

UNEARTHING THE ENVIRONMENTAL IMPACT OF HUMAN ACTIVITY: A GLOBAL CO2 EMISSION ANALYSIS

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1. Introduction:

1.1 Overview

Global CO₂ emissions from energy combustion and industrial processes¹ rebounded in 2021 to reach their highest ever annual level. A 6% increase from 2020 pushed emissions to 36.3 gigatonnes (Gt), an estimate based on the IEA's detailed region-by-region and fuel-by-fuel analysis, drawing on the latest official national data and publicly available energy, economic and weather data.

The Covid-19 pandemic had far-reaching impacts on energy demand in 2020, reducing global CO₂ emissions by 5.2%. However, the world has experienced an extremely rapid economic recovery since then, driven by unprecedented fiscal and monetary stimulus and a fast – although uneven – roll-out of vaccines. The recovery of energy demand in 2021 was compounded by adverse weather and energy market conditions, which led to more coal being burnt despite renewable power generation registering its largest ever annual growth.

ed in 2020. CO₂ emissions in 2021 rose to around 180 megatonnes (Mt) above the pre-pandemic level of 2019.

The 6% increase in CO₂ emissions in 2021 was in line with the jump in global economic output of 5.9%. This marks the strongest coupling of CO₂ emissions with Gross domestic product (GDP) growth since 2010, when global emissions rebounded by 6.1% while economic output grew by 5.1% as the world emerged from the Global Financial Crisis.

