

# UNEARTHING THE ENVIRONMENTAL IMPACT OF HUMAN

## ACTIVITY: A GLOBAL CO<sub>2</sub> EMISSION ANALYSIS

### 1.INTRODUCTION

Global warming is the unusually rapid increase in earth's average surface temperature over the past century primarily due to the green house gases released by people burning fossil fuels. CO<sub>2</sub> emissions are from the burning of fossil fuels and the manufacture of cement. Global warming is often considered an effect of climate change. Ever since the industrial and scientific revolution, earth is slowly being used up for its resources. Moreover, the onset of the exponential increase in the world's population is also very taxing on the environment. Carbon dioxide (CO<sub>2</sub>): Fossil fuel use is the primary source of CO<sub>2</sub>. CO<sub>2</sub> can also be emitted from direct human-induced impacts on forestry and other land use, such as deforestation, land clearing for agriculture and degradation of soils. Fossil fuels – coal, oil, gas are by far the largest contributor to global climate change.

#### 1.1 OVERVIEW :

Global warming of the carbon emissions from fossil fuels have significantly increased since 1900. Since 1970, CO<sub>2</sub> emissions have increased by about 90% with emissions from fossil fuels industrial processes contributing about 427,299% of total CO<sub>2</sub> emissions increase from 1990 to 2020. Carbon dioxide enters the atmosphere through burning fossil fuels (coal, natural gas and oil), solid waste, trees and other biological materials and also as a result of certain chemical reactions, for example cement production. Carbon dioxide is removed from the atmosphere when it is absorbed by plants as part of the biological carbon cycle. Carbon dioxide (CO<sub>2</sub>) is the primary greenhouse gas emitted through human activities. Carbon dioxide is naturally present in the atmosphere as a part of the earth carbon cycle. Human activities are altering the carbon cycle both by adding more CO<sub>2</sub> to the atmosphere and by influencing the ability of natural sinks, like forests and soils, to remove and store CO<sub>2</sub> from the atmosphere. While CO<sub>2</sub> emissions come from a variety of natural sources, human-related emissions are responsible for the increase that has occurred in the atmosphere since the industrial revolution. The main human activity that emits CO<sub>2</sub> is the combustion of fossil fuels (coal and oil) for energy and transportation. Certain industrial processes and land use changes also emit CO<sub>2</sub>. Carbon dioxide is constantly being exchanged among the atmosphere, ocean and land surfaces. Carbon dioxide emissions in the United States decreased by 2% between 1992 and 2001 since the combustion of fossil fuels is the



largest source of gas emissions in the United States, changing emission from fossil fuels combustion have historically been the dominant factor affecting total us emissions trends. Change in co2 emissions from fossil fuels combustion are influenced by many long term and short term factors and seasonal temperatures.

