

## 1. INTRODUCTION

### 1.1 Overview

Carbon dioxide emissions are emissions stemming from the burning of fossil fuels and the manufacture of cement they include carbon dioxide produced during consumption of solid, liquid, and gas fuels as well as gas flaring.

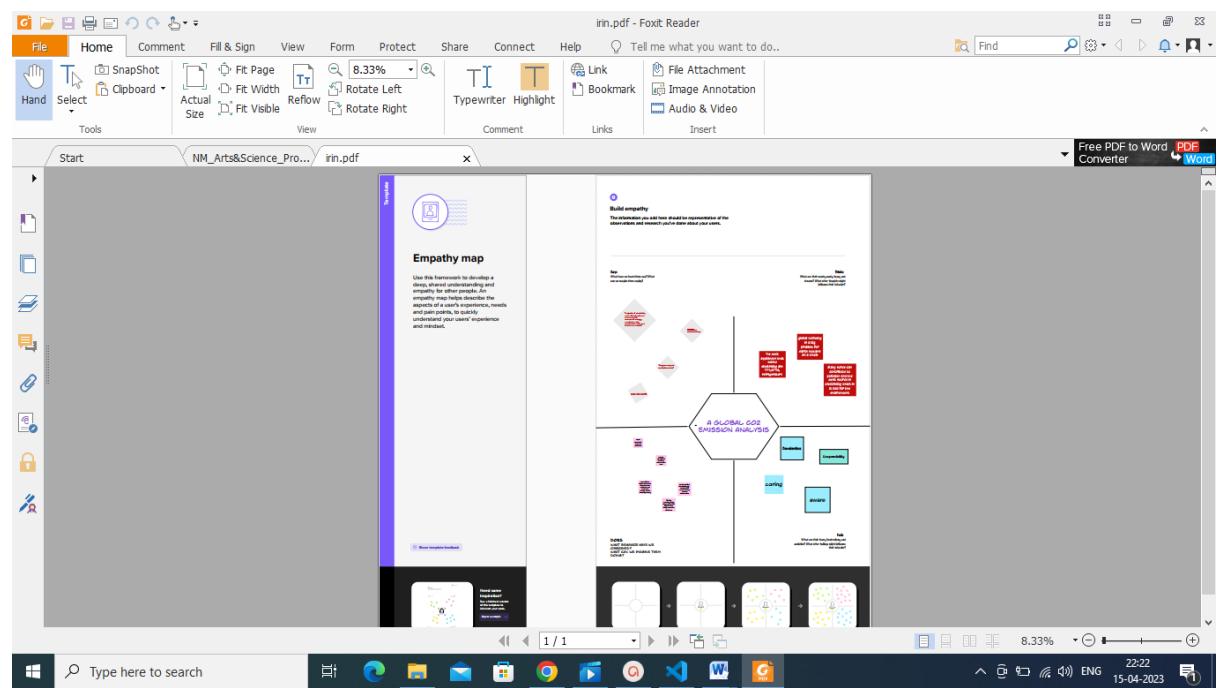
### 1.2 Purpose

The carbon in CO<sub>2</sub> can be used to produce fuels that are in use today, including methane, methanol, gasoline and aviation fuels.

The process involves using the CO<sub>2</sub> in combination with hydrogen, which is highly energy-intensive to produce, and results in a carbon-containing fuel that is easier to handle and use than pure hydrogen. Low-carbon hydrogen can be produced from fossil fuels when combined with CCS, or through electrolysis of water using low-carbon electricity.

## 2. PROBLEM DEFINITION AND DESIGN THINKING

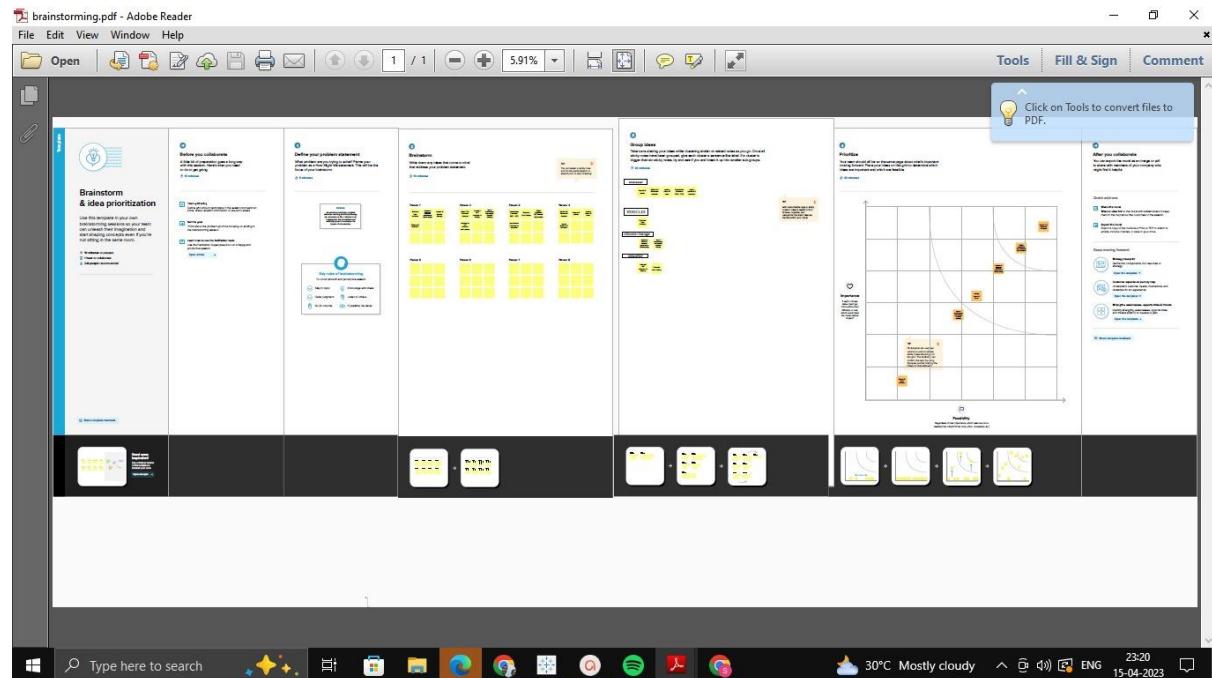
### 2.1 Empathy Map



### 2. Ideation & Brainstorming Map



# Project Report Template



### 3. RESULT

## DASHBOARD

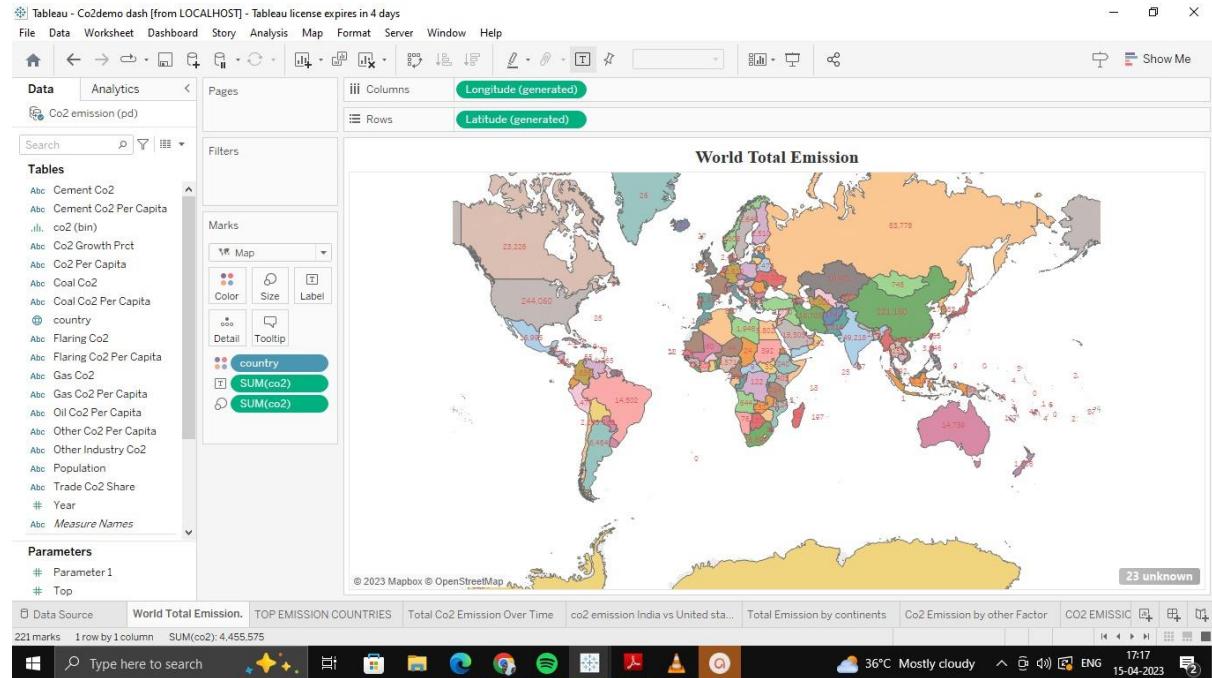


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File Data Worksheet Dashboard Story Analysis Map Format Server Window Help



Data

Analytics

Co2 emission (pd)

Search

## Tables

- Abc Cement Co2
- Abc Cement Co2 Per Capita
- .ili. co2 (bin)
- Abc Co2 Growth Prct
- Abc Co2 Per Capita
- Abc Coal Co2
- Abc Coal Co2 Per Capita
- Abc country
- Abc Flaring Co2
- Abc Flaring Co2 Per Capita
- Abc Gas Co2
- Abc Gas Co2 Per Capita
- Abc Oil Co2 Per Capita
- Abc Other Co2 Per Capita
- Abc Other Industry Co2
- Abc Population
- Abc Trade Co2 Share
- # Year
- Abc Measure Names

## Parameters

- # Parameter1
- # Top

Data Source

Chart For Flaring Co2 Em...

Donut Chart for Oil Co2 Emission

Donut Chart for Co2 Emission

4 marks 1 row by 4 columns SUM of Measure Values: 1,025,874



Type here to search



## Filters

Measure Names

country: India

## Marks

Bar

Color

Size

Label

Detail

Tooltip

Measure Na..

## Measure Values

SUM(Cumulative Co..)

SUM(co2)

SUM(Oil Co2)

CNT(Co2 emission)

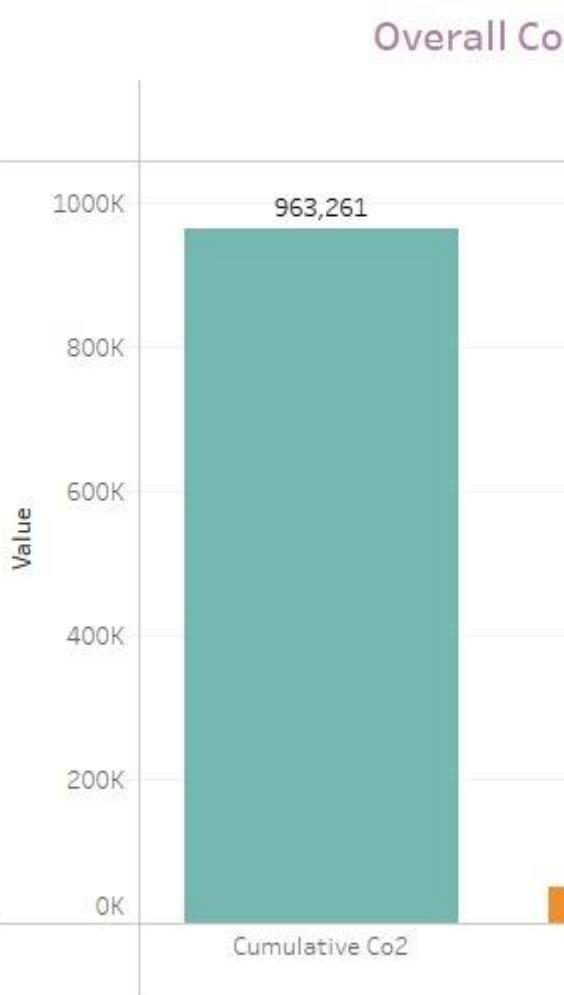


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**Analytics**

Co2 emission (pd)

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- Abc Oil Co2 Per Capita
- Abc Other Co2 Per Capita
- Abc Other Industry Co2
- Abc Population
- Abc Trade Co2 Share
- # Year
- Abc Measure Names

**Parameters**

- # Parameter1
- # Top

 Data Source

Donut chart for Coal Co2

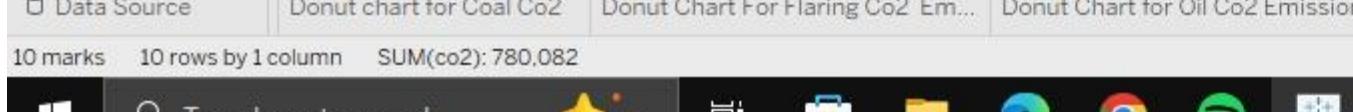
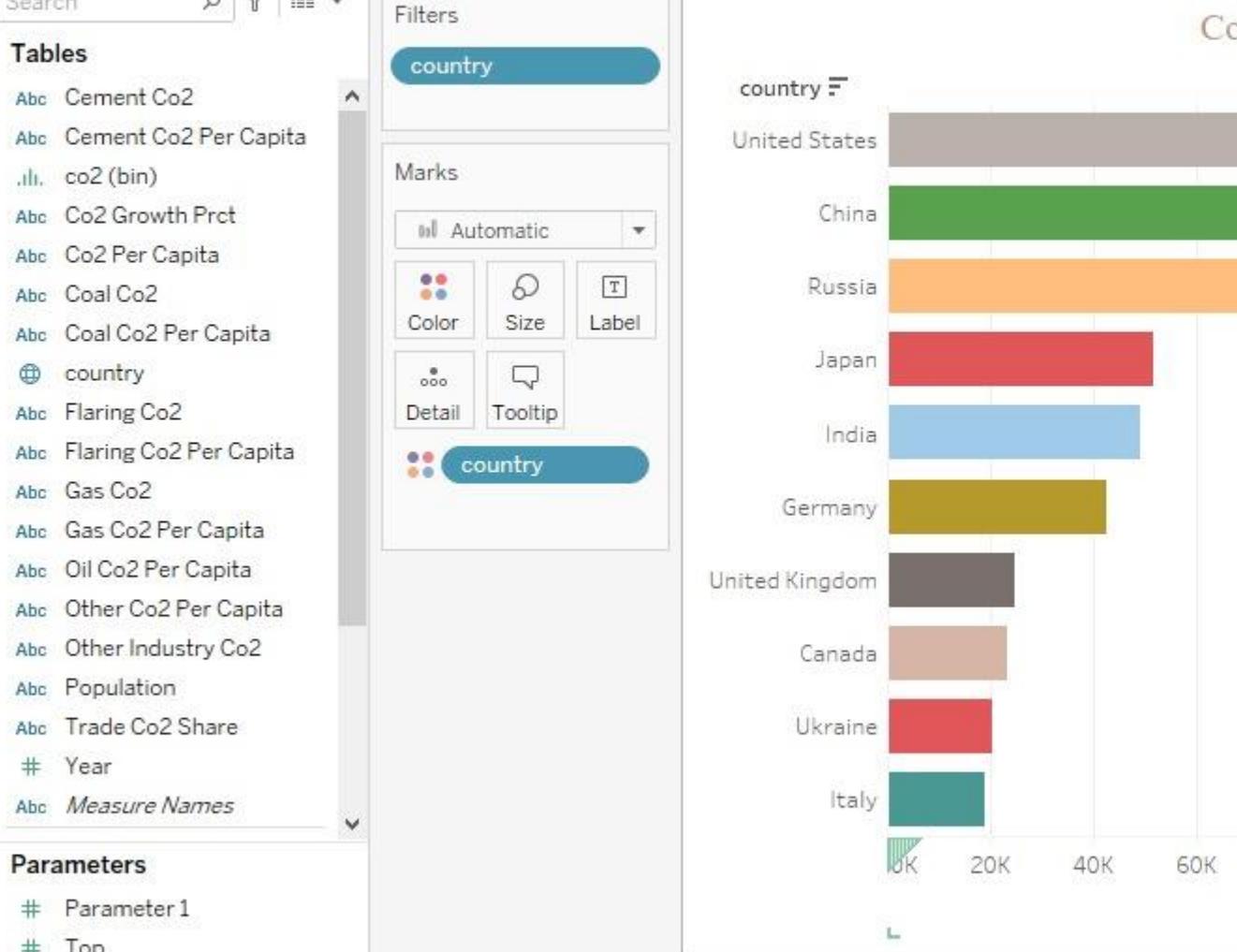
Donut Chart For Flaring Co2 Em...