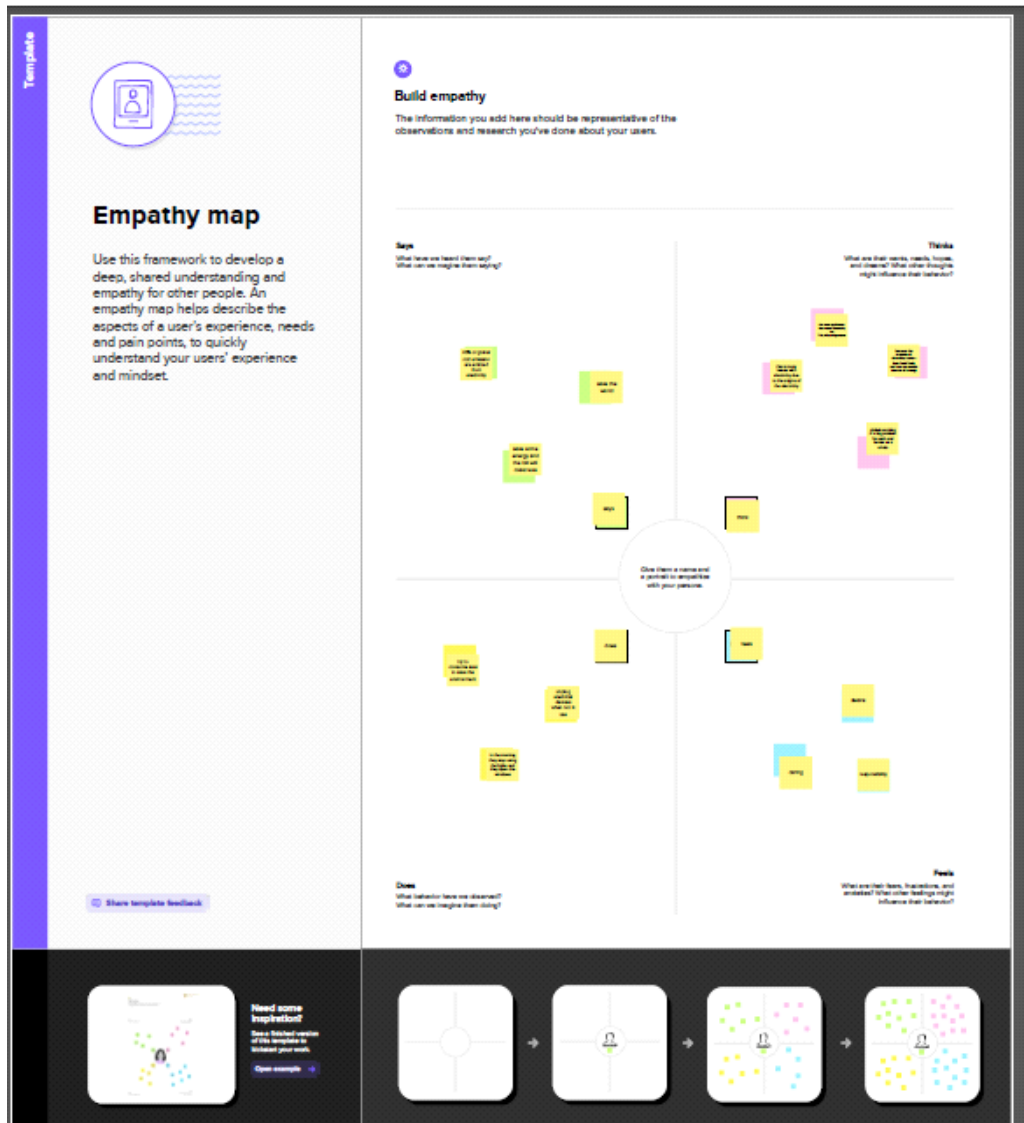
1.2 Purpose

The range of potential CO₂ use applications is very large and includes direct use, by which CO₂ is not chemically altered (non-conversion) and the use of CO₂ by transformation (via multiple chemical and biological processes) to fuels, chemicals and building materials.

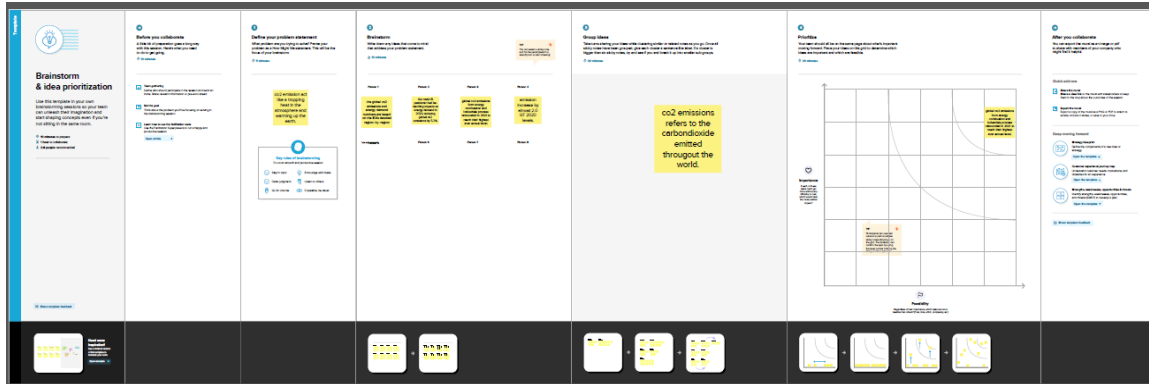
Although most conversion pathways are highly energy-intensive and still in their infancy, they are attracting growing interest and support from governments, industry and investors. Companies such as CarbonCure and Solidia, which use CO₂ to manufacture concrete, have recently attracted investment from Breakthrough Energy Ventures and OGCI Climate Investments, respectively. In North America, the NRG COSIA Carbon XPrize is supporting the development of novel CO₂ use opportunities with a USD 20 million global competition ¹². Governments in Canada, Japan, the United Kingdom and the United States as well as the European Commission are also providing significant RD&D support for CO₂ use.

2. Problem definition and Design Thinking:

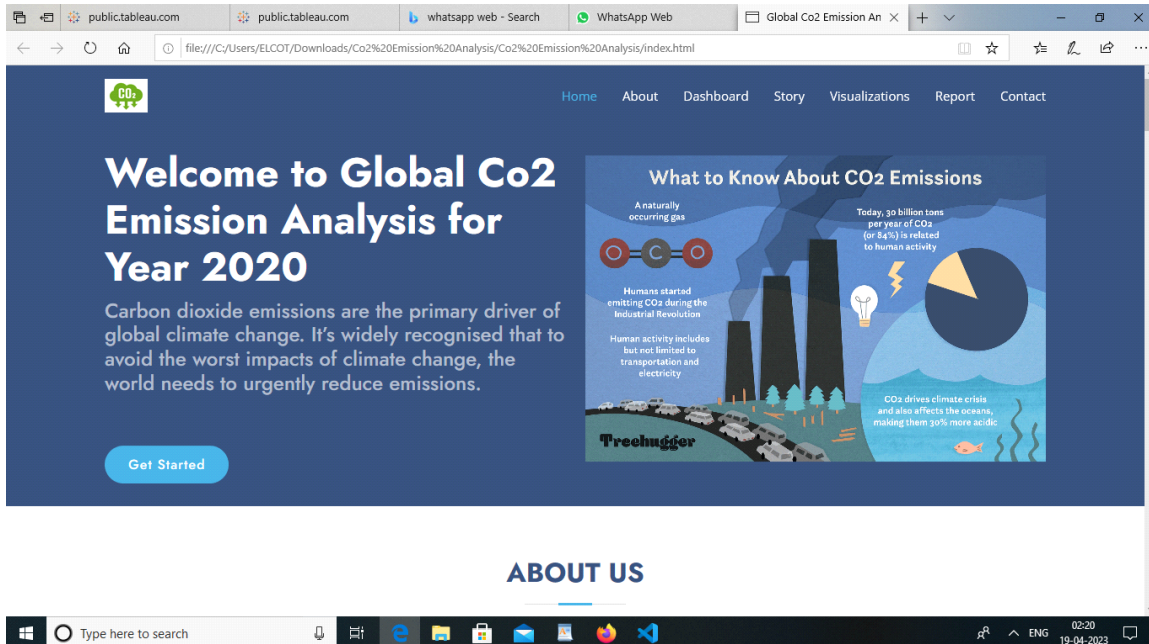
2.1 Empathy Map:

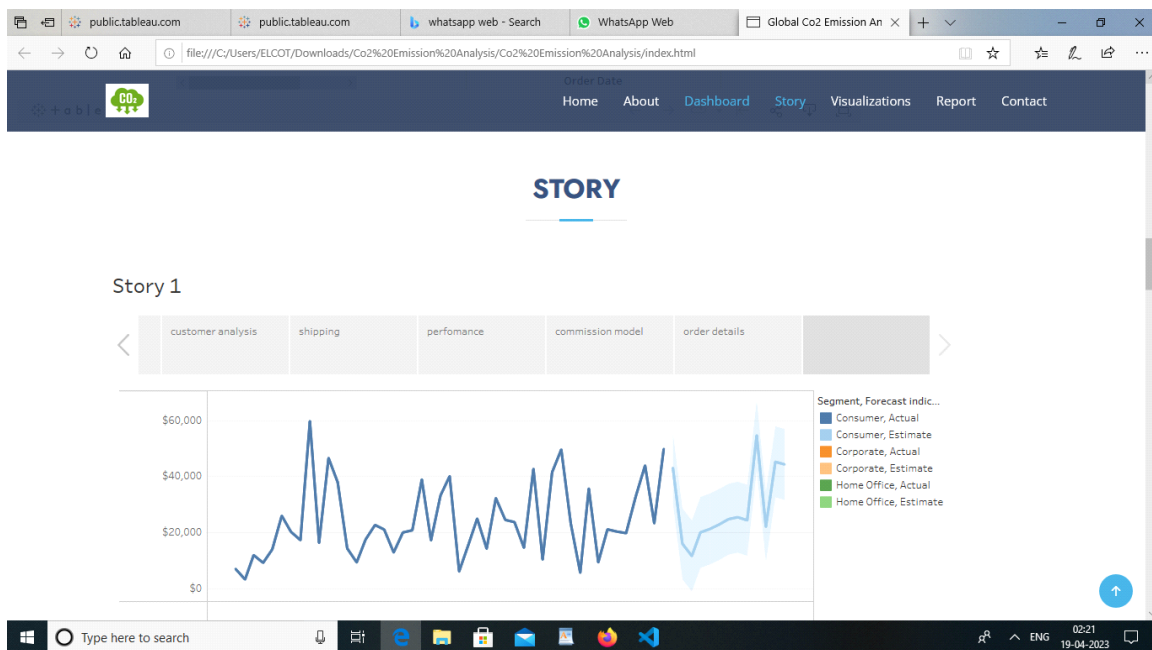
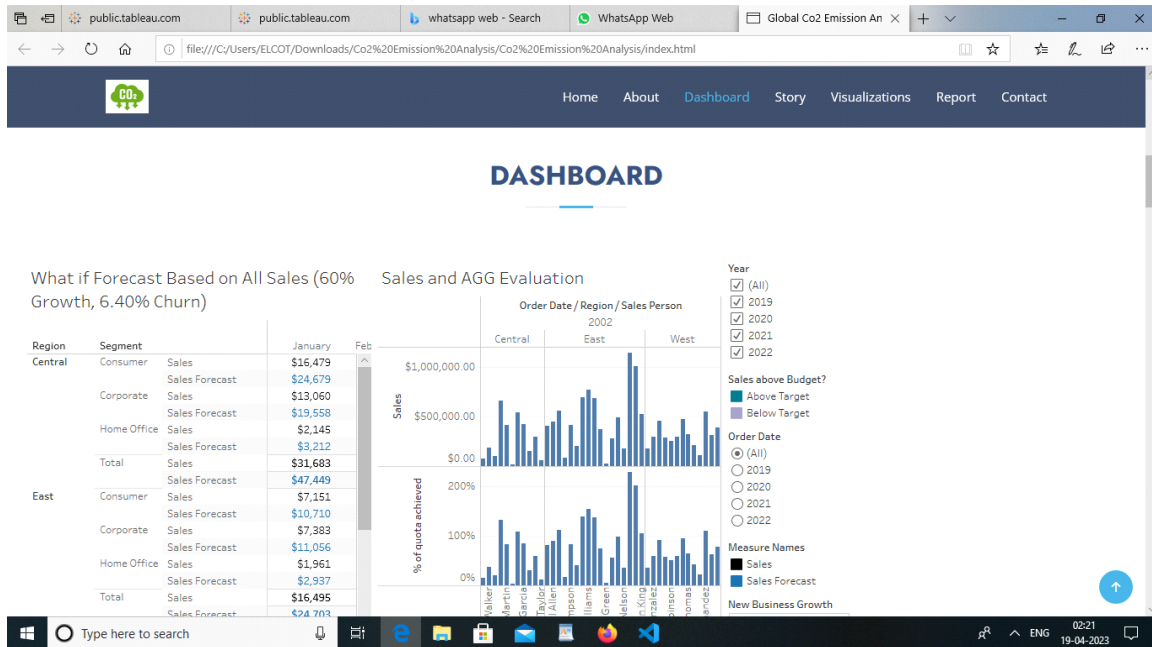