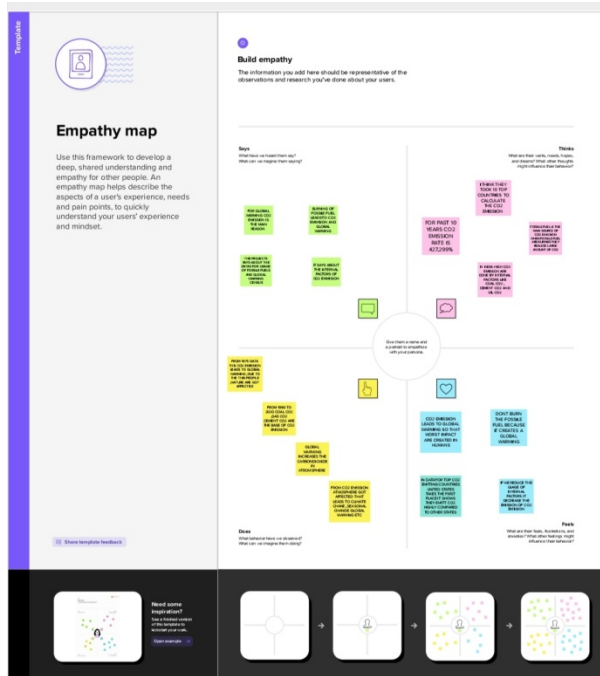
## **1.2PURPOSE:**

New opportunities to use carbon dioxide (CO<sub>2</sub>) in the development of products and services are capturing the attention of governments, industry and the investment community interested in mitigating climate change as well as in other factors, including technology leadership and supporting a circular economy. This analysis considers the near-term market potential for five key categories of CO<sub>2</sub>-derived products and services: fuels, chemicals, building materials from minerals, building materials from waste, and CO<sub>2</sub> use to enhance the yields of biological processes. All five categories could individually be scaled-up to a market size of at least 10 MtCO<sub>2</sub>/yr – almost as much as the current CO<sub>2</sub> demand for food and beverages – but most face commercial and regulatory barriers. CO<sub>2</sub> use can support climate goals where the application is scalable, uses low-carbon energy and displaces a product with higher life-cycle emissions. Some CO<sub>2</sub>-derived products also involve permanent carbon retention, in particular building materials. A better understanding and improved methodology to quantify the life-cycle climate benefits of CO<sub>2</sub> use applications are needed. The market for CO<sub>2</sub> use is expected to remain relatively small in the short term, but early opportunities could be developed, especially those related to building materials. Public procurement of low-carbon products can help to create an early market for CO<sub>2</sub>-derived products and assist in the development of technical standards. In the long term, CO<sub>2</sub> sourced from biomass or the air could play a key role in a net-zero CO<sub>2</sub> emission economy, including as a carbon source for aviation fuels and chemicals.

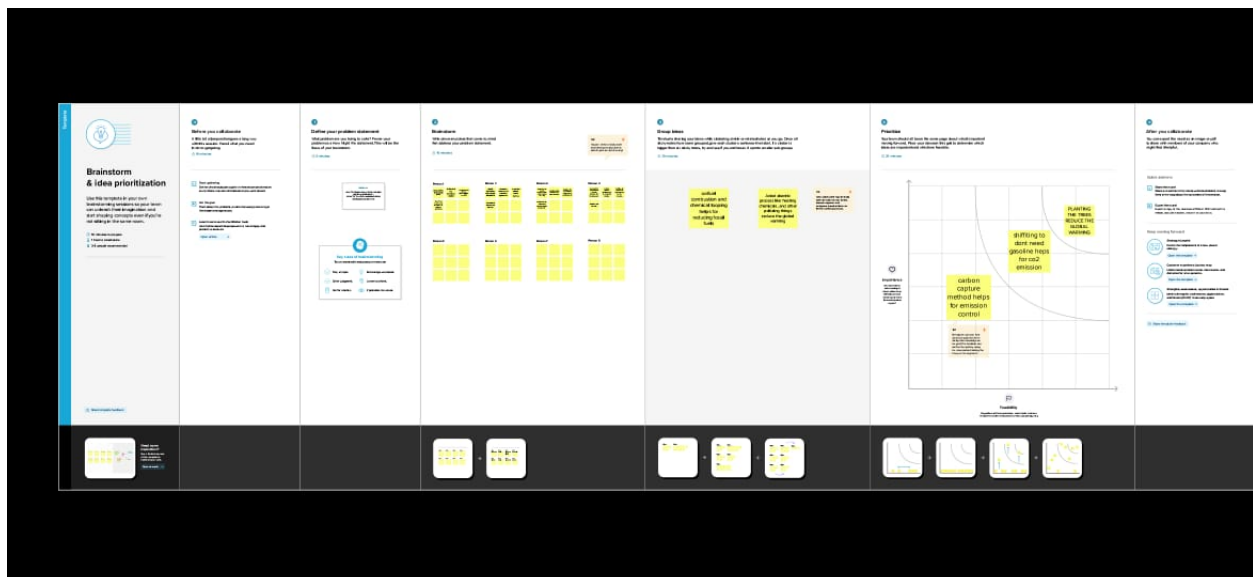
## **2 .PROBLEM DEFINITION & DESIGN THINKING**