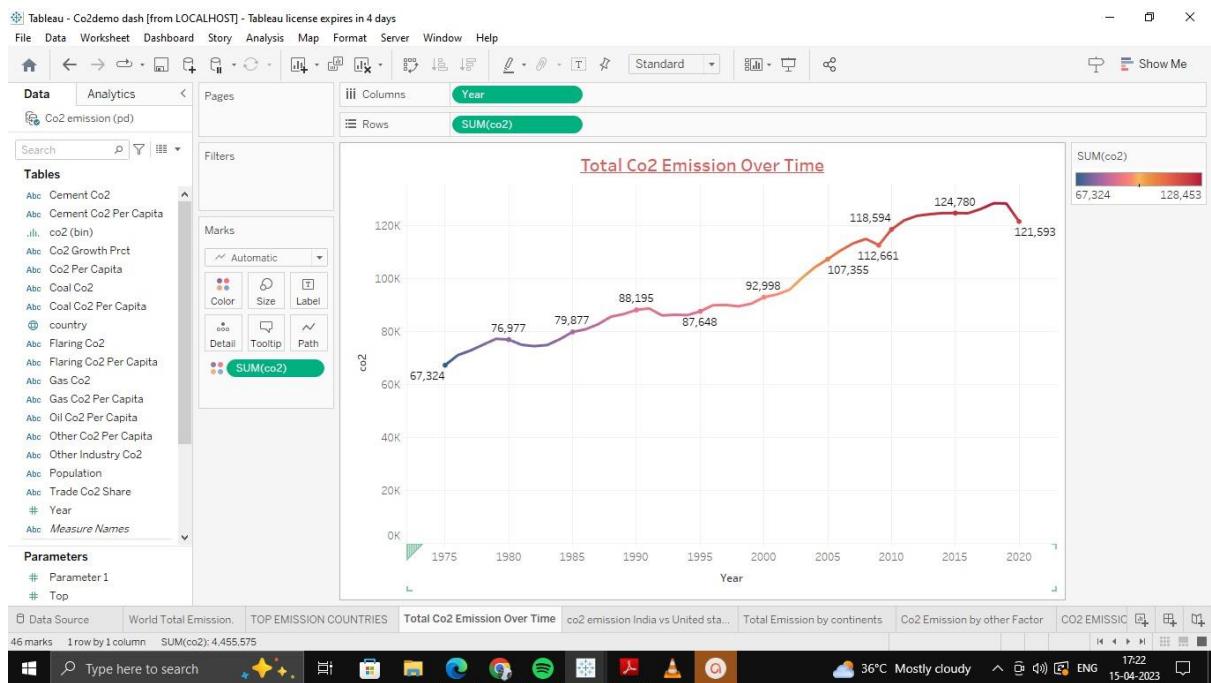
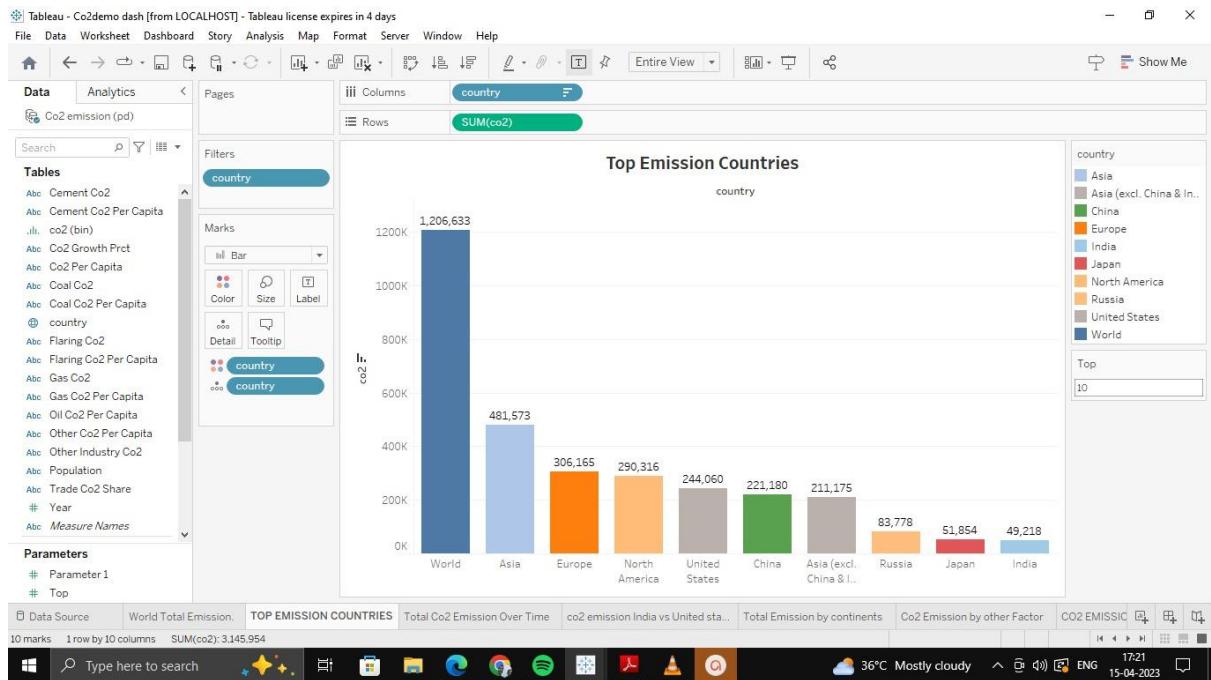
Donut Chart for Oil Co2 Emission

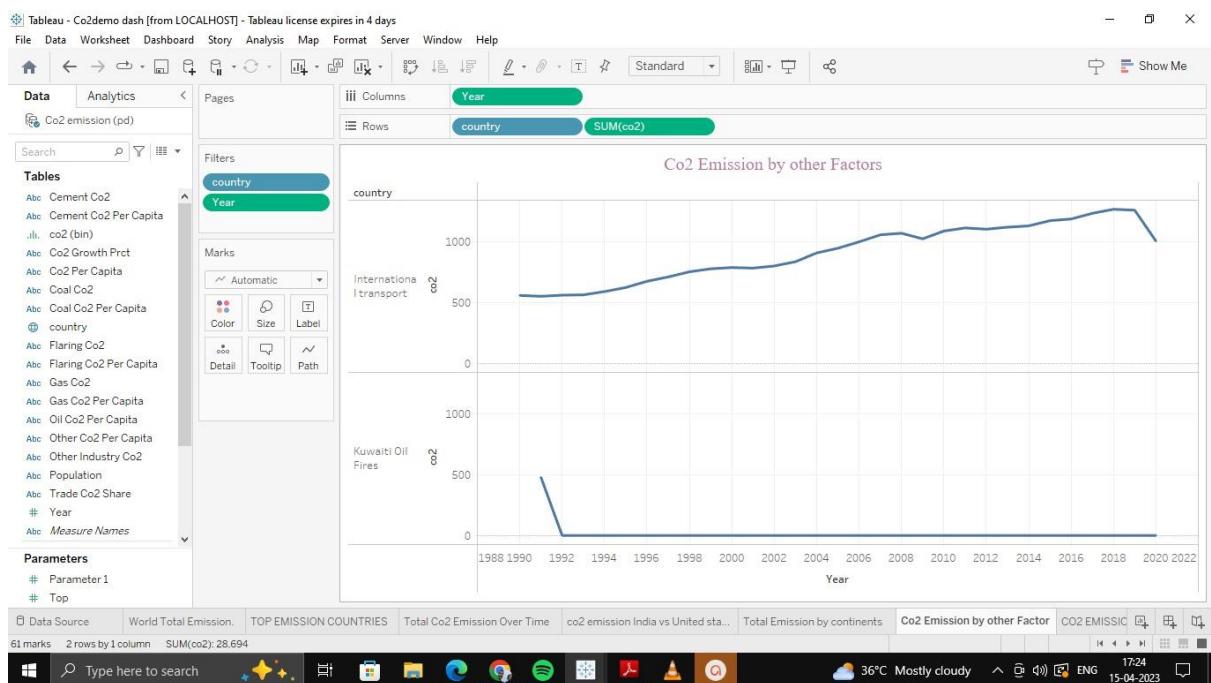
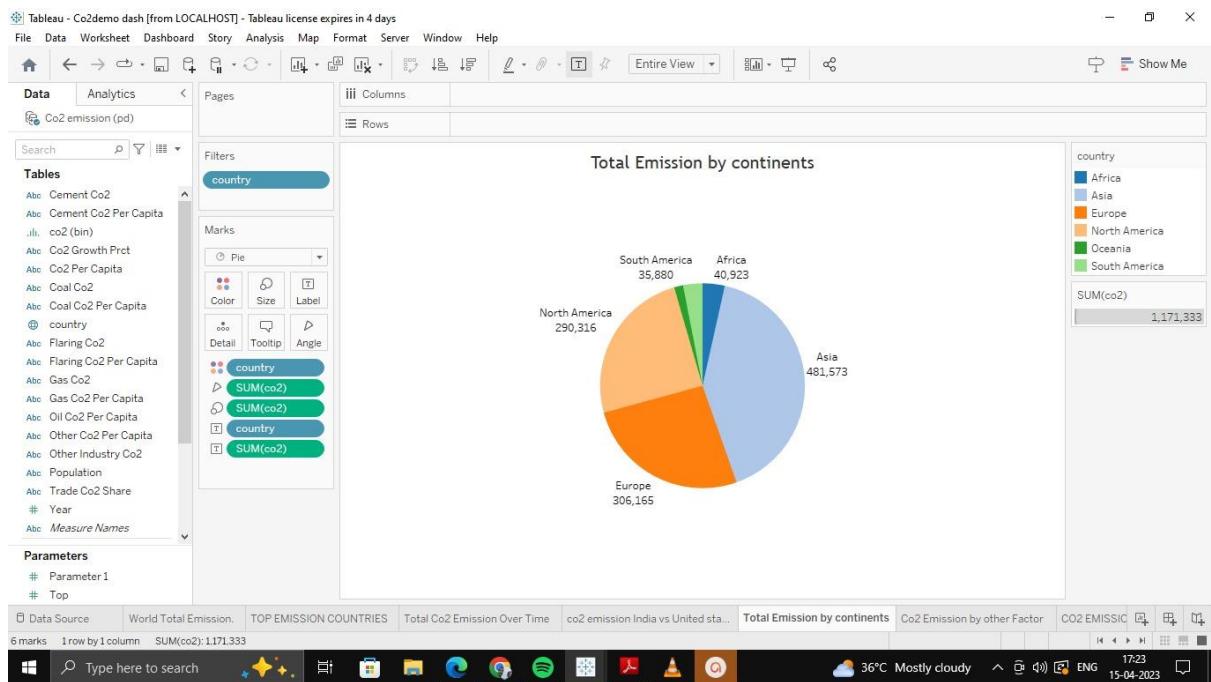
10 marks 10 rows by 1 column SUM(co2): 780,082



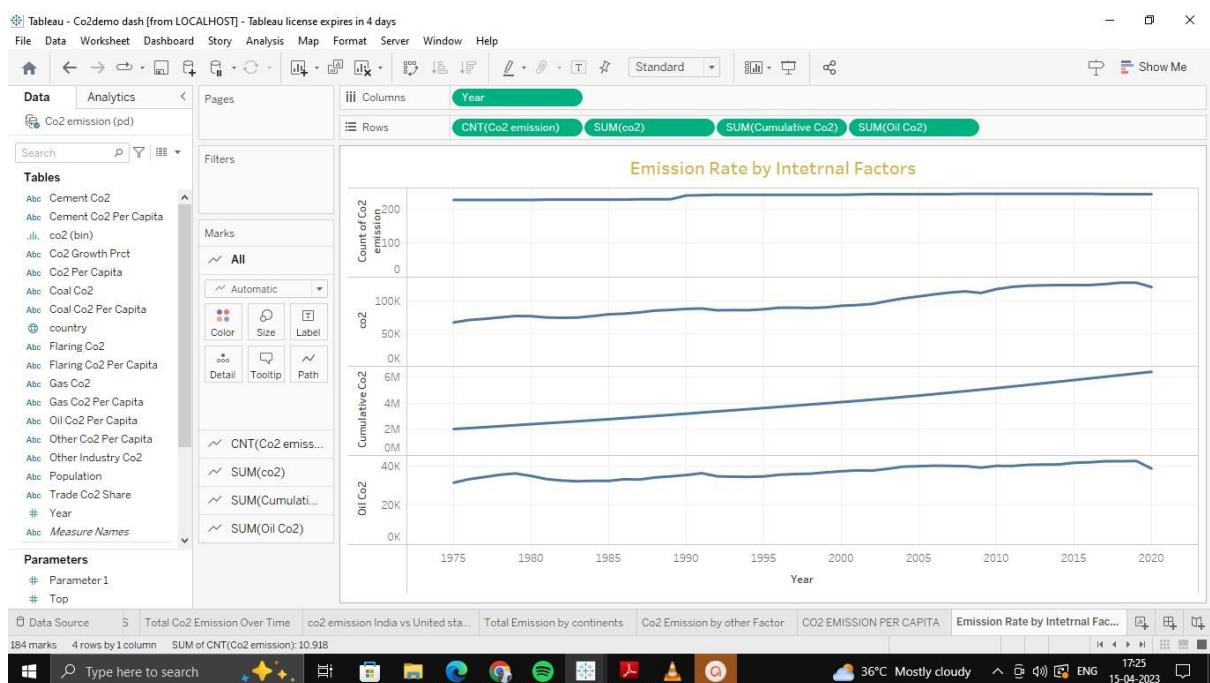
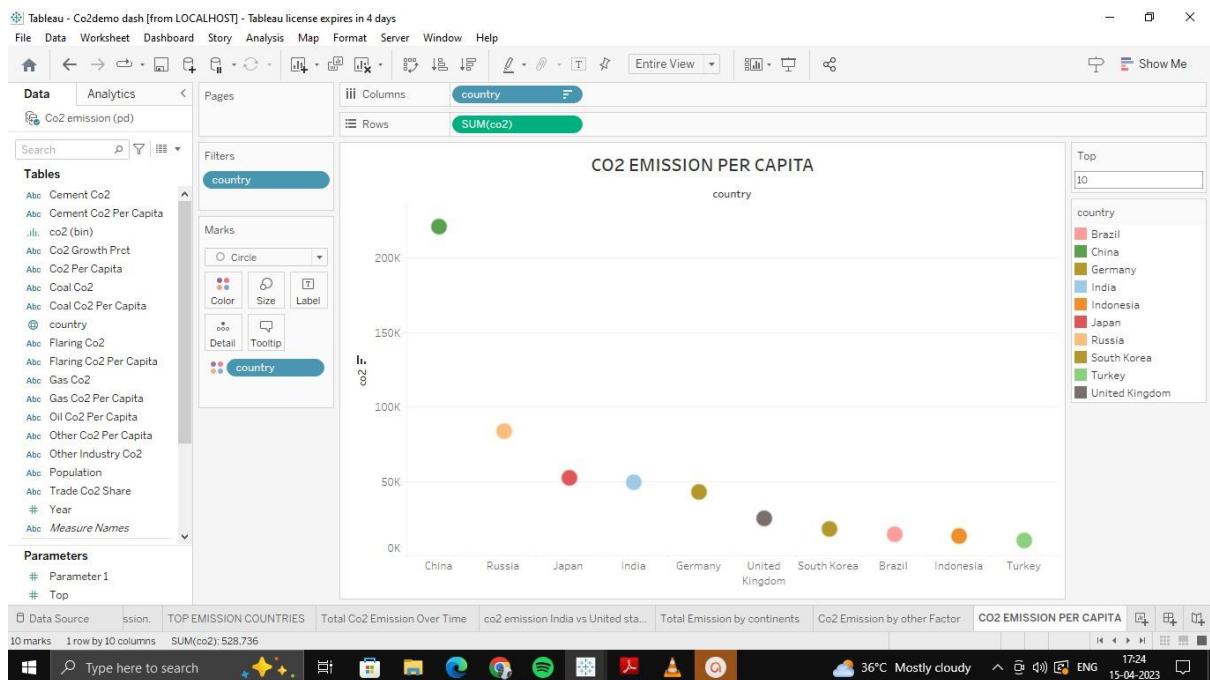
Type here to search