2.2 Brain Stroming:



3. Result:





4. Advantages and Disadvantages:

4.1 Advantages:

1. The numerous advantages of CCS include economic, social, and environmental, and a massive impact on a global and local scale.
2. Carbon capture can increase the power generated with carbon dioxide-based steam cycles. In this process, carbon dioxide is pressured through a supercritical fluid, which could transfer heat more effectively and require less energy to compress steam.
3. Geologically stored carbon dioxide might be utilized to retrieve geothermal heat from the area injected which results in the generation of sustainable geothermal energy.
4. Carbon dioxide captured with carbon capture can also be utilized in the manufacturing of polymers and chemicals such as polyurethanes.
5. The captured carbon dioxide is incorporated into concrete to reinforce it and increase the durability of the infrastructure. The carbon capture operations create employment for skilled engineers and technicians who need to operate them.

4.2 Disadvantages:

1. Carbon capture reduces the carbon released in the atmosphere and therefore, it is recognized as one of the solutions to help address climate change and global warming.
2. Despite this, carbon capture and storage (CCS) does not come without some disadvantages.
3. The methods and CCS technologies that are necessary for carbon capture have some cost implications attached to them.
4. Therefore, it can be very costly for power plants to generate electricity through fossil fuels.
5. There are several concerns with respect to the safety of the storage of carbon dioxide in huge volumes at a single location due to the possibility of leakages, which can lead to environmental contamination if not handled correctly.

5. Applications:

1. Other commercial applications include food and beverage production, metal fabrication, cooling, fire suppression and stimulating plant growth in greenhouses.
2. Most commercial applications today involve direct use of CO₂.
3. New pathways involve transforming CO₂ into fuels, chemicals and building materials.
4. CO₂ is also widely used in food and beverage production, the fabrication of metal, cooling, fire suppression and in greenhouses to stimulate plant growth.
5. In the grain treatment process, CO₂ is pumped into silos or other storage facilities in order to kill insects and protect the products.
6. It also plays an important role in the manufacture of some fertilizers.
7. Furthermore, the air in greenhouses can be enriched with carbon dioxide to allow the crops there to optimize their photosynthesis potential.

6. Conclusion:

Carbon pricing initiatives are spreading throughout the world. Over 60 countries, cities, states and provinces have implemented or are planning to implement carbon pricing schemes, with a fairly balanced distribution between emission trading systems and carbon taxes. When the emissions trading system in the power sector of China starts its implementation, carbon pricing initiatives will cover one-fifth of global greenhouse gas emissions.

Emissions trading systems present many benefits. They help to expose emitters to the external costs of emissions in the most flexible and least costly way, and as such reduce emissions cost-effectively.

Trading systems can also stimulate technological innovations, support climate risk quantification and multilateral co-operation, and create synergies with energy and environmental policies.

Emissions trading system are useful policy instruments that facilitate the acceleration of clean energy transitions and emissions reductions.