### **2.1 EMPATHY MAP:**

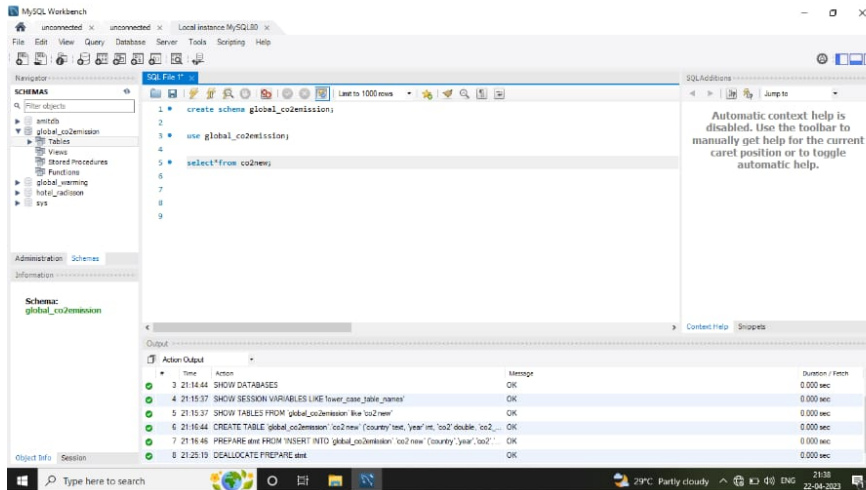




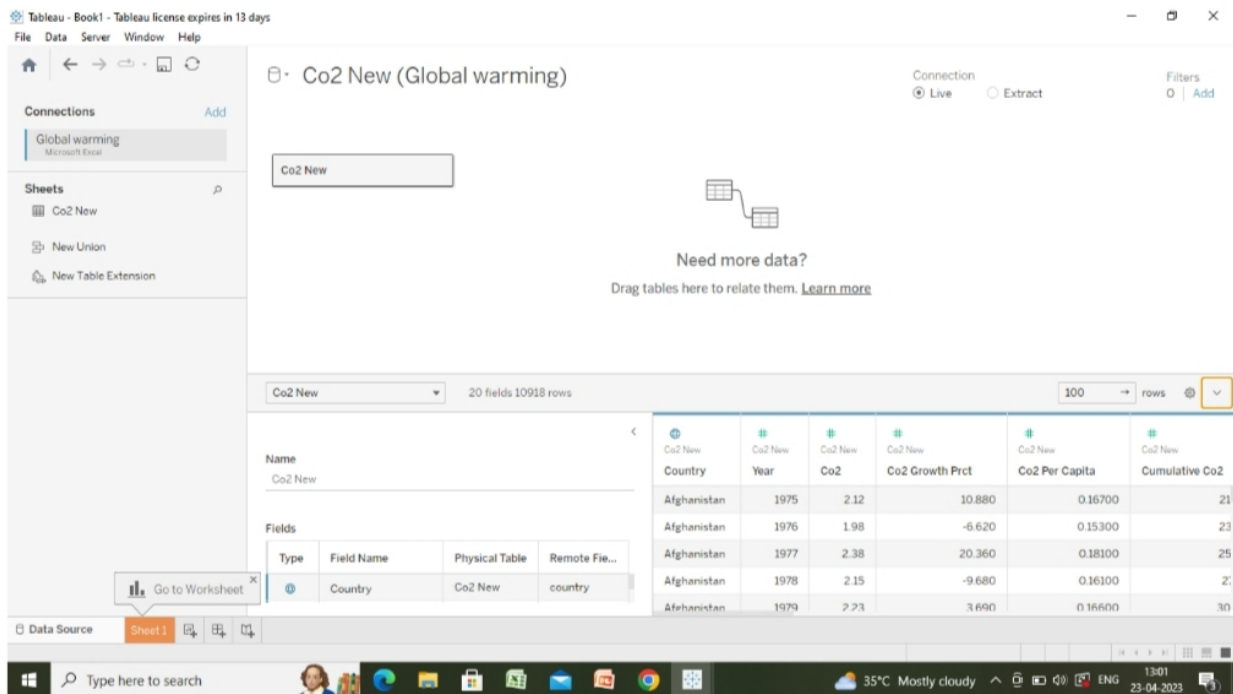
## 2.2 IDEATION AND BRAINSTROMING MAP:



## 3.RESULT:



First we installed the MySQL to stored the data. In MySQL we register using user name and password after that we entered into the home. Using the root we imported the data into Mysql which we stored the data in excel sheet. After we imported we can see the output data which we see in the above screenshot.



To make the data table first we register in tableau and then we got the link in mail to download the tableau using the link we downloaded after that we connect the tableau server with MySQL after that we connect the server with server code and password. next we can see the stored data in tableau then we drag the data and formed the data table.

#### **4.ADVANTAGES:**

The Arctic, Antarctic, and other frozen regions of the earth might experience more plant growth and milder climates.