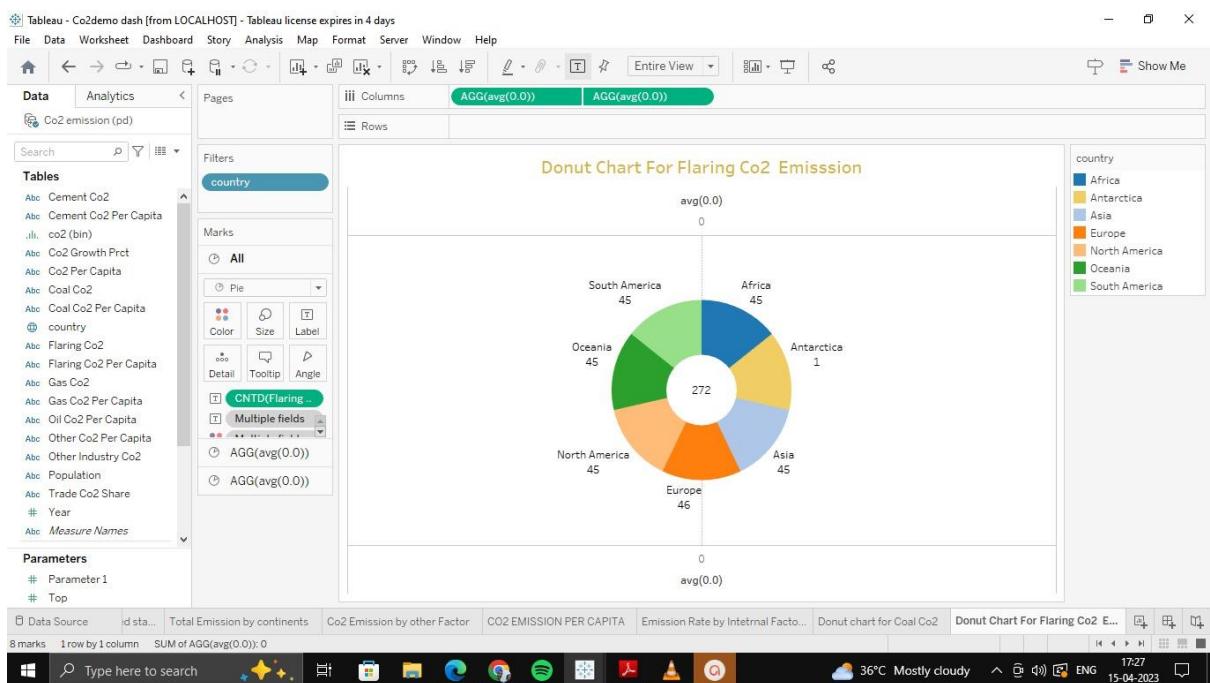
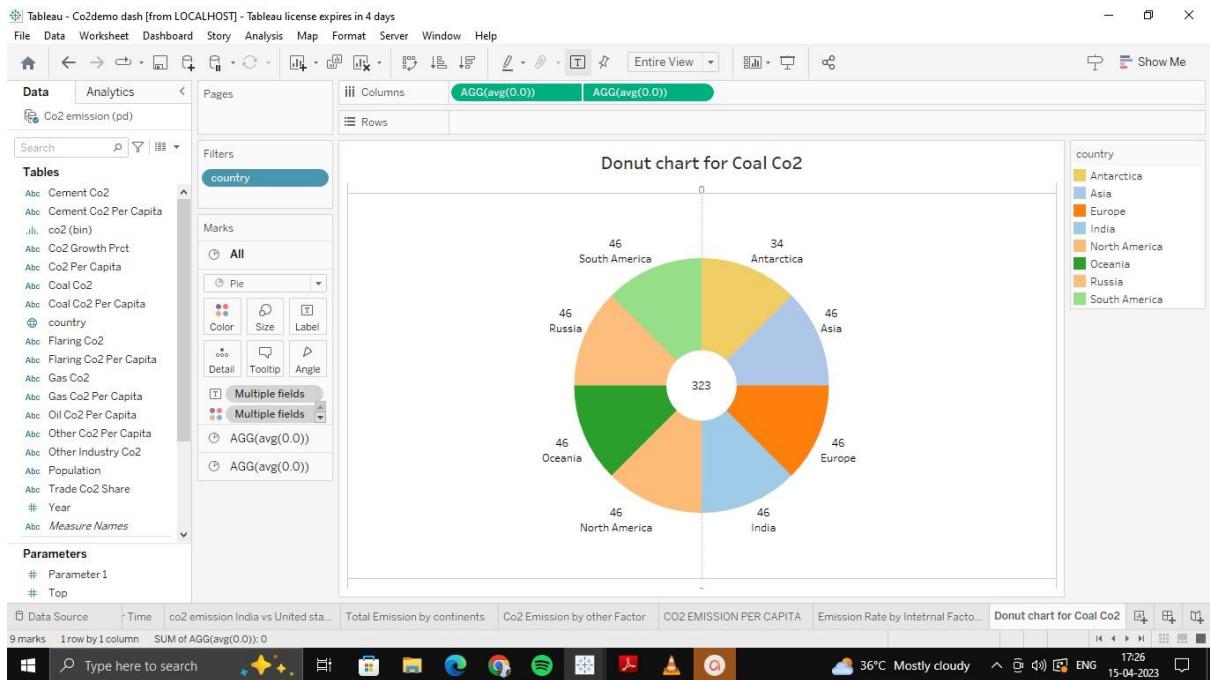


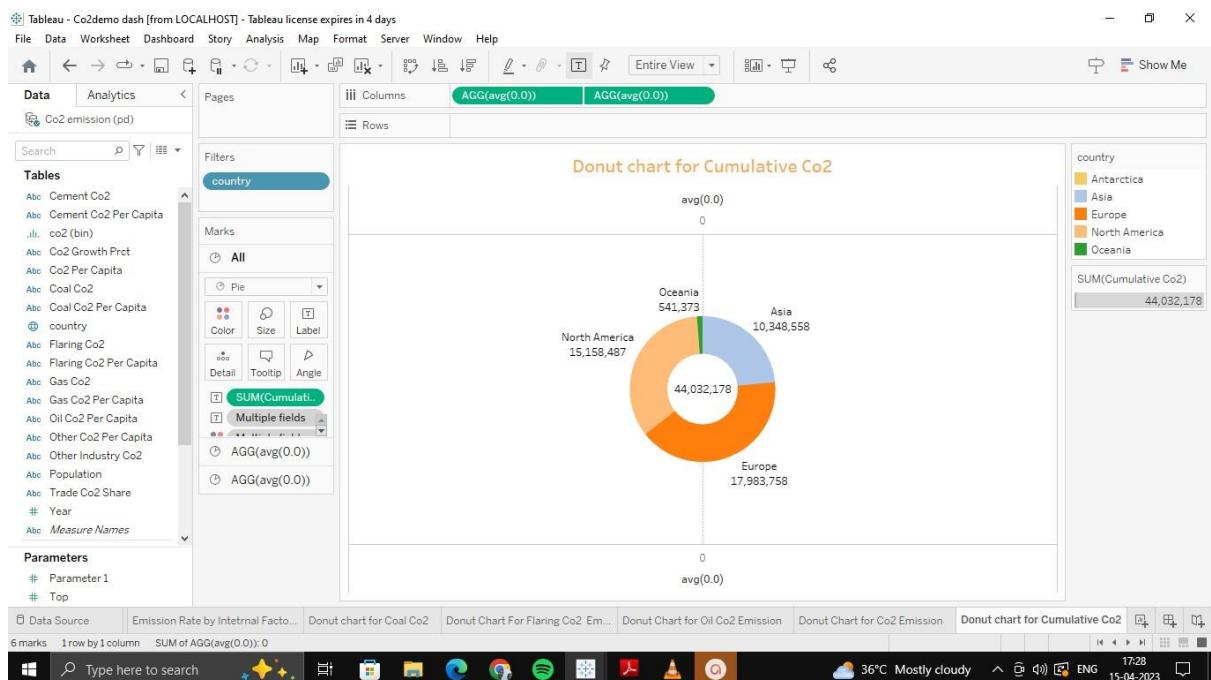
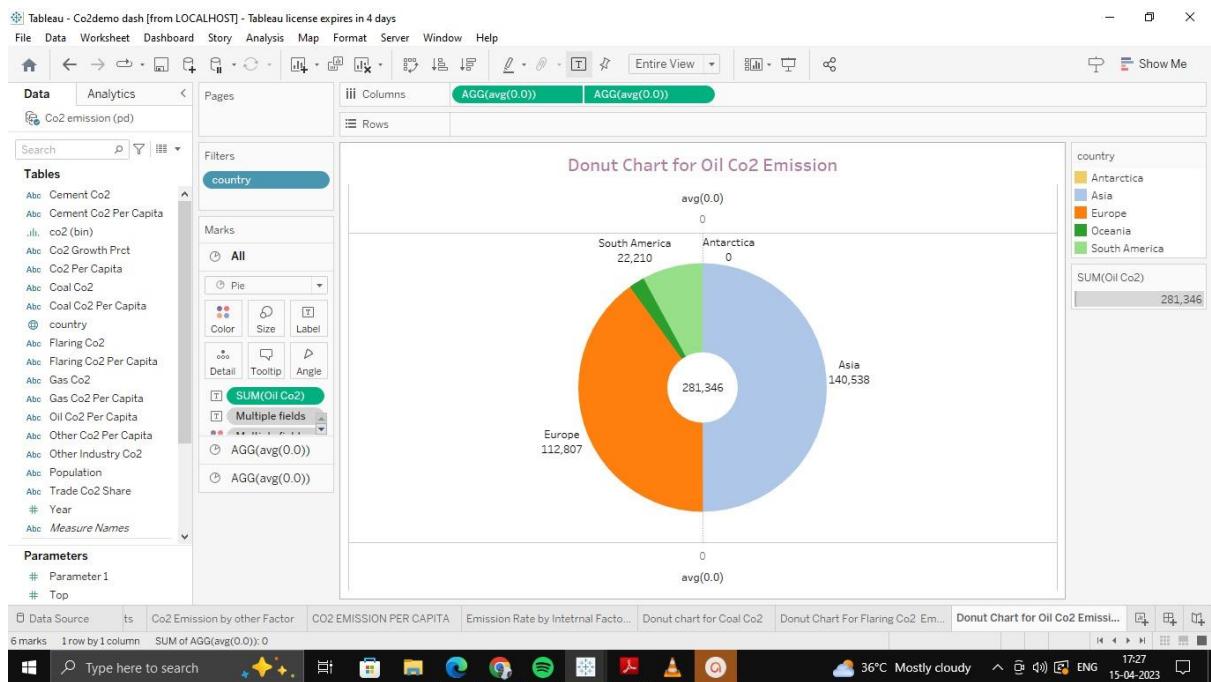
# Project Report Template

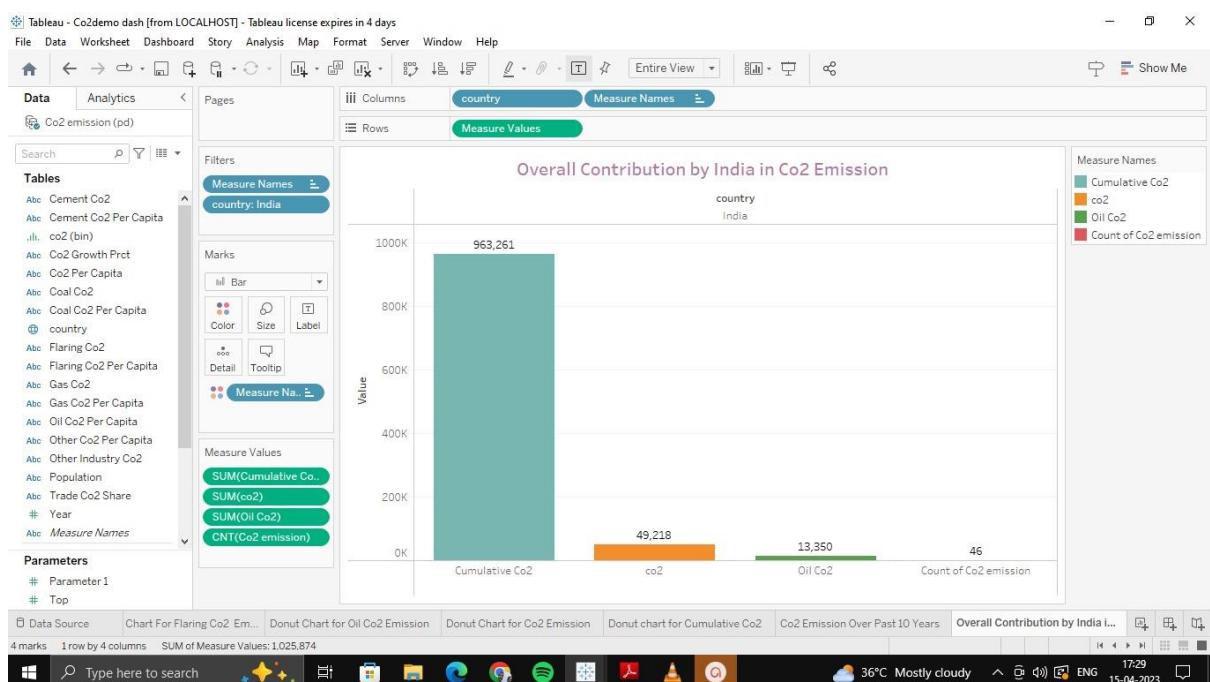
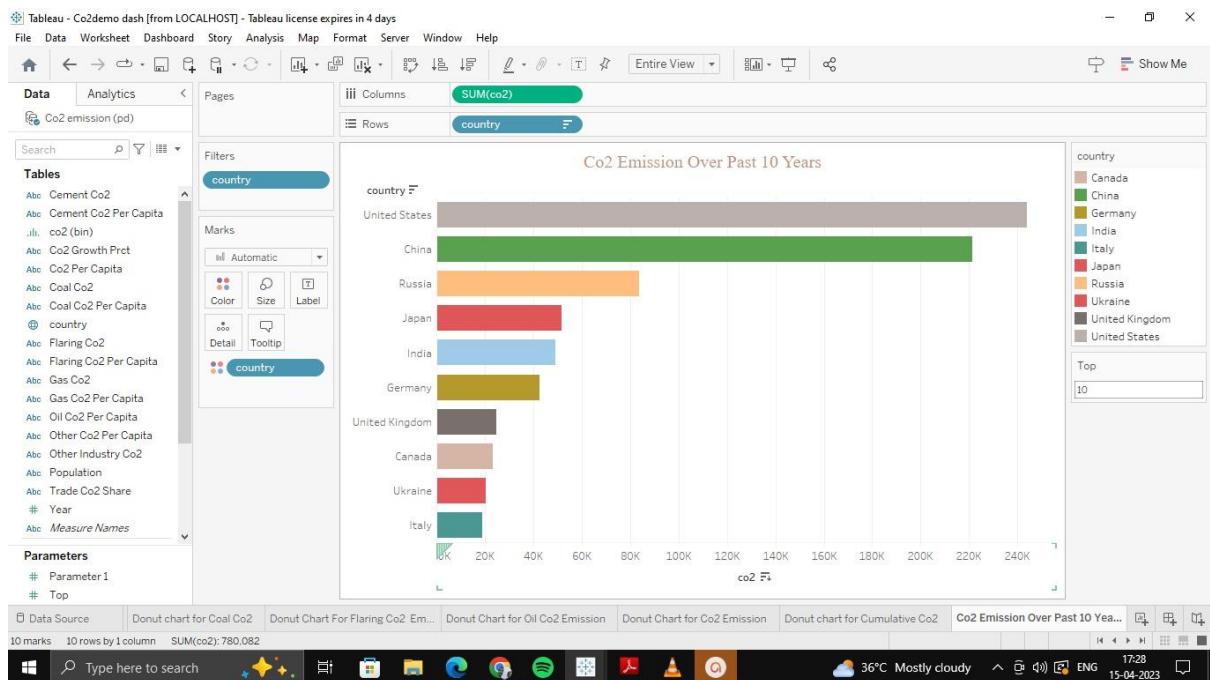