However, the practical policy implementation of an emissions trading system needs to be designed in a way that fits with local contexts and integrates with other policy priorities in each jurisdiction.

Jurisdictions need to fully understand their own energy and low-carbon development conditions, to carefully define the expected role and functions of establishing an emissions trading system, and to discuss the system's objectives with major stakeholders. The long-term policy predictability of an emission.

7. Future scope:

This paper provides a cost-benefit analysis of controlling or decreasing CO₂ emissions. It uses an analytical framework, called Global 2100, which is designed to evaluate CO₂ energy economy interactions and estimate the cost of a carbon emissions limit. It analyzes three demand parameters (potential GNP growth, elasticity of price induced substitution between capital-labour and energy, and the rate of autonomous energy efficiency improvements) which are crucial to the debate over energy and environmental futures.

The paper discusses various energy sources which are either presently in use or will possibly be in use in the future, and analyzes their impact on cost-benefit analyses. Finally, the paper analyzes the results of carbon constraints and suggests that there is need for more research and development on the subject.

8. Appendix

8.1. HTML code for the output web page

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Global Co2 Emission Analysis</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Jost:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/style.css" rel="stylesheet">

  <!-- =====
* Template Name: Arsha - v4.10.0
```

```

* Template URL:
https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/
* Author: BootstrapMade.com
* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>

  <!-- ===== Header ===== -->
  <header id="header" class="fixed-top ">
    <div class="container d-flex align-items-center justify-content-between">

      <h1 class="logo"> </h1>

      <!-- Uncomment below if you prefer to use an image logo -->
      <!-- <a href="index.html" class="logo me-auto"></a>-->

      <nav id="navbar" class="navbar">
        <ul>
          <li><a class="nav-link scrollto active"
href="#hero">Home</a></li>
          <li><a class="nav-link scrollto" href="#about">About</a></li>
          <li><a class="nav-link scrollto"
href="#dash">Dashboard</a></li>
          <li><a class="nav-link scrollto"
href="#services">Story</a></li>
          <li><a class="nav-link scrollto"
href="#portfolio">Visualizations</a></li>
          <li><a class="nav-link scrollto"
href="#report">Report</a></li>
          <li><a class="nav-link scrollto"
href="#contact">Contact</a></li>

        </ul>
        <i class="bi bi-list mobile-nav-toggle"></i>
      </nav>
      <!-- .navbar -->

    </div>
  </header>
  <!-- End Header -->

```

```

<!-- ===== Hero Section ===== -->
<section id="hero" class="d-flex align-items-center">

    <div class="container">
        <div class="row">
            <div class="col-lg-6 d-flex flex-column justify-content-center pt-4
pt-lg-0 order-2 order-lg-1" data-aos="fade-up" data-aos-delay="200">
                <h1>Welcome to Global Co2 Emission Analysis for Year 2020</h1>
                <h2>Carbon dioxide emissions are the primary driver of global
climate change. It's widely recognised that to avoid the worst impacts of climate
change, the world needs to urgently reduce emissions.</h2>
                <div class="d-flex justify-content-center
justify-content-lg-start">
                    <a href="#about" class="btn-get-started scrollto">Get
Started</a>
                    <a href="https://www.youtube.com/watch?v=jDDapla0z7Q"
class="glightbox btn-watch-video"></a>
                </div>
            </div>
            <div class="col-lg-6 order-1 order-lg-2 hero-img"
data-aos="zoom-in" data-aos-delay="200">
                
            </div>
        </div>
    </div>

</section>
<!-- End Hero -->

<main id="main">

    <!-- ===== Clients Section ===== -->

    <!-- End Clients Section -->

    <!-- ===== About Us Section ===== -->
    <section id="about" class="about">
        <div class="container">

            <div class="section-title">
                <h2>About Us</h2>
            </div>
        </div>
    </section>

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    </div>

    <div class="row content">
        <div class="col-lg-12">
            <p>
                Carbon dioxide emissions are those 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 and gas flaring.
            </p>
            <p>
                Global carbon dioxide (CO2) emissions from fossil fuels
                and industry have increased considerably since 2000, and in 2019 reached a record high
                of 36.7 billion metric tons of CO2. In 2020, the COVID-19 pandemic caused global CO2
                emissions to plummet five
                percent to 34.81 billion metric tons.</p>
            <p> Historically, major global events cause emission
                reductions. The 2009 global recession caused worldwide CO2 emissions to fall by
                approximately 460 million metric tons. But this pales in comparison to the emission
                reductions in
                2020. Countries around the world were put under strict
                lockdowns, meaning transportation and industrial activities were significantly
                reduced. CO2 emission levels in India dropped for the first time in four decades in
                the year
                ending March 2020. Global CO2 emissions per capita also
                experienced a substantial decline in 2020, falling to an average of 4.47 metric tons
                per person.</p>