Larger growing seasons can correspond to increased agricultural production in a few areas.

To learn about the CO<sub>2</sub> emission in seven continents by in refractors like coal CO<sub>2</sub>, gas CO<sub>2</sub>, cement CO<sub>2</sub>.

If we reduce the burn of fossil fuel it decreases the CO<sub>2</sub> emission.

#### **DISADVANTAGES:**

Fossil fuel is the main source of CO<sub>2</sub> emission when fossil fuel are burned they release large amounts of CO<sub>2</sub>

CO<sub>2</sub> emission leads to global warming due to global warming our climate system has changed due to climate change, worst impact has created.

Human activities have raised the atmosphere carbon dioxide content by 50% less than 200 years.

Carbon dioxide in the atmosphere warms the planet causing the climate change.

The main human activity that emits CO<sub>2</sub> is the combustion of fossil fuels for energy and transportation.

#### **5.APPLICATIONS:**

New opportunities to use carbon dioxide (CO<sub>2</sub>) in the development of products and services are capturing the attention of governments, industry and the investment community interested in mitigating climate change as well as in other factors, including technology leadership and supporting a circular economy. This analysis considers the near-term market potential for five key categories of CO<sub>2</sub>-derived products and services: fuels, chemicals, building materials from minerals, building materials from waste, and



CO<sub>2</sub> use to enhance the yields of biological processes. All five categories could individually be scaled-up to a market size of at least 10 MtCO<sub>2</sub>/yr – almost as much as the current CO<sub>2</sub> demand for food and beverages – but most face commercial and regulatory barriers. CO<sub>2</sub> use can support climate goals where the application is scalable, uses low-carbon energy and displaces a product with higher life-cycle emissions. Some CO<sub>2</sub>-derived products also involve permanent carbon retention, in particular building materials. A better understanding and improved methodology to quantify the life-cycle climate benefits of CO<sub>2</sub> use applications are needed. The market for CO<sub>2</sub> use is expected to remain relatively small in the short term, but early opportunities could be developed, especially those related to building materials. Public procurement of low-carbon products can help to create an early market for CO<sub>2</sub>-derived products and assist in the development of technical standards. In the long term, CO<sub>2</sub> sourced from biomass or the air could play a key role in a net-zero CO<sub>2</sub> emission economy, including as a carbon source for aviation fuels and chemicals.

## **6.CONCLUSION:**

These harmful green house gases are emitted by the burning of fossil fuels. Global warming will result in the melting of the polar ice caps and raise the ocean level which will submerge island and coastal land

Global warming is not something to take lightly. The oceans are warming, the polar ice caps are melting, and greenhouse gas levels are at an all-time high. These are just some of the things that the claims-makers for the global warming cause have said. The science has proven them right. So, the ultimate claim is that humans are a large factor in the increased rate of global warming. There are claims-makers of all kinds fighting about whether that is true or not. The solutions proposed deal with a cleaner world, while the deniers will opt to do nothing. This issue has turned political, and it seems like nothing gets done until someone who believes in global warming is in charge. Right now, that is not the case. This issue will continue to get worse until there is no turning back. Hopefully society can come to a consensus to try and inhibit global warming. This is the only way to keep the place we live healthy.

## **7.FUTURE SCOPE:**

Increasing green house gas concentration will have many effects. Future temperature changes. Future ice, snow pack and permafrost. Future sea level change. Future precipitation and storm events. Future ocean acidification. Future changes are expected to include a warmer atmosphere, a warmer and more acidic ocean, higher sea levels and larger changes in precipitation patterns. The extent of future climate change depends on what we do now to reduce greenhouse gas emission. The more we emit, the larger future changes will be. Increase in average global



temperatures are expected to be within the range of 0.5 °F to 8.6°F by 2100 , with a likely increase of at least 2.7°F for all scenarios except the one representing the most aggressive mitigation of green house gas emissions. Expect under the most aggressive mitigation scenario studied, global average temperature is expected to warm at it has during the last 100 years. Future changes are expected to include a warm and more acidic ocean, higher sea levels, and large changes in precipitation patterns.

#### 8. APPENDIX: Trailhead link

Team leader: <https://trailblazer.me/id/nramya14>

Group member 1: <https://trailblazer.me/id/nramya14>

Group member 2: <https://trailblazer.me/id/nramya14>

Group member 3: <https://trailblazer.me/id/nramya14>