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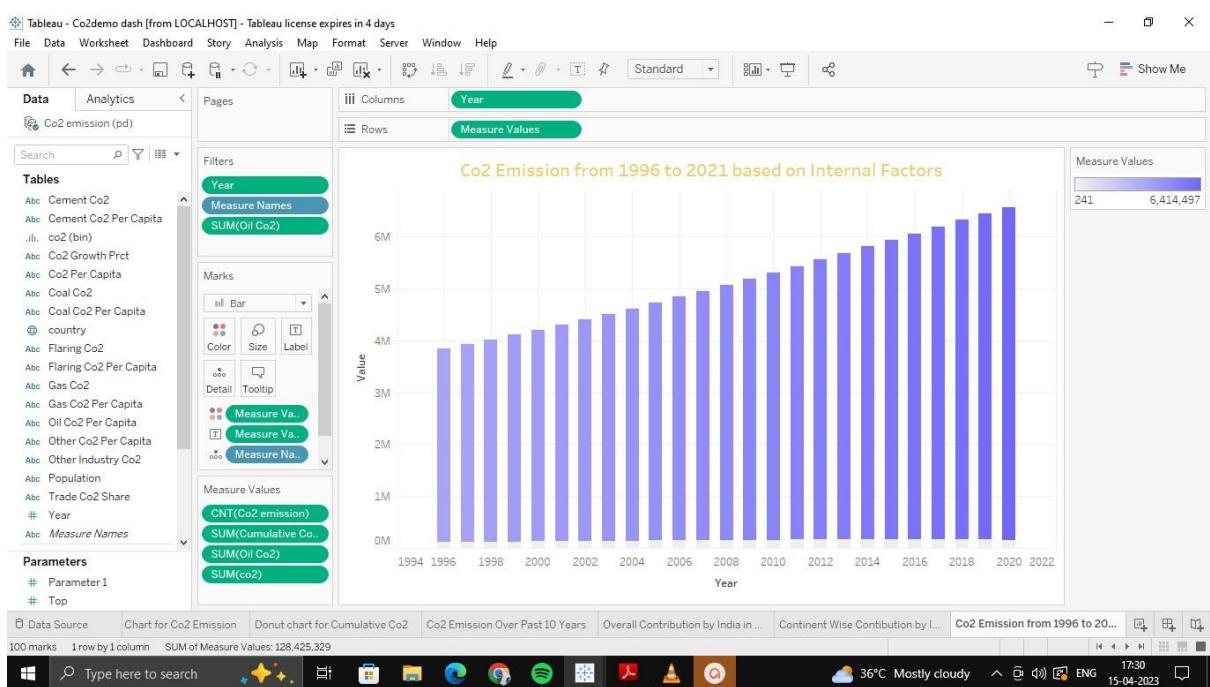
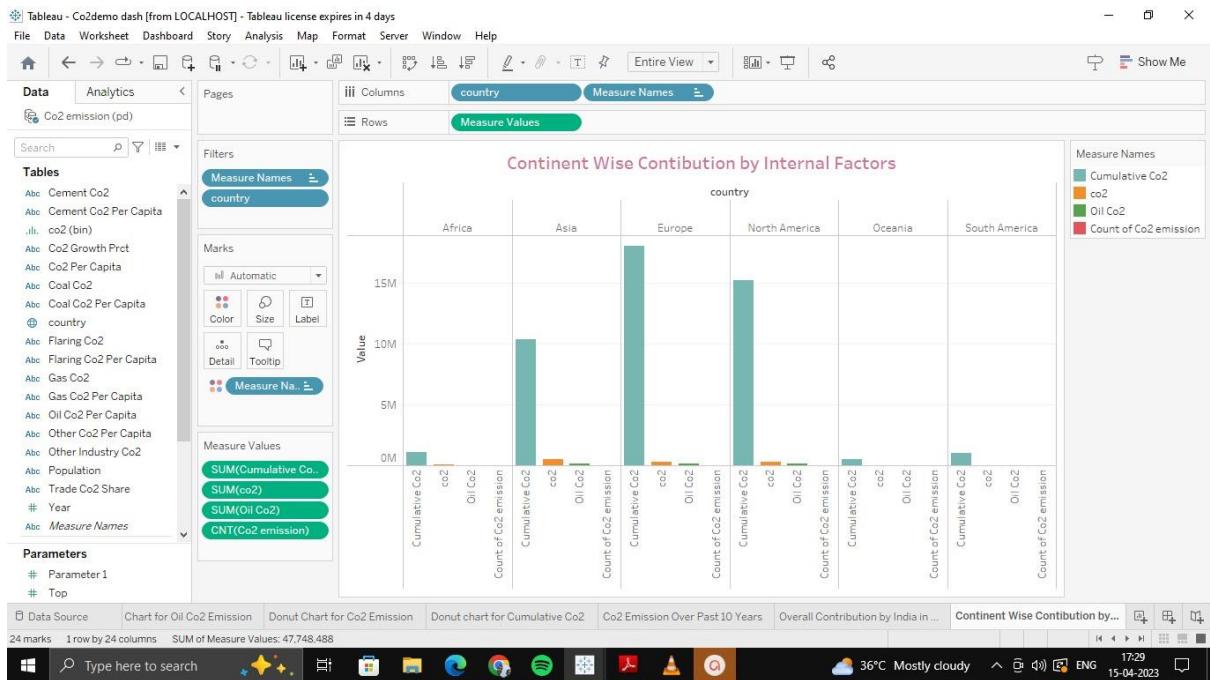






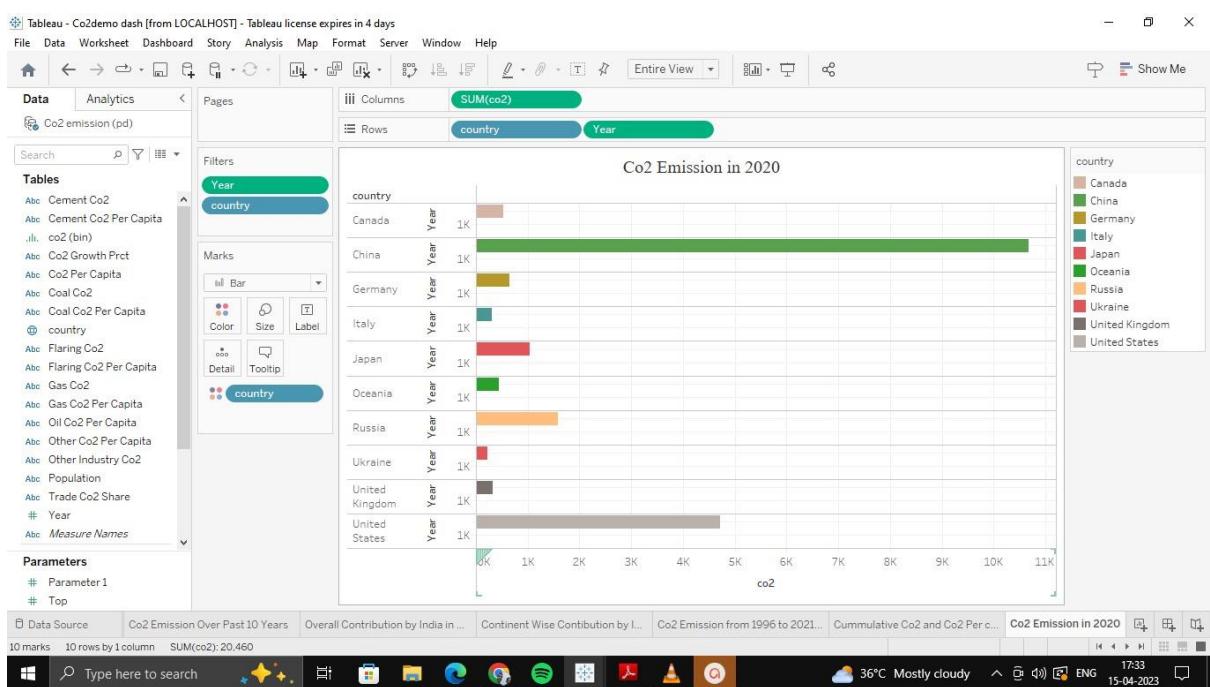
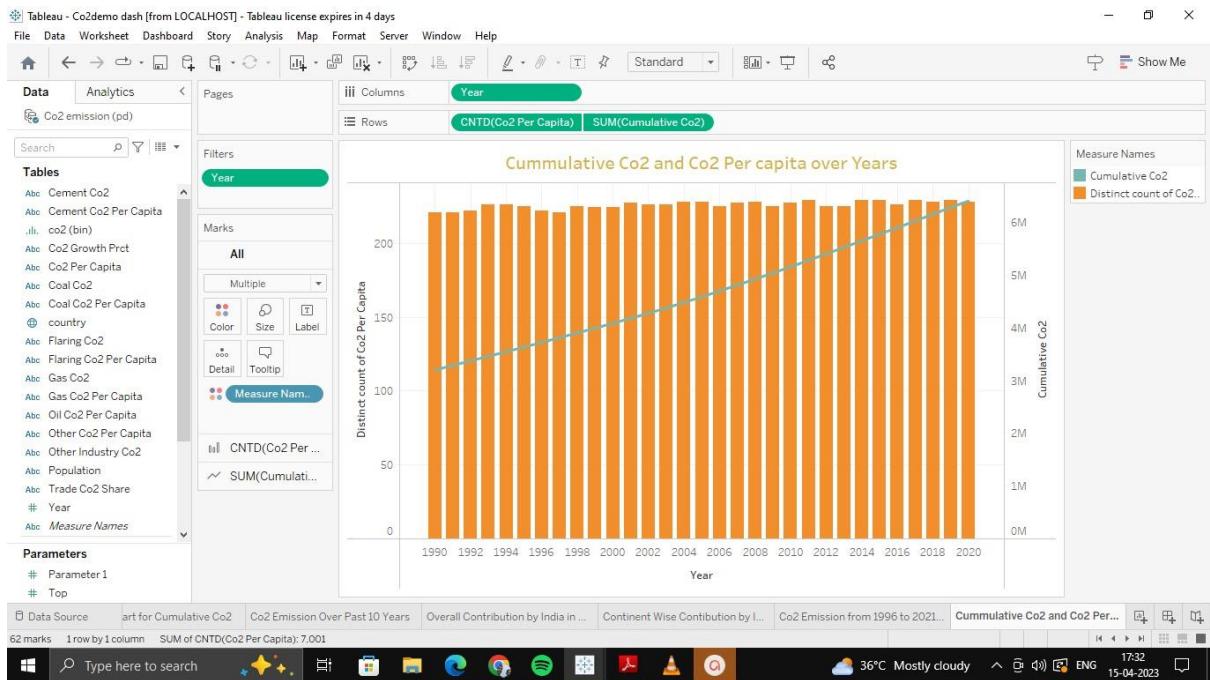


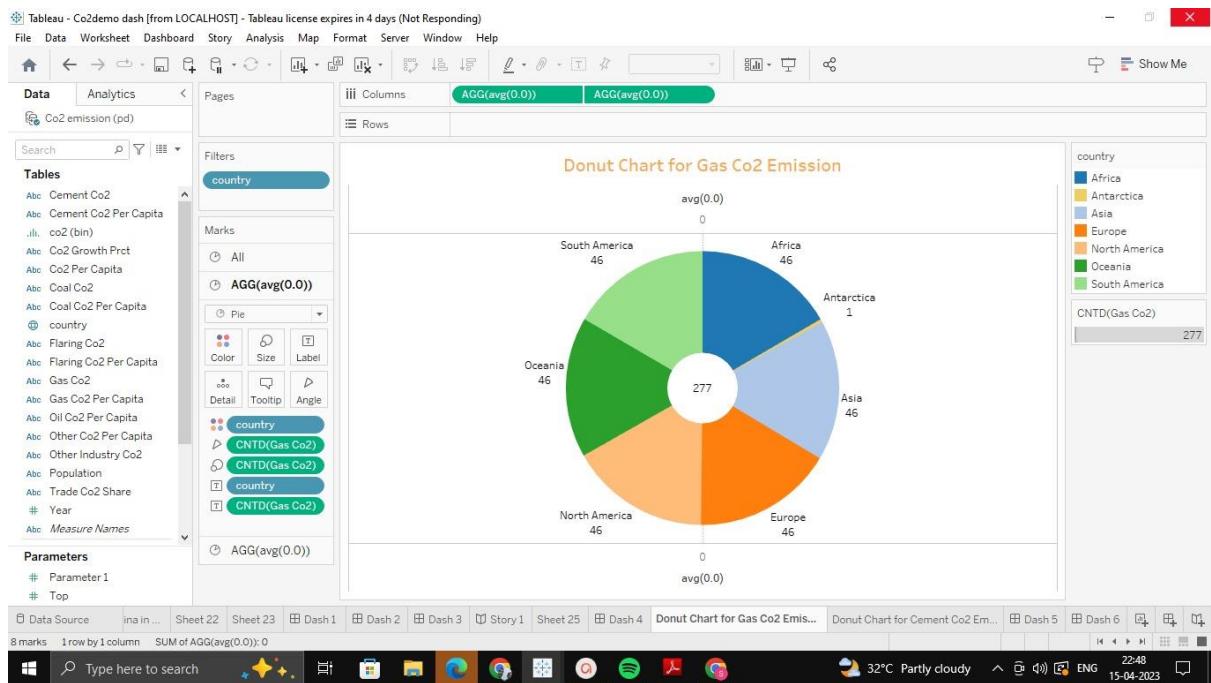
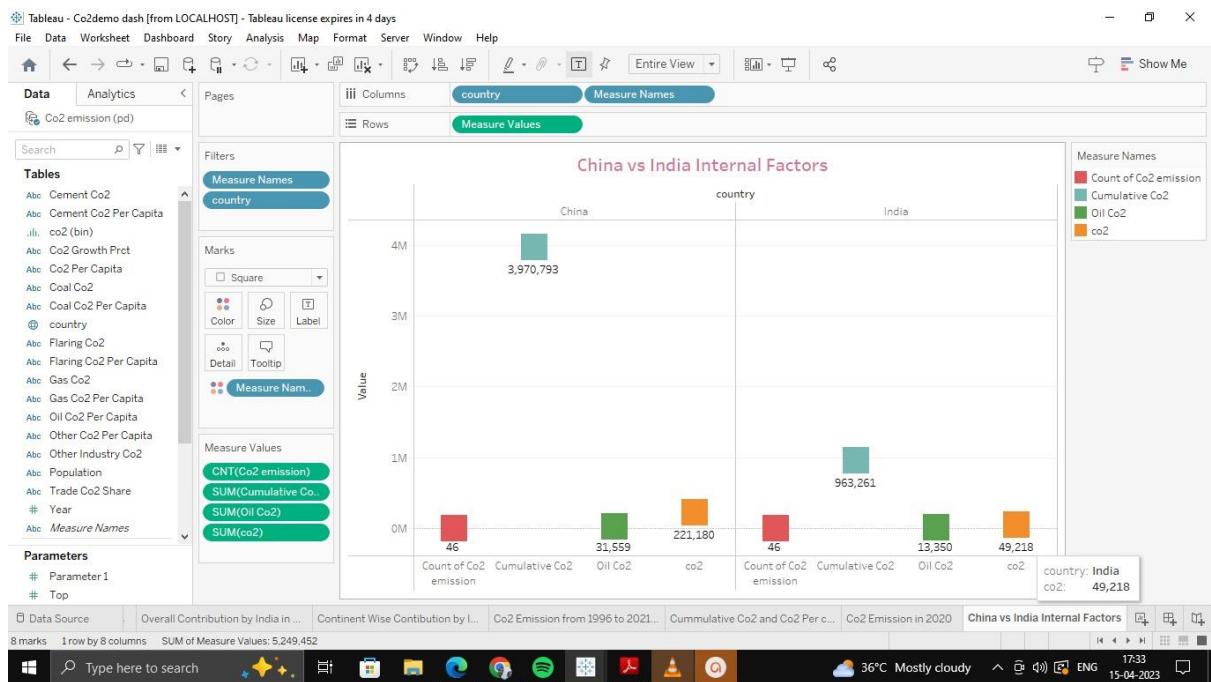
# Project Report Template