        </div>
    </div>

</div>
</section>
<!-- End About Us Section -->

<!-- ===== Why Us Section ===== -->
<section id="dash" class="">
    <div class="container-fluid" data-aos="fade-up">
        <div class="section-title">
            <h2>Dashboard</h2>
        </div>
        <div class='tableauPlaceholder' id='viz1681886974047'
style='position: relative'><noscript><a href='#'><img alt='Dashboard 7 '
src='https://public.tableau.com/static/images/Da/Dashboard7/1_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='Dashboard_16818128071890&#47;Dashboard7' /><param name='tabs'
value='no' /><param name='toolbar' value='yes' /><param name='static_image'
value='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Da&#47;Dashbo
ard_16818128071890&#47;Dashboard7&#47;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'
/><param name='filter' value='publish=' /></object></div>
<script
type='text/javascript'>
    var divElement =
document.getElementById('viz1681886974047');
    var vizElement =
divElement.getElementsByTagName('object')[0];
    if (
divElement.offsetWidth > 800 ) {
vizElement.style.width='1000px';vizElement.style.height='827px';} else if (
divElement.offsetWidth > 500 ) {
vizElement.style.width='1000px';vizElement.style.height='827px';} else {
vizElement.style.width='100%';vizElement.style.height='1627px';}
    var scriptElement =
document.createElement('script');
    scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
    vizEle
ment.parentNode.insertBefore(scriptElement, vizElement);
    </script>
    <param name='tabs' value='no' /><param name='toolbar' value='yes'
/>
    <param name='static_image'
value='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Co&#47;Co2das
h&#47;Dashboard1&#47;1.png' />
    <param name='animate_transition' value='yes' />
    <param name='display_static_image' value='yes' />
    <param name='toolbar' value='no' />
    <param name='display_spinner' value='yes' />
    <param name='display_overlay' value='yes' />
    <param name='display_count' value='yes' />
    <param name='language' value='en-US' />
    <param name='showShareOptions' value='false' />
</object>
</div>
<script type='text/javascript'>
    var divElement = document.getElementById('viz1672205035633');
    var vizElement = divElement.getElementsByTagName('object')[0];
    if (divElement.offsetWidth > 800) {
        vizElement.style.width = '100%';
        vizElement.style.height = (divElement.offsetWidth * 0.75) +
'px';

```



```

        } else if (divElement.offsetWidth > 500) {
            vizElement.style.width = '90%';
            vizElement.style.height = (divElement.offsetWidth * 0.75) +
'px';

        } else {
            vizElement.style.width = '100%';
            vizElement.style.height = '1477px';
        }
        var scriptElement = document.createElement('script');
        scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
        vizElement.parentNode.insertBefore(scriptElement,
vizElement);
    </script>

</div>

<!-- End Why Us Section -->
<section id="services" class="services">
    <div class="container" data-aos="fade-up">
        <div class="section-title">
            <h2>Story</h2>
        </div>

        <div class='tableauPlaceholder' id='viz1681887022048'
style='position: relative'><noscript><a href='#><img alt='Story 1 '
src='https://public.tableau.com/static/images/st/story1_1
6818778289740/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='story1_16818778289740/Story1' /><param name='tabs'
value='no' /><param name='toolbar' value='yes' /><param name='static_image'
value='https://public.tableau.com/static/images/st/story1
_16818778289740/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'
/><param name='filter' value='publish=yes'
/></object></div>
        <script
type='text/javascript'>
            var divElement =
document.getElementById('viz1681887022048');
            var vizElement =

```

```

divElement.getElementsByTagName('object')[0];
.vizElement.style.height='991px';
scriptElement =
document.createElement('script');
scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);
</script>
<noscript><a href='#><img alt='CO2 Emission Story '
src='https://public.tableau.com/static/images/G4/G4Q8N94F4/1_rss.png' style='border: none' /></a>
</noscript><object class='tableauViz' style='display:none;'>
<param name='host_url'
value='https://public.tableau.com/' />
<param name='embed_code_version' value='3' /> <param
name='path' value='shared/G4Q8N94F4' />
<param name='toolbar' value='yes' />
<param name='static_image'
value='https://public.tableau.com/static/images/G4/G4Q8N94F4/1.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('viz1672206123585');
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>
</section>

