_sector:name]=Horticulture&sort[ogpl_module_domain_name]=asc&sort[created]=desc
- https://elearning.tableau.com/tableau-fundamentals
- https://github.com/saurabhshukla3648
- https://public.tableau.com/