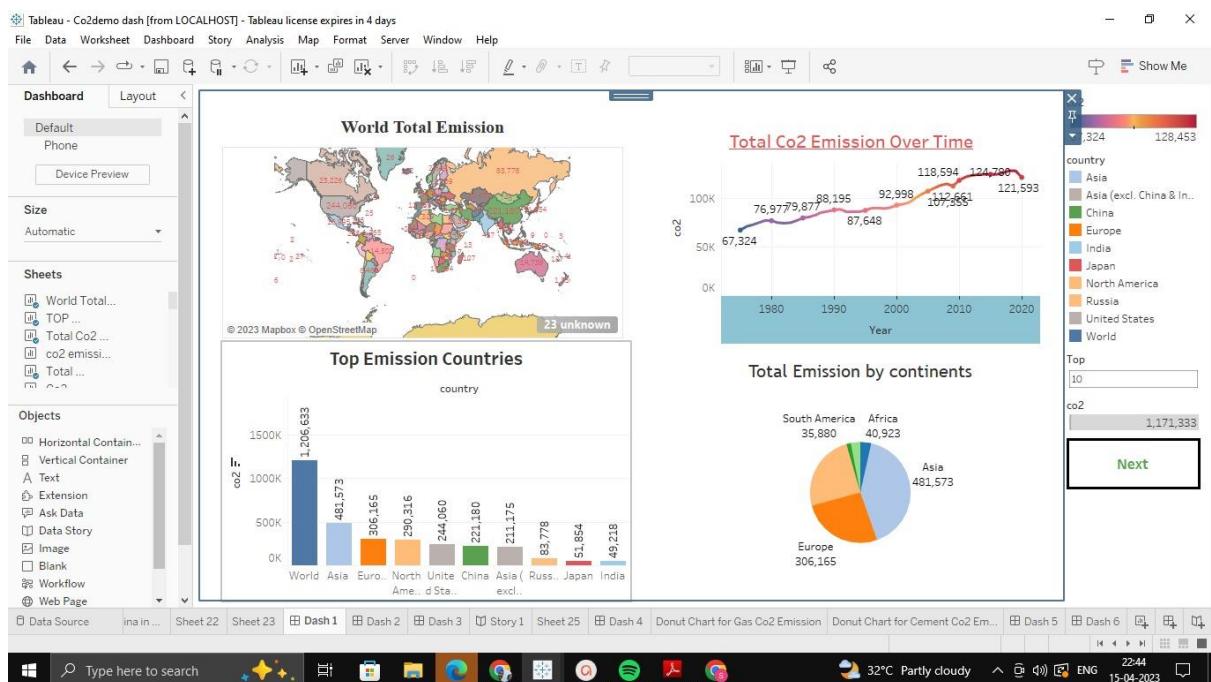
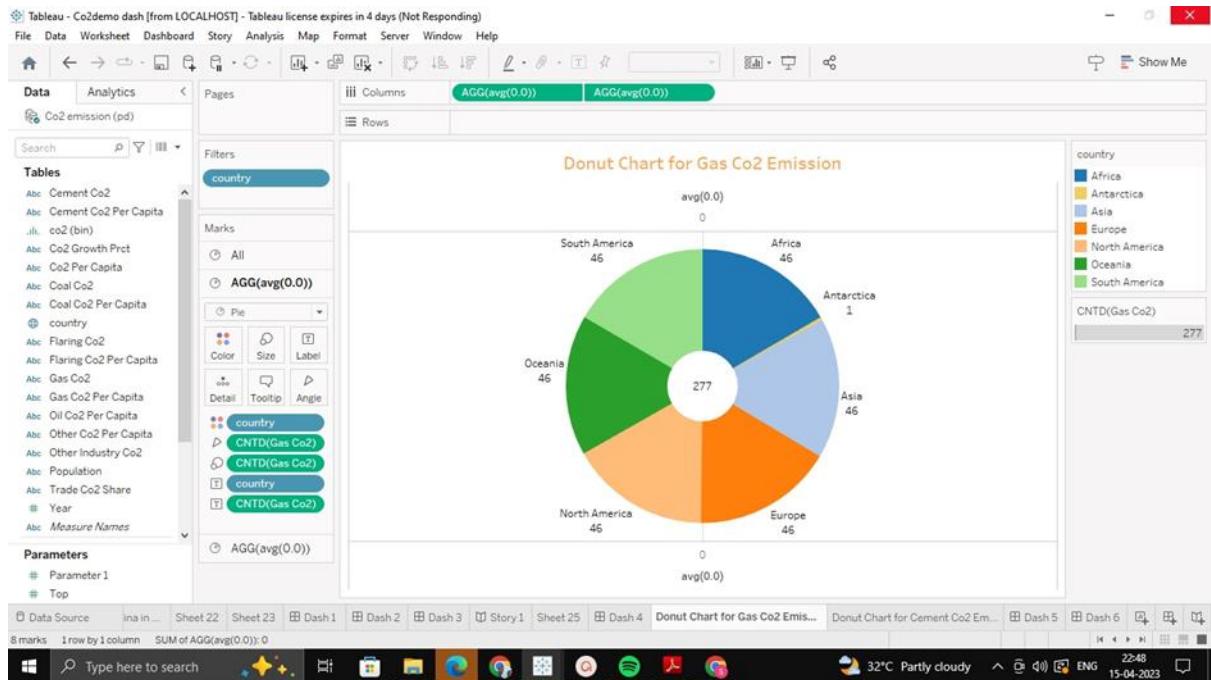
# Project Report Template





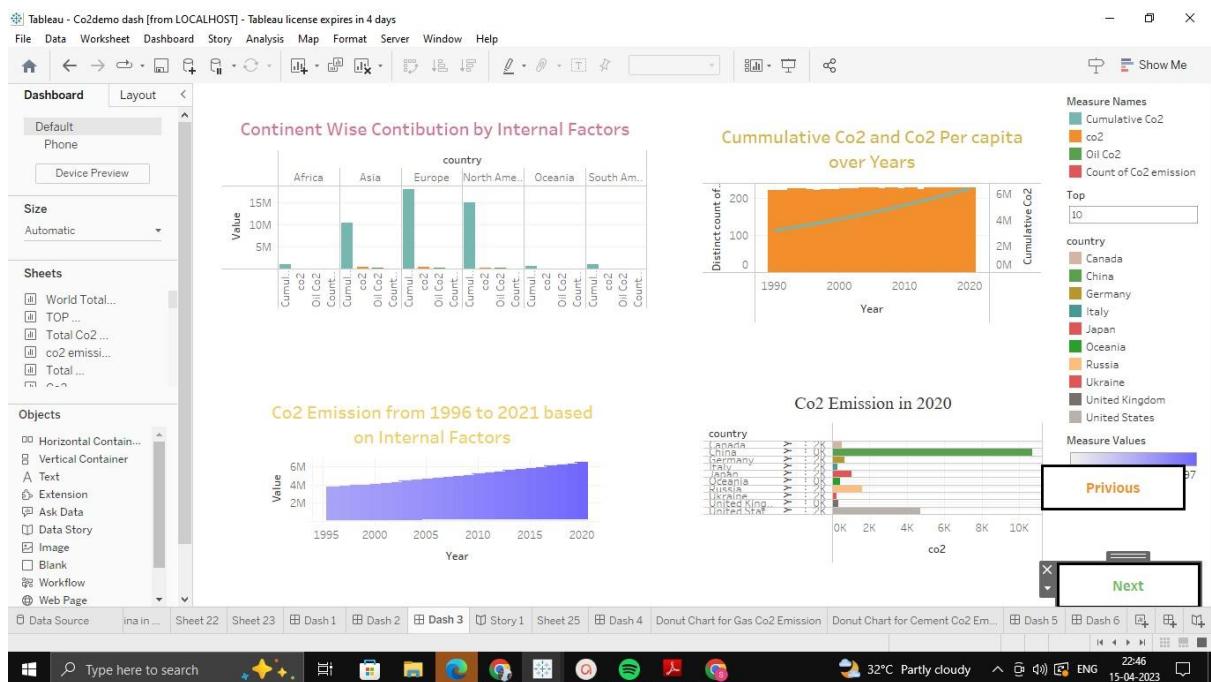
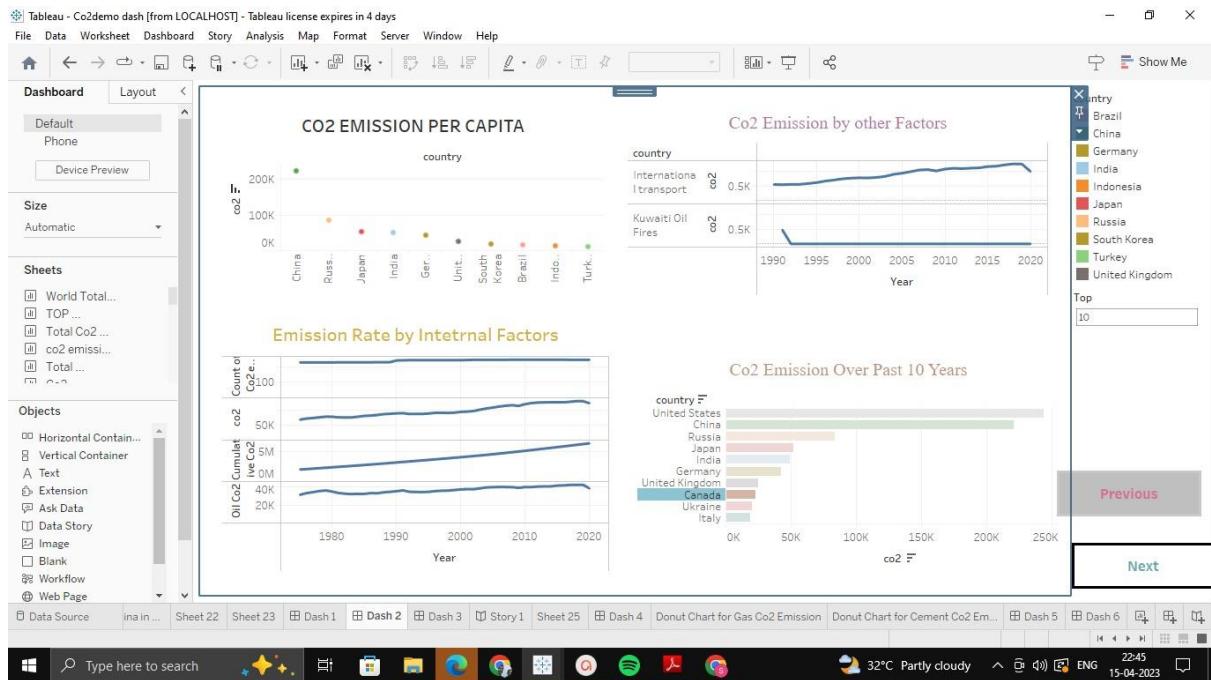


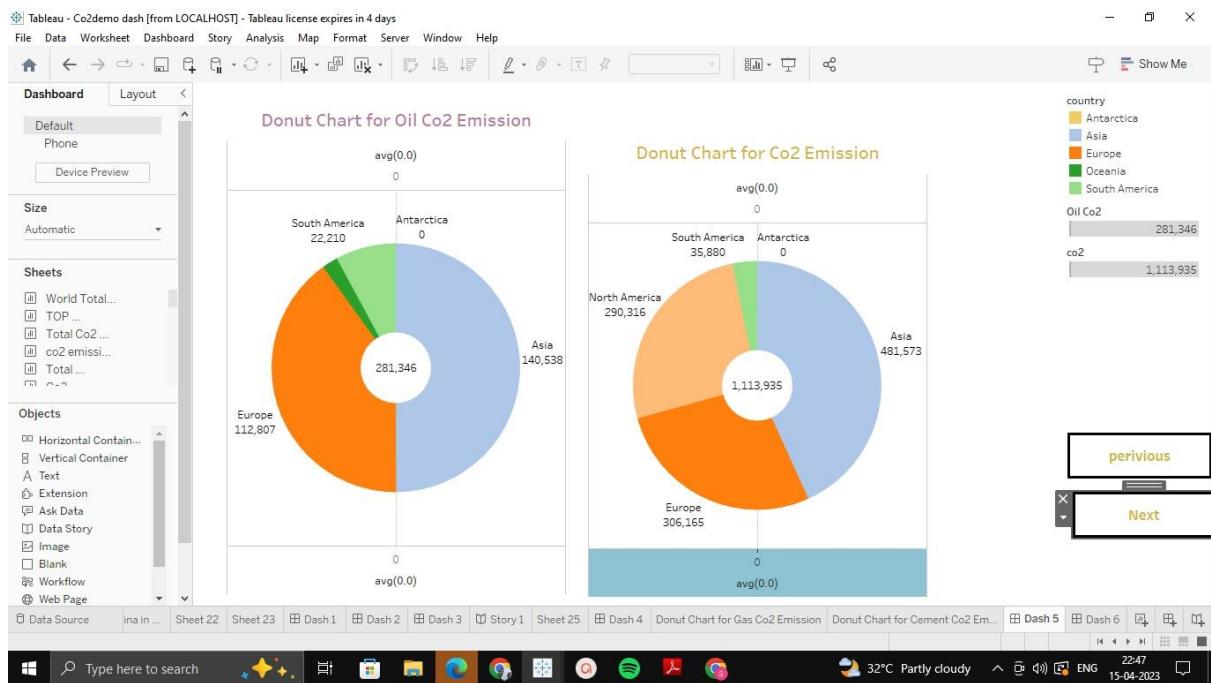
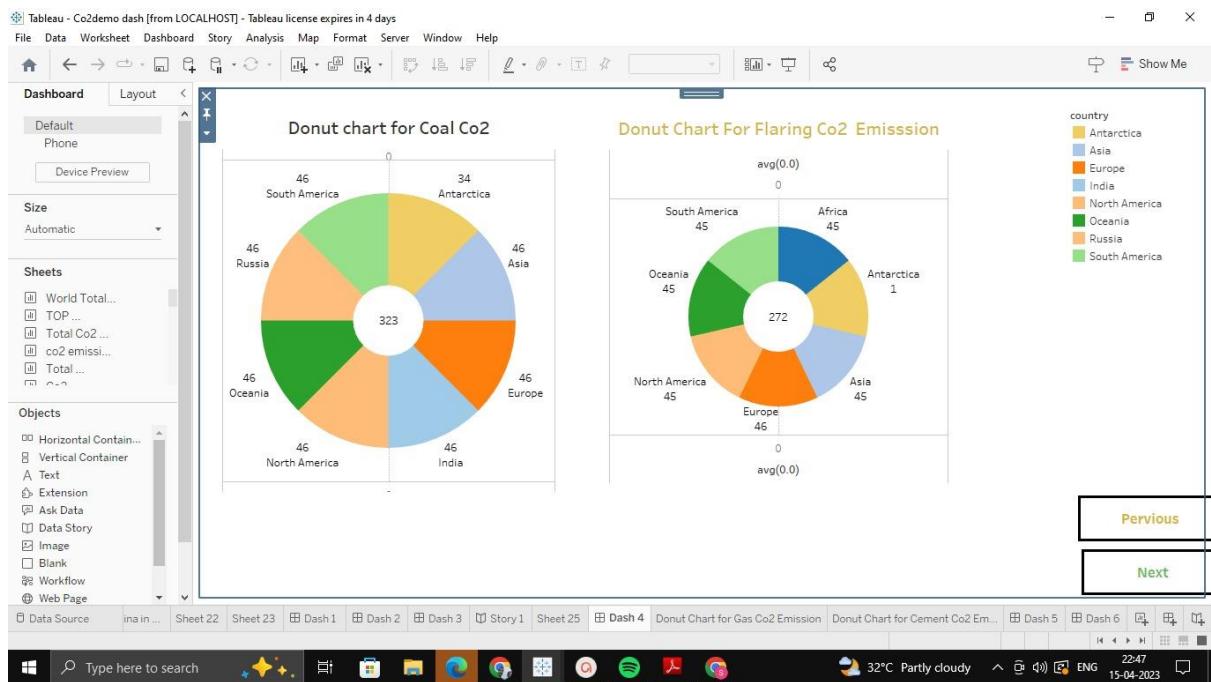
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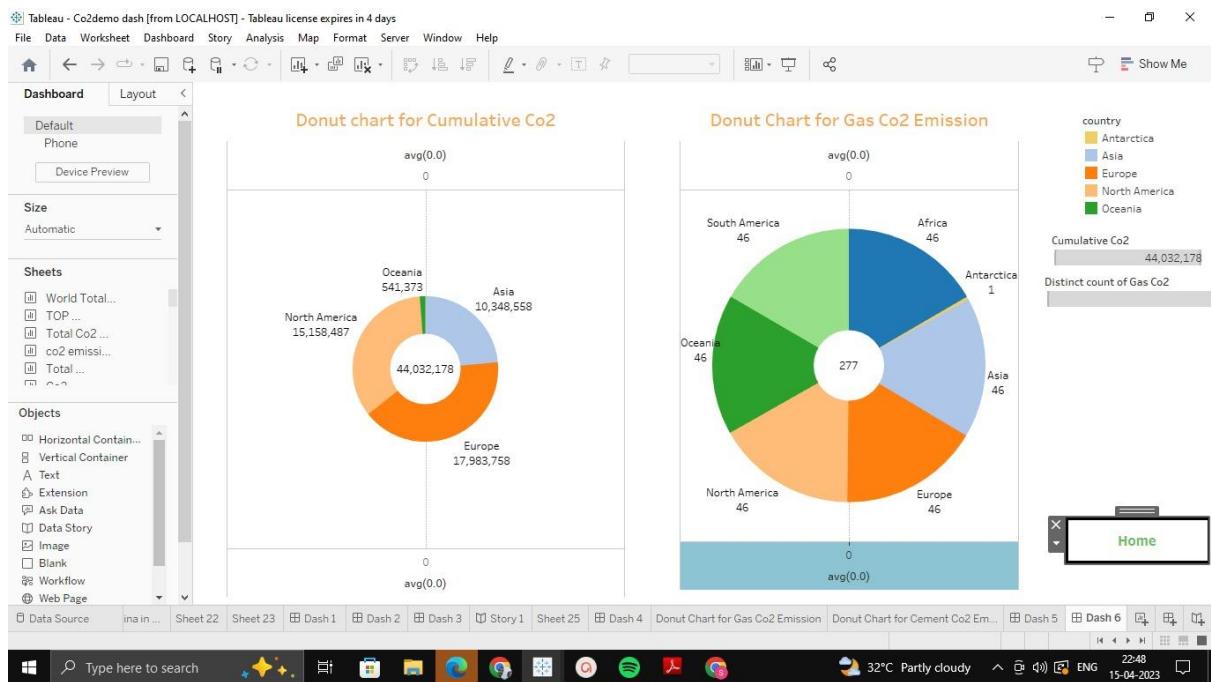