<!-- ===== Skills Section ===== -->

<!-- End Skills Section -->

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<!-- End Services Section -->

<!-- ===== Cta Section ===== -->

<!-- End Cta Section -->

<!-- ===== Portfolio Section ===== -->
<section id="portfolio" class="portfolio">
  <div class="container" data-aos="fade-up">

    <div class="section-title">
      <h2>Visualizations</h2>

    </div>

    <div class="row portfolio-container">

      <div class="col-lg-4 col-md-6 portfolio-item filter-web">
        <div class="portfolio-wrap">
          

          <div class="portfolio-info">
            <h4>Image 1 </h4>

            <div class="portfolio-links">
              <a href="assets/img/portfolio/p1.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>

            </div>
          </div>
        </div>
      </div>

      <div class="col-lg-4 col-md-6 portfolio-item filter-web">
        <div class="portfolio-wrap">
          

          <div class="portfolio-info">
            <h4>Image 2 </h4>

            <div class="portfolio-links">

```

```

        <a href="assets/img/portfolio/p1.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>

        </div>
    </div>
</div>
<div class="col-lg-4 col-md-6 portfolio-item filter-web">
    <div class="portfolio-wrap">
        

        <div class="portfolio-info">
            <h4>Image 3 </h4>

            <div class="portfolio-links">
                <a href="assets/img/portfolio/p1.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>

            </div>
        </div>
    </div>
</div>

    <div class="col-lg-4 col-md-6 portfolio-item filter-web">
        <div class="portfolio-wrap">
            

            <div class="portfolio-info">
                <h4>Image 5</h4>
                <div class="portfolio-links">
                    <a href="assets/img/portfolio/p5.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>

                </div>
            </div>
        </div>
    </div>

    <div class="col-lg-4 col-md-6 portfolio-item filter-web">
        <div class="portfolio-wrap">
            

            <div class="portfolio-info">
                <h4>Image 6</h4>

```

```

                <div class="portfolio-links">
                    <a href="assets/img/portfolio/p5.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>
                </div>
            </div>
        </div>
        <div class="col-lg-4 col-md-6 portfolio-item filter-web">
            <div class="portfolio-wrap">
                
                <div class="portfolio-info">
                    <h4>Image 4</h4>
                    <div class="portfolio-links">
                        <a href="assets/img/portfolio/p5.jpg"
data-gallery="portfolioGallery" class="portfolio-lightbox" title="Web 3"><i
class="bx bx-plus"></i></a>
                    </div>
                </div>
            </div>
        </div>
    </div>

</div>
</section>
<section id="report" class="skills">
    <div class="container" data-aos="fade-up">
        <div class="section-title">
            <h2>Report</h2>
        </div>
        <div class="row content">
            <div class="col-md-5 order-1 order-md-2"
data-aos="fade-right" data-aos-delay="100">
                
            </div>
            <div class="col-lg-6 pt-4 pt-lg-0 content"
data-aos="fade-left" data-aos-delay="100">
                <h3>Top Co2 Emitting countries for Past 10 Years</h3>
                <br>
                <p class="fst-italic">

```

China is the highest Co2 Emitting country among the other countries.

</p>

<p class="fst-italic">

United States is the second highest Co2 Emitting country.

</p>

<p class="fst-italic">

India is the Third highest Co2 Emitting country.

</p>

</div>

</div>

<div class="row content">

<div class="col-md-5" data-aos="fade-right">

</div>

<div class="col-md-7 pt-5" data-aos="fade-left">

<h3>Continents Contribution towards Co2 Emission</h3>

<p class="fst-italic">

Asian is the highest Co2 Emitting country among the other continents.

</p>

<p class="fst-italic">

Europe is the second highest Co2 Emitting continent.

</p>

<p class="fst-italic">

Antartica is the lowest Co2 Emitting countries because of low human activity/existence in the continent.

</p>

</div>

<div class="row content">

<div class="col-md-5" data-aos="fade-right">

</div>

<div class="col-md-7 pt-5" data-aos="fade-left">

<h3>Overall India Contribution towards Co2 Emission</h3>

```

        <br>
        <p class="fst-italic">
            Coal is the highest factor of Co2 Emission.
        </p>
        <p class="fst-italic">
            Oil is the second highest Co2 Emitting factor.
        </p>
    </div>
</div>
<div class="row content">
    <div class="col-md-5 order-1 order-md-2"
data-aos="fade-left">
        