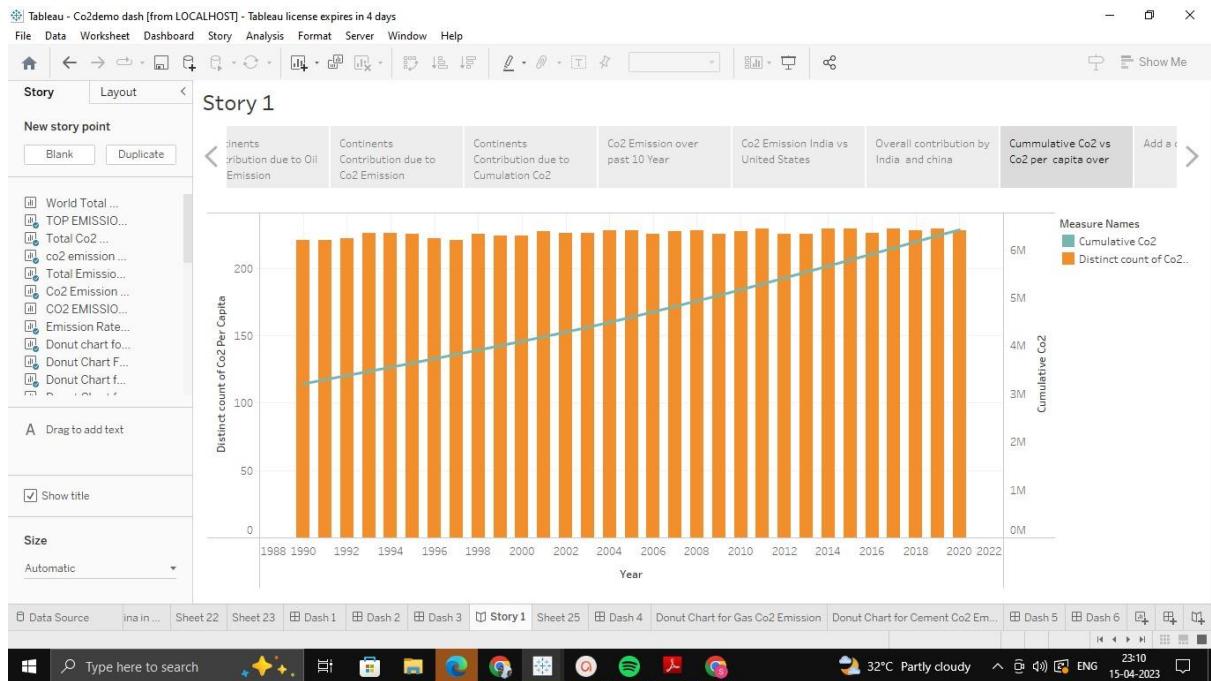
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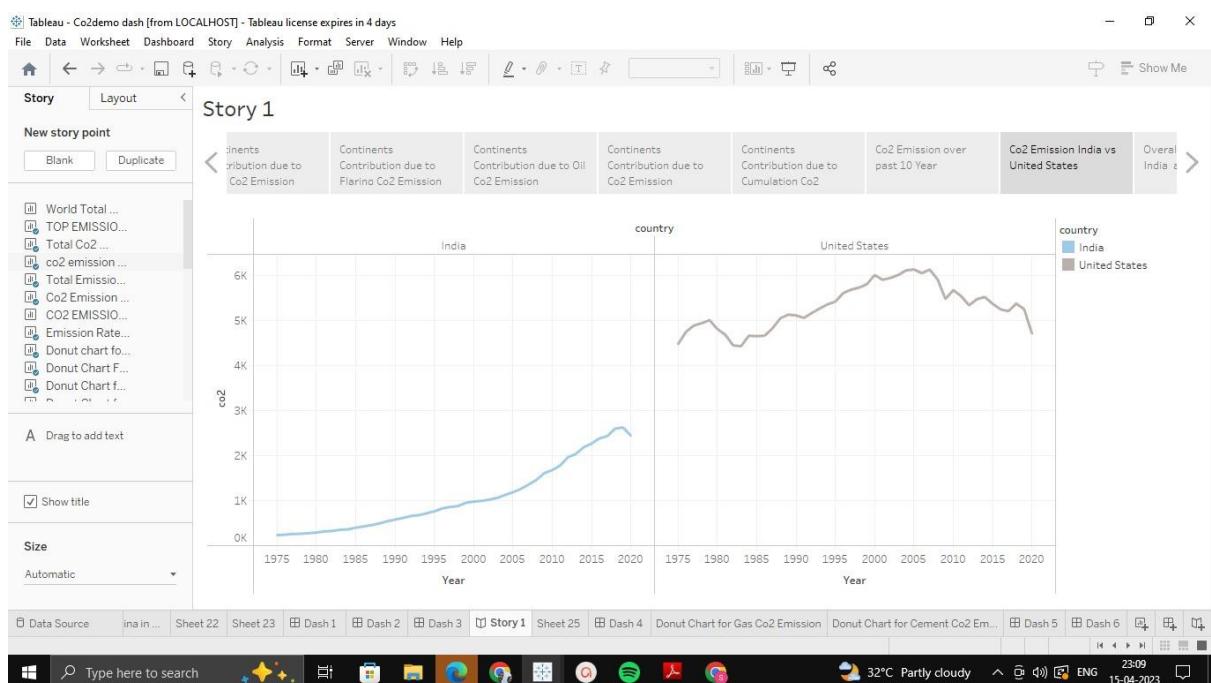
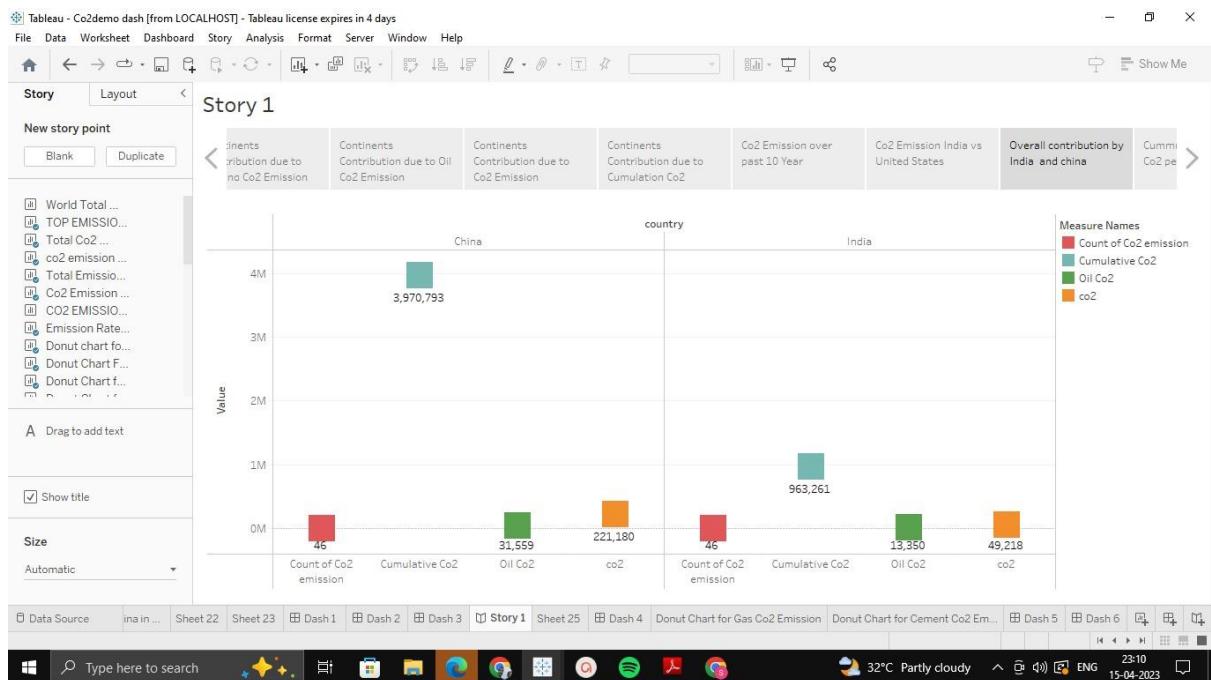


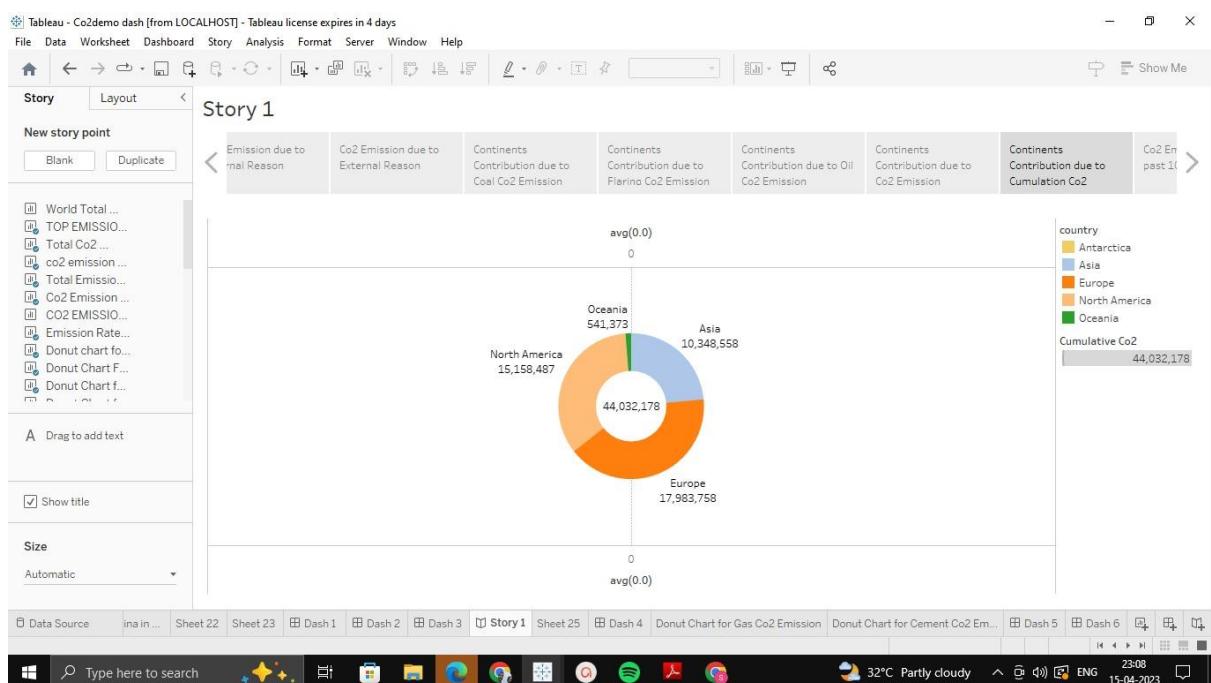
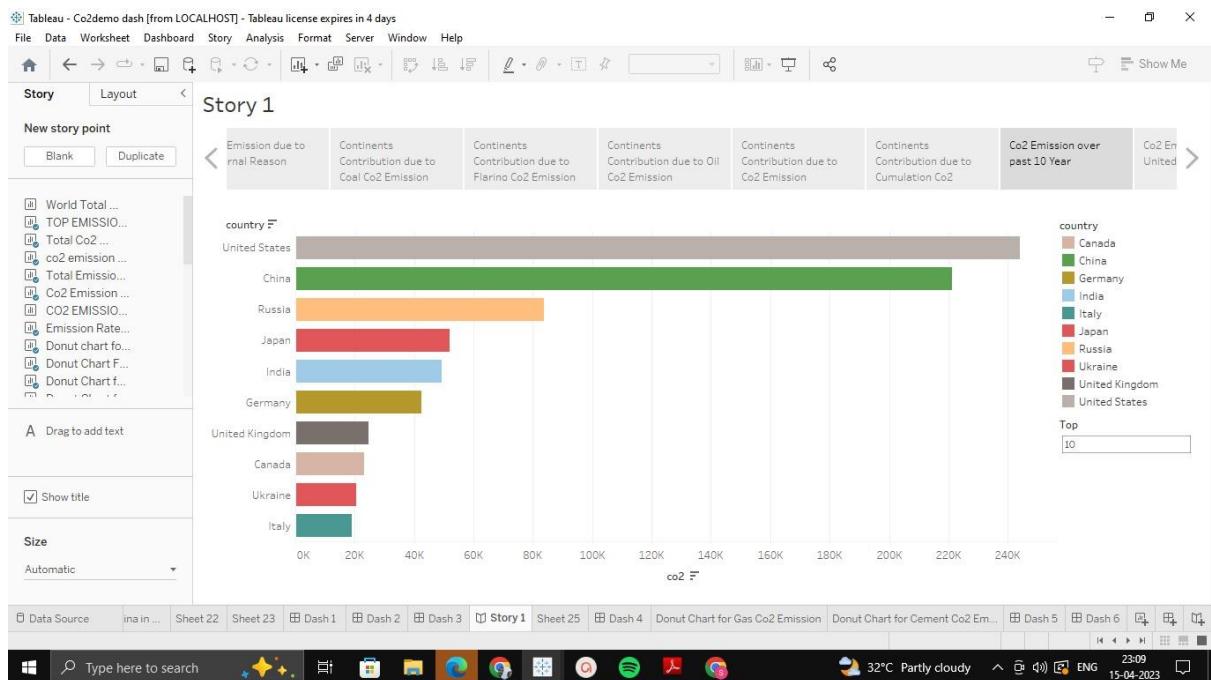


## STORY



# Project Report Template





# Project Report Template

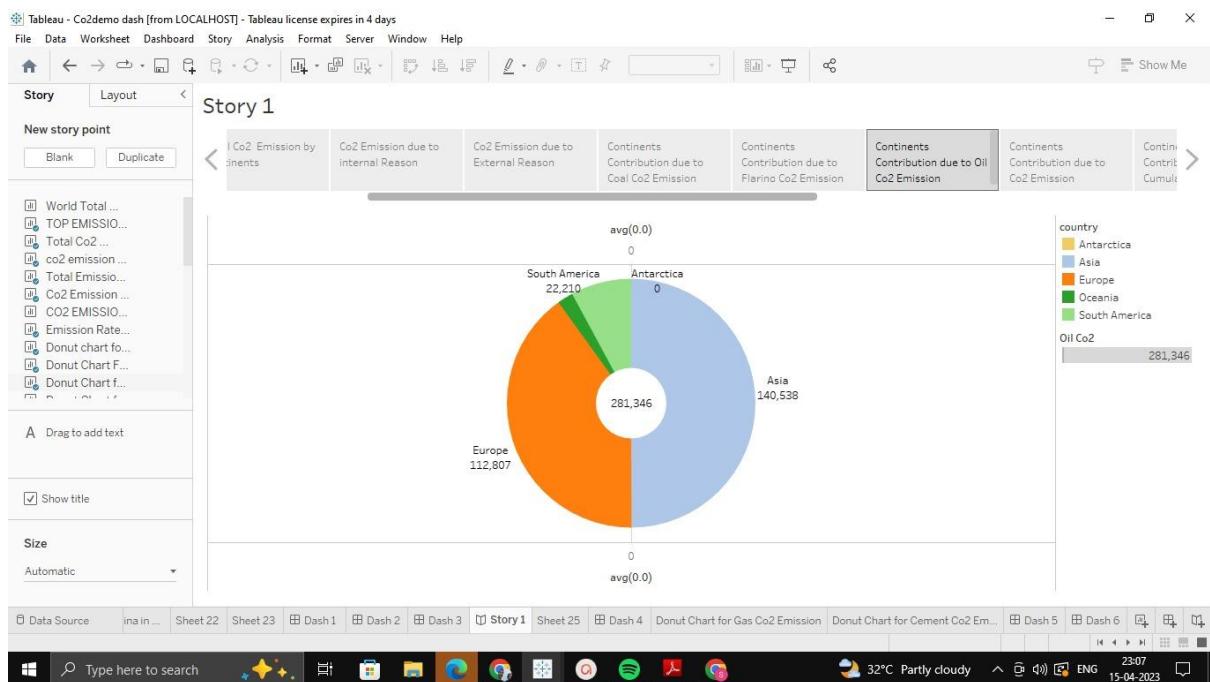
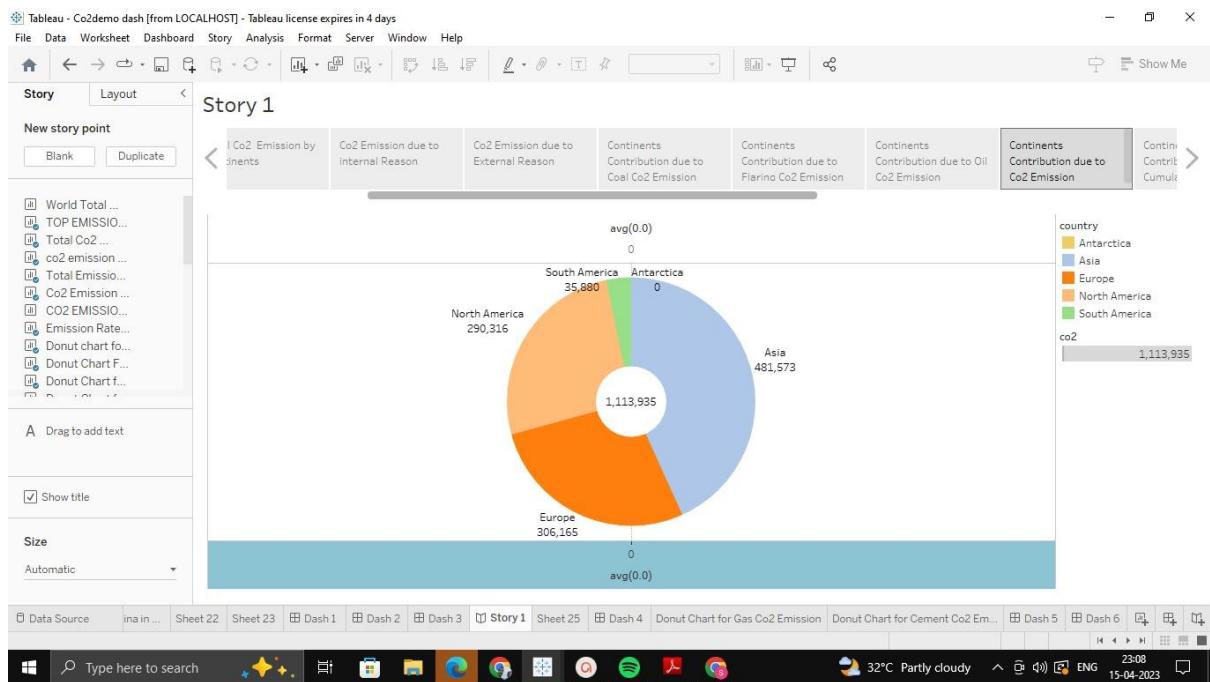


Tableau - Co2demo dash [from LOCALHOST] - Tableau license expires in 4 days

File Data Worksheet Dashboard Story Analysis Format Server Window Help

Story Layout < Story 1 >

New story point

Blank Duplicate

Countries Emitting Highest Total Co2 Emission from 1975 to 2020 Total Co2 Emission by Continents Co2 Emission due to Internal Reason Co2 Emission due to External Reason Continents Contribution due to Coal Co2 Emission Continents Contribution due to Flaring Co2 Emission

World Total... TOP EMISSIONS... Total Co2 ... co2 emission... Total Emissio... Co2 Emissio... CO2 EMISSIO... Emission Rate... Donut chart fo... Donut Chart F... Donut Chart f...

A Drag to add text

Show title

Size Automatic

avg(0.0) 0

South America 45 Africa 45 Antarctica 1 Oceania 45 Asia 45 North America 45 Europe 46 avg(0.0)

country Africa Antarctica Asia Europe North America Oceania South America

272

avg(0.0) 0

Story 1 Sheet 22 Sheet 23 Dash 1 Dash 2 Dash 3 Story 1 Sheet 25 Dash 4 Donut Chart for Gas Co2 Emission Donut Chart for Cement Co2 Em... Dash 5 Dash 6 < > 32/07 ENG 15-04-2023

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Story Layout < Story 1 >

New story point

Blank Duplicate

Countries Emitting Highest Total Co2 Emission from 1975 to 2020 Total Co2 Emission by Continents Co2 Emission due to Internal Reason Co2 Emission due to External Reason Continents Contribution due to Coal Co2 Emission Continents Contribution due to Flaring Co2 Emission

World Total... TOP EMISSIONS... Total Co2 ... co2 emission... Total Emissio... Co2 Emissio... CO2 EMISSIO... Emission Rate... Donut chart fo... Donut Chart F... Donut Chart f...

A Drag to add text

Show title

Size Automatic

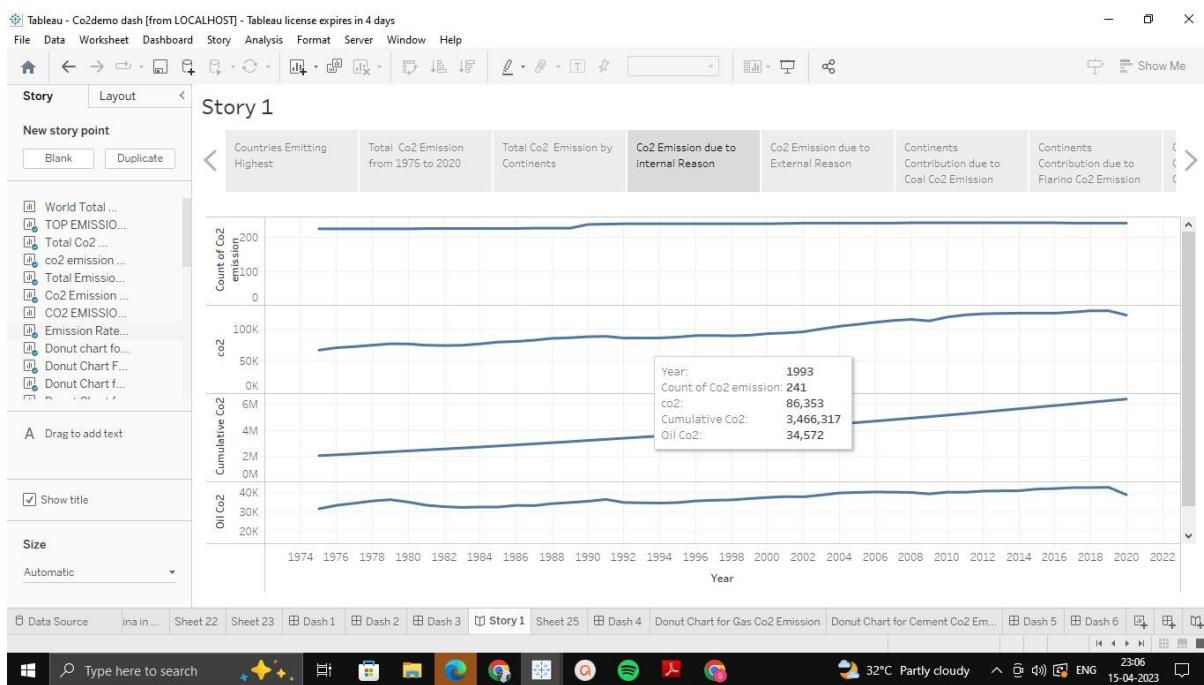
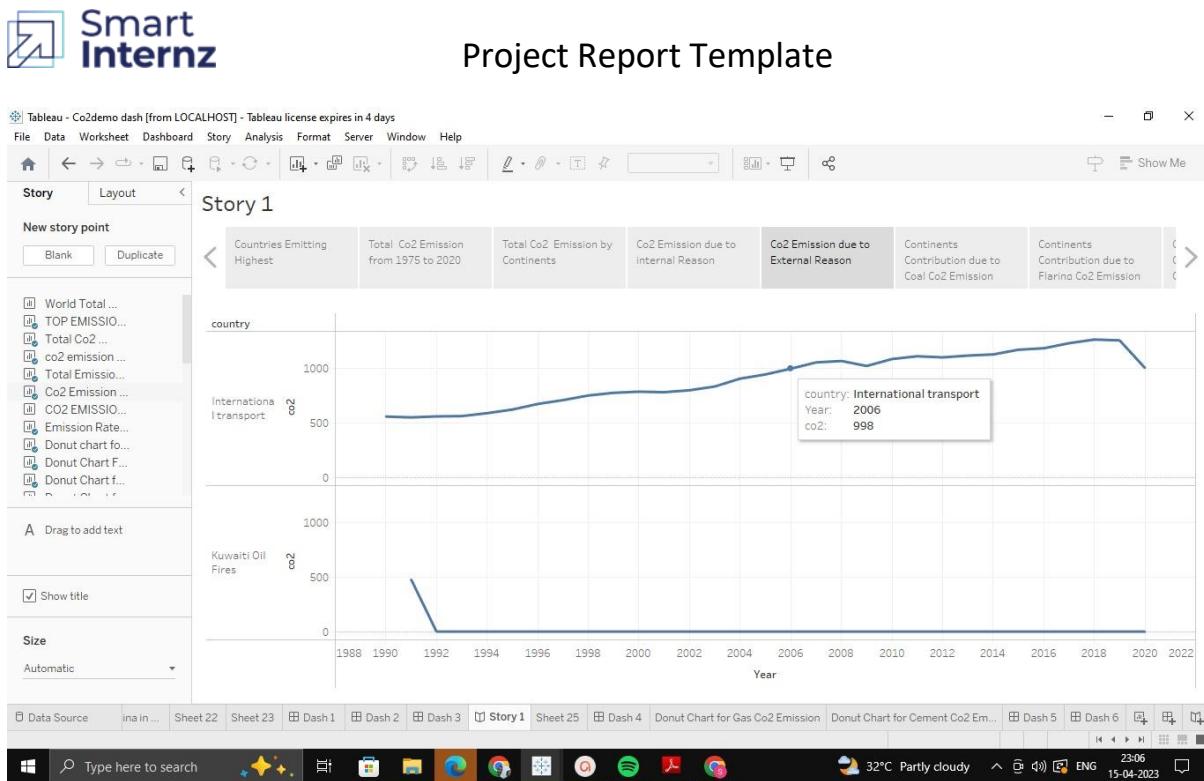
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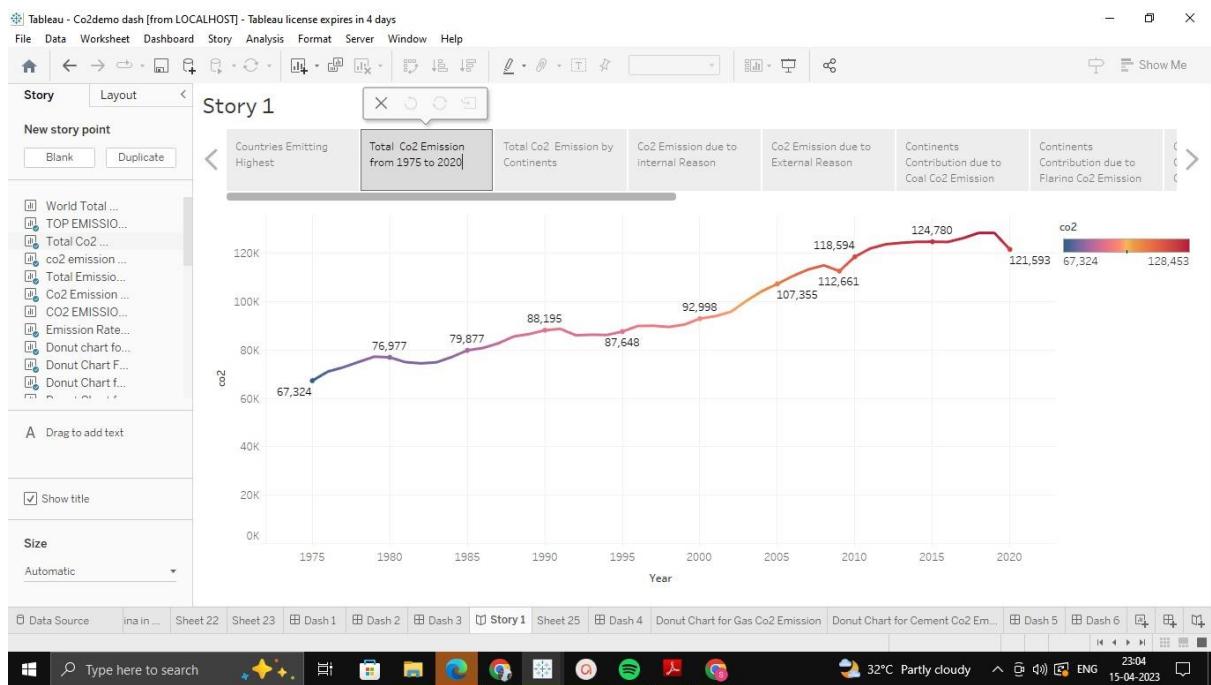
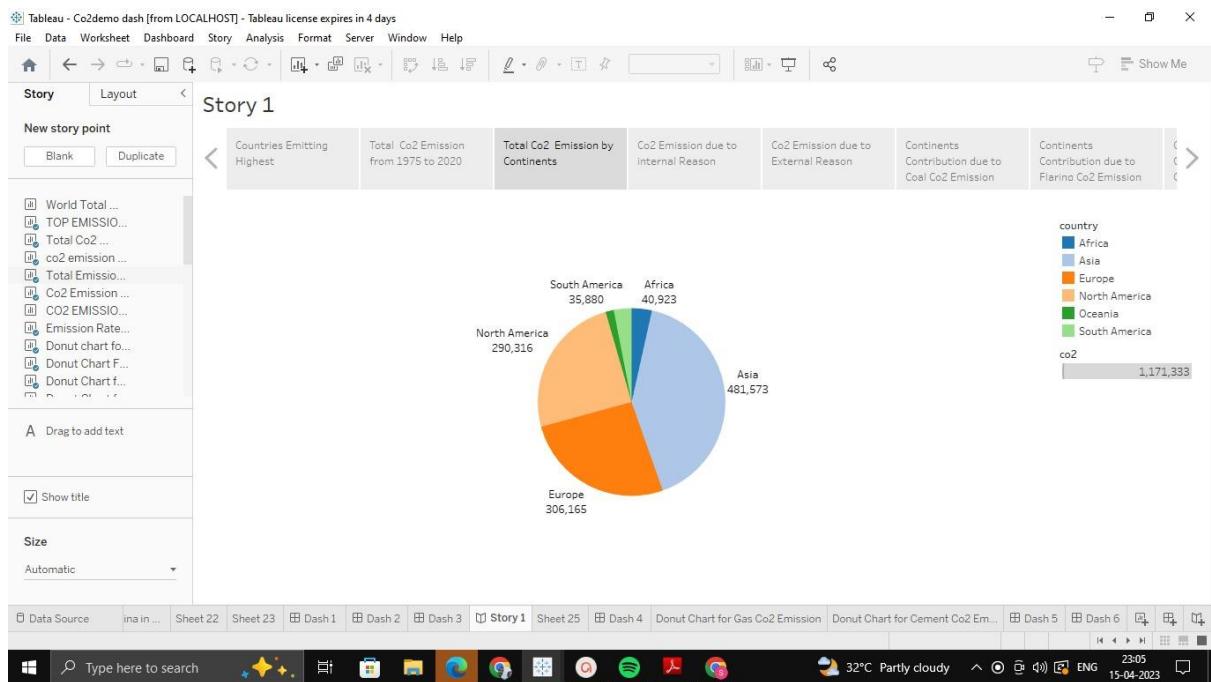
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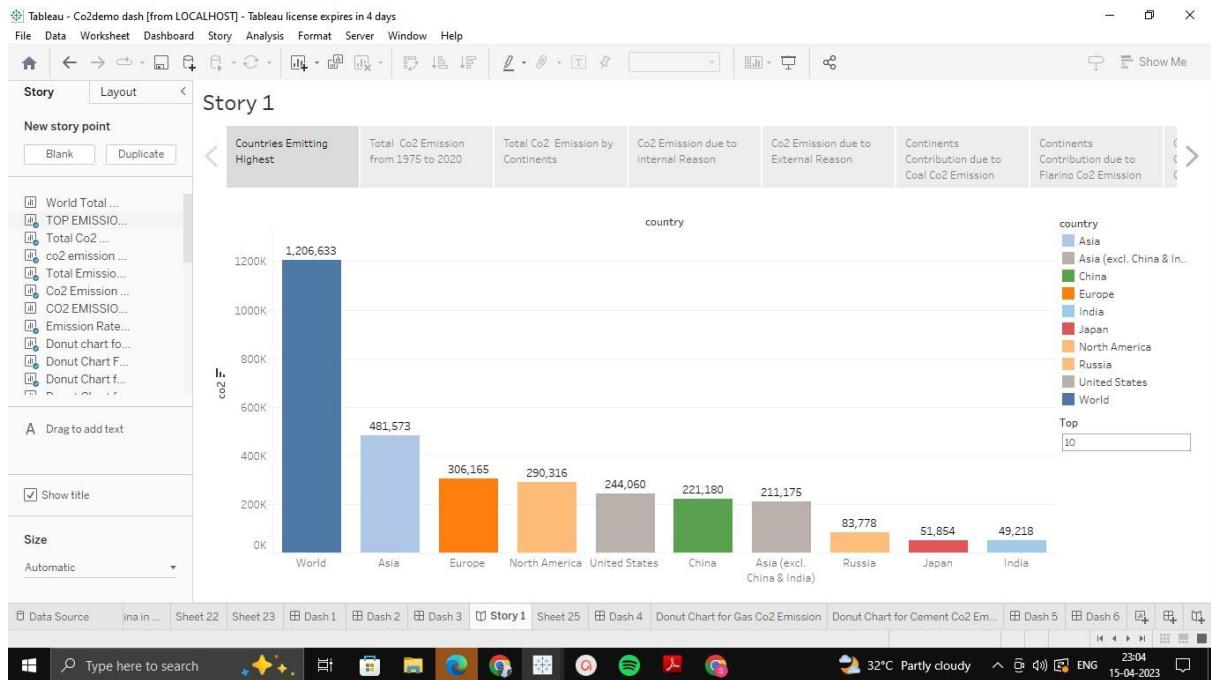
323