    </div>
    <div class="col-md-7 pt-5 order-2 order-md-1"
data-aos="fade-right">
        <h3>Overall Co2 Emission over time </h3>
        <br>
        <p class="fst-italic">
            Co2 Emission in 1975 was 67324 (in metric tons).
        </p>
        <p class="fst-italic">
            Co2 Emission in 2019 was 128423 (in metric tons)
which was highest in the past years.
        </p>
        <p class="fst-italic">
            Co2 Emission in 2020 was found to be 121593 (in
metric tons).
        </p>
    </div>
</div>

</div>
</div>

</section>
<!-- End Portfolio Section -->

<!-- ===== Team Section ===== -->

<!-- End Team Section -->

```

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<!-- ===== Pricing Section ===== -->

<!-- End Pricing Section -->

<!-- ===== Contact Section ===== -->
<section id="contact" class="contact">
    <div class="container" data-aos="fade-up">

        <div class="section-title">
            <h2>Contact</h2>
        </div>

        <div class="row">

            <div class="col-lg-5 d-flex align-items-stretch">
                <div class="info">
                    <div class="address">
                        <i class="bi bi-geo-alt"></i>
                        <h4>Location:</h4>
                        <p>SmartBridge, Hyderabad,AndhraPradesh,
India</p>
                    </div>

                    <div class="email">
                        <i class="bi bi-envelope"></i>
                        <h4>Email:</h4>
                        <p>info@smartbridge.com<br>contact@smartbridg
e.com</p>
                    </div>

                    <div class="phone">
                        <i class="bi bi-phone"></i>
                        <h4>Call:</h4>
                        <p>+11 1234 1234<br>+11 4321 4321</p>
                    </div>

                </div>

            </div>

            <div class="col-lg-7 mt-5 mt-lg-0 d-flex
align-items-stretch">

```



```

        <form action="forms/contact.php" method="post"
role="form" class="php-email-form">
            <div class="row">
                <div class="form-group col-md-6">
                    <label for="name">Your Name</label>
                    <input type="text" name="name"
class="form-control" id="name" required>
                </div>
                <div class="form-group col-md-6">
                    <label for="name">Your Email</label>
                    <input type="email" class="form-control"
name="email" id="email" required>
                </div>
            </div>
            <div class="form-group">
                <label for="name">Subject</label>
                <input type="text" class="form-control"
name="subject" id="subject" required>
            </div>
            <div class="form-group">
                <label for="name">Message</label>
                <textarea class="form-control" name="message"
rows="10" required></textarea>
            </div>
            <div class="my-3">
                <div class="loading">Loading</div>
                <div class="error-message"></div>
                <div class="sent-message">Your message has been
sent. Thank you!</div>
            </div>
            <div class="text-center"><button
type="submit">Send Message</button></div>
        </form>
    </div>

</div>

</section>
<!-- End Contact Section -->

</main>
<!-- End #main -->

<!-- ===== Footer ===== -->

```

```

<footer id="footer">

    <div class="footer-top">
        <div class="container">

            </div>
        </div>

        <div class="container footer-bottom clearfix">
            <div class="copyright">
                &copy; Copyright <strong><span>Arsha</span></strong>. All Rights
Reserved
            </div>
            <div class="credits">
                <!-- All the links in the footer should remain intact. -->
                <!-- You can delete the links only if you purchased the pro version.
-->

                <!-- Licensing information: https://bootstrapmade.com/license/ -->
                <!-- Purchase the pro version with working PHP/AJAX contact form:
https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/ -->
                Designed by <a href="https://bootstrapmade.com/">Indra Prakash</a>
                <div class="social-links mt-3">
                    <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
                    <a href="#" class="facebook"><i class="bx
bxl-facebook"></i></a>
                    <a href="#" class="instagram"><i class="bx
bxl-instagram"></i></a>
                    <a href="#" class="google-plus"><i class="bx
bxl-skype"></i></a>
                    <a href="#" class="linkedin"><i class="bx
bxl-linkedin"></i></a>
                </div>
            </div>
        </div>
    </footer>

```

```
<!-- End Footer -->

<div id="preloader"></div>
<a href="#" class="back-to-top d-flex align-items-center
justify-content-center"><i class="bi bi-arrow-up-short"></i></a>

<!-- Vendor JS Files -->
<script src="assets/vendor/aos/aos.js"></script>
<script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
<script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
<script src="assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>
<script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
<script src="assets/vendor/waypoints/noframework.waypoints.js"></script>
<script src="assets/vendor/php-email-form/validate.js"></script>

<!-- Template Main JS File -->
<script src="assets/js/main.js"></script>

</body>

</html>
```