country Antarctica Asia Europe India North America Oceania Russia South America

Story 1 Sheet 22 Sheet 23 Dash 1 Dash 2 Dash 3 Story 1 Sheet 25 Dash 4 Donut Chart for Gas Co2 Emission Donut Chart for Cement Co2 Em... Dash 5 Dash 6 < > 32/06 ENG 15-04-2023







## 4. ADVANTAGE AND DISADVANTAGE

### Advantages

- Green plants grow faster with more co2
- Boost Agricultural productivity and improve drought resistance. Regulation of blood PH, affinity of hemoglobin for oxygen.

### Disadvantages

- As co2 levels rise, the earth's temperature rises with it causing the melting of the polar ice caps directly into the oceans.
- They also contribute to respiratory disease from smog and air pollution

## 5.APPLICATIONS

1. CO<sub>2</sub> is used to produce fuels that are in use today including methane, methanol, gasoline and aviation fuels
2. It is used in food and beverage production, the fabrication of metal, cooling, FIRE SUPPRESSION and in greenhouses to stimulate plant growth.

## 6. CONCLUSION

Nonetheless the conclusion is the regional climate changes, especially temperature increase, are impacting natural systems across the world and that these temperature increase are most likely to be the result of anthropogenic CO<sub>2</sub> emission (green house gas emissions)

## 7.Future scope

To help direct and indirect emissions sources improve transparency. And provide utility for different types of organizations and different types of climate policies and business goals, three scopes are defined for GHG accounting and reporting purpose

### Scope 1      Direct GHG EMISSION

Direct GHG emissions occur from sources that are owned or controlled by the company. Emissions from chemical production in owned or controlled process equipment.

Example: CFCs, NO<sub>x</sub>, burning fuel in our fleet of vehicles etc.,

### Scope 2      Electricity Indirect GHG Emission

Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Emissions physically occur at the facility where electricity is generated

### Scope 3      Other Indirect GHG Emission

Scope 3 is an optional reporting category that allows for the treatment of all other indirect emissions.

Some examples of scope 3 activities are extraction and production of purchased materials, transportation of purchased fuels, and use of products and services.

```
<!doctype html>

<html lang="en">

<head>

    <!-- Required meta tags -->

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

    <link rel="icon" href="img/favicon.png" type="image/png">

    <title>Co2 Emission</title>

    <!-- Bootstrap CSS -->

    <link rel="stylesheet" href="css/bootstrap.css">

    <link rel="stylesheet" href="//code.jquery.com/ui/1.12.1/themes/base/jquery-ui.css">

    <link rel="stylesheet" href="vendors/linericon/style.css">

    <link rel="stylesheet" href="css/font-awesome.min.css">

    <link rel="stylesheet" href="vendors/owl-carousel/owl.carousel.min.css">

    <link rel="stylesheet" href="vendors/lightbox/simpleLightbox.css">

    <link rel="stylesheet" href="vendors/nice-select/css/nice-select.css">

    <link rel="stylesheet" href="vendors/animate-css/animate.css">

    <link rel="stylesheet" href="vendors/popup/magnific-popup.css">

    <!-- main css -->

    <link rel="stylesheet" href="css/style.css">

    <link rel="stylesheet" href="css/responsive.css">

</head>

<body>
```

```
<!--=====Header Menu Area =====-->

<header class="header_area">

    <div class="top_menu row m0">

        <div class="container">

            <div class="float-left">

                <ul class="list header_social">

                    <li><a href="#">Contact Us +44 (012) 5689  
3264</a></li>

                </ul>

            </div>

            <div class="float-right">

                <select>

                    <option value="1">USD</option>

                    <option value="1">EUR</option>

                    <option value="1">AOA</option>

                    <option value="1">AUD</option>

                </select>

                <select>

                    <option value="1">ENG</option>

                    <option value="1">FRA</option>

                    <option value="1">BAN</option>

                </select>

            </div>

        </div>

    </div>

    <div class="main_menu">

        <nav class="navbar navbar-expand-lg navbar-light">
```

```
<div class="container">

    <!-- Brand and toggle get grouped for better mobile display --
->

    <a class="navbar-brand logo_h" href="index.html"></a>

    <button class="navbar-toggler" type="button" data-
toggle="collapse" data-target="#navbarSupportedContent"
aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">

        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>

    </button>

    <!-- Collect the nav links, forms, and other content for
toggling -->

    <div class="collapse navbar-collapse offset"
id="navbarSupportedContent">

        <ul class="nav navbar-nav menu_nav ml-auto">

            <li class="nav-item active"><a class="nav-
link" href="index.html">Home</a></li>

            <li class="nav-item"><a class="nav-link"
href="about-us.html">About</a></li>

            <li class="nav-item"><a class="nav-link"
href="gallery.html">Dashboard</a></li>

            <li class="nav-item"><a class="nav-link"
href="elements.html">Story</a></li>

            <li class="nav-item"><a
class="nav-link" href="rooms.html">Overview</a></li>

        </ul>

    </div>
```

```
<li class="nav-item"><a class="nav-link"  
href="contact.html">Contact</a></li>
```

```
</ul>
```

```
</div>
```

```
</div>
```

```
</nav>
```

```
</div>
```

```
</header>
```

```
<!--=====Header Menu Area =====-->
```

```
<!--=====Home Banner Area =====-->
```

```
<section class="home_banner_area">
```

```
<div class="banner_inner d-flex align-items-center">
```

```
<div class="overlay bg-parallax" data-stellar-ratio="2" data-stellar-vertical-  
offset="0" data-background=""></div>
```

```
<!-- <div class="overlay overlay-bg"></div> -->
```

```
<div class="container">
```

```
<div class="banner_content text-center">
```

```
<p class="top-text">Welcome to</p>
```

```
<h1>Global Co2 Emission Analysis</h1>
```

```
<p class="text">Carbon dioxide (CO2) is a trace gas in  
Earth's atmosphere. It is also found in large quantities dissolved in the world's oceans. It is a  
byproduct of cellular respiration and is an essential component of photosynthesis—plants, algae,  
and certain types of bacteria remove it from the air in the process of carbon fixation.
```

```
</p>
```

```
</a>
```

```
</div>
```

```
</div>  
</div>  
</section>  
<!--=====End Home Banner Area =====-->
```

```
<!--=====About Area =====-->
```

```
<section class="about_area section_gap">  
  <div class="container">  
    <div class="row">  
      <div class="col-lg-12">  
        <div class="main_title">  
          <div class="top-part">  
            <p>About Us Our Co2 Emission</p>  
          </div>  
          <h2>  
            About Us Our Co2 Emission
```

```
</h2>
```

```
<div class="bottom_part">
```

```
<p>
```

This paper discusses the method  
and results of a trend

assessment of global CO2 emissions up to 2009 and updates  
last year's assessment up to and including 2008. The current  
assessment includes not only fossil fuel combustion on which  
the BP reports are based, but also incorporates all other

relevant CO<sub>2</sub> emissions sources including flaring of waste gas during oil production, cement clinker production and other limestone uses, feedstock and other non-energy uses of fuels, and from several other small sources.

The assessment excludes CO<sub>2</sub> emissions from deforestation and logging, forest and peat fires, from post-burn decay of remaining above-ground biomass, and from decomposition of organic carbon in drained peat soils. The latter mostly affects developing countries. These sources could add as much as a further 20% to global CO<sub>2</sub> emissions. However, this percentage is highly uncertain and varies widely between years. This variation is also a reason that emissions and sinks from land use, land-use change and the forestry sector (LULUCF) are kept separate from the UN Climate Convention (UNFCCC) and the Kyoto Protocol. For the same reason, the emissions from the LULUCF sector are not included in this assessment. Information on recent emissions from forest and peat fires and post-burn emissions is being assessed by the Global Carbon Project, which will publish later this year a comprehensive assessment of the global carbon budget including all sources and sinks (GCP, 2010).

The estimate of global CO<sub>2</sub> emissions from 1970 to 2005 is based on the results of the EDGAR 4.1 dataset, a joint project of the European Commission's Joint Research Centre (JRC) and the Netherlands Environmental Assessment Agency (PBL). This dataset provides greenhouse gas emissions per country and on a 0.1 x 0.1 degree grid for all anthropogenic

sources identified by the IPCC for the period 1970-2005 (JRC/PBL, 2010). Although the publicly released dataset distinguishes about 25 sources categories, emissions are estimated for well over 100 detailed categories as identified in the Revised 1996 IPCC guidelines for compilation of emission inventories (IPCC, 1996).

For fuel-related combustion emissions, the EDGAR dataset uses detailed international energy statistics from the International Energy Agency (IEA, 2009) and the latest methodology, and CO<sub>2</sub> emission factors for 56 fuel types published in the 2006 IPCC Guidelines for GHG Emission Inventories (IPCC, 2006). Other sources of CO<sub>2</sub> emissions included are flaring and venting of associated gas from oil production, the production of minerals such as cement and lime, metals production, the production of chemicals such as ammonia and ethylene, and several other small sources such as lubricant and wax use. Moreover, to improve completeness, several other small sources identified in the 2006 IPCC Guidelines were added, such as waste incineration(6C) and underground coal fires in China and elsewhere (7A).

These sources add about 0.3% to fuel combustion emissions.

</p>

</div>

</div>

</div>

```
</section>

<!--=====End About Area =====-->

<!-- Start Our Gallery Area --&gt;

&lt;section class="our_gallery_area"&gt;

    &lt;div class="container-fluid"&gt;

        &lt;div class="row"&gt;

            &lt;div class="col-lg-12"&gt;

                &lt;div class="main_title"&gt;

                    &lt;div class="top-part"&gt;

                        &lt;p&gt;Dashboard&lt;/p&gt;

                    &lt;/div&gt;

                    &lt;h2&gt;Dashboard&lt;/h2&gt;

                    &lt;div class="bottom_part"&gt;

                        &lt;p&gt;

                            &lt;div class='tableauPlaceholder'
id='viz1681329367070' style='position: relative'&gt;&lt;noscript&gt;&lt;a href='#'&gt;&lt;img alt='Dash 1 ' src='https://public.tableau.com/static/images/Co/Co2demodash_16813289164650/Dash1/1_rss.png' style='border: none' /&gt;&lt;/a&gt;&lt;/noscript&gt;&lt;object class='tableauViz' style='display:none;'&gt;&lt;param name='host_url' value='https%3A%2F%2Fpublic.tableau.com%2F' /&gt;&lt;param name='embed_code_version' value='3' /&gt;&lt;param name='site_root' value='/' /&gt;&lt;param name='name' value='Co2demodash_16813289164650/Dash1' /&gt;&lt;param name='tabs' value='no' /&gt;&lt;param name='toolbar' value='yes' /&gt;&lt;param name='static_image' value='https://public.tableau.com/static/images/Co/Co2demodash_16813289164650/Dash1/1.png' /&gt;&lt;param name='animate_transition' value='yes' /&gt;&lt;param name='display_static_image' value='yes' /&gt;&lt;param name='display_spinner' value='yes' /&gt;&lt;param name='display_overlay' value='yes' /&gt;&lt;param name='display_count' value='yes' /&gt;&lt;param name='language' value='en-US' /&gt;&lt;param name='filter' value='publish=yes' /&gt;&lt;/object&gt;&lt;/div&gt;
&lt;script type='text/javascript'&gt;
var divElement =
document.getElementById('viz1681329367070');
var vizElement =
divElement.getElementsByTagName('object')[0];
if ( divElement.offsetWidth &gt; 800 ) {
vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';} else if ( divElement.offsetWidth &gt; 500 ) {
vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';} else {</pre>
```

```
vizElement.style.width='100%';vizElement.style.height='1527px';}           var scriptElement =
document.createElement('script');           scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);           </script>

</p>

</div>

<!-- End Our Room Area -->

<=====Latest Element Area ======>
```

```
<section class="latest_blog_area section_gap color-bg">
```

```
  <div class="container">
```

```
    <div class="row">
```

```

<div class="col-lg-12">

    <div class="main_title">

        <p class="text-uppercase">Story</p>

        <h2>

            Our Story

        </h2>

        <p>

            <div class='tableauPlaceholder'
id='viz1681329506974' style='position: relative'><noscript><a href='#'><img alt='Story 1 '
src='https://public.tableau.com/static/images/Co/Co2story_1681145
5152930/Story1/1_rss.png' style='border: none' /></a></noscript><object
class='tableauViz' style='display:none;'><param name='host_url'
value='https%3A%2F%2Fpublic.tableau.com%2F' /><param name='embed_code_version' value='3'
/> <param name='site_root' value="" /><param name='name'
value='Co2story_16811455152930/Story1' /><param name='tabs' value='no' /><param
name='toolbar' value='yes' /><param name='static_image'
value='https://public.tableau.com/static/images/Co/Co2story_16811
455152930/Story1/1.png' /> <param name='animate_transition' value='yes' /><param
name='display_static_image' value='yes' /><param name='display_spinner' value='yes' /><param
name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param
name='language' value='en-US' /></object></div>          <script type='text/javascript'>
var divElement = document.getElementById('viz1681329506974');           var vizElement =
divElement.getElementsByTagName('object')[0];
vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';
var scriptElement = document.createElement('script');           scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);           </script>

        </div>

    </div>

</div>

</div>

</section>

```

<!=====End Latest Element Area =====-->