Reduce Carbon Footprint

CO_2 Emissions As The New Energy and Economic Powerhouse

Datafluent
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1. WHAT IS CLIMATE CHANGE?

Climate change refers to **long-term shifts** in **temperatures** and **weather patterns**.

Source : un.org

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2. UN DECADE ON ECOSYSTEM RESTORATION?

End poverty, combat climate change and prevent a mass extinction.

Source : decadeonrestoration.org

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3. WHAT NOW?

UN demands to accelerate the renewable energy transition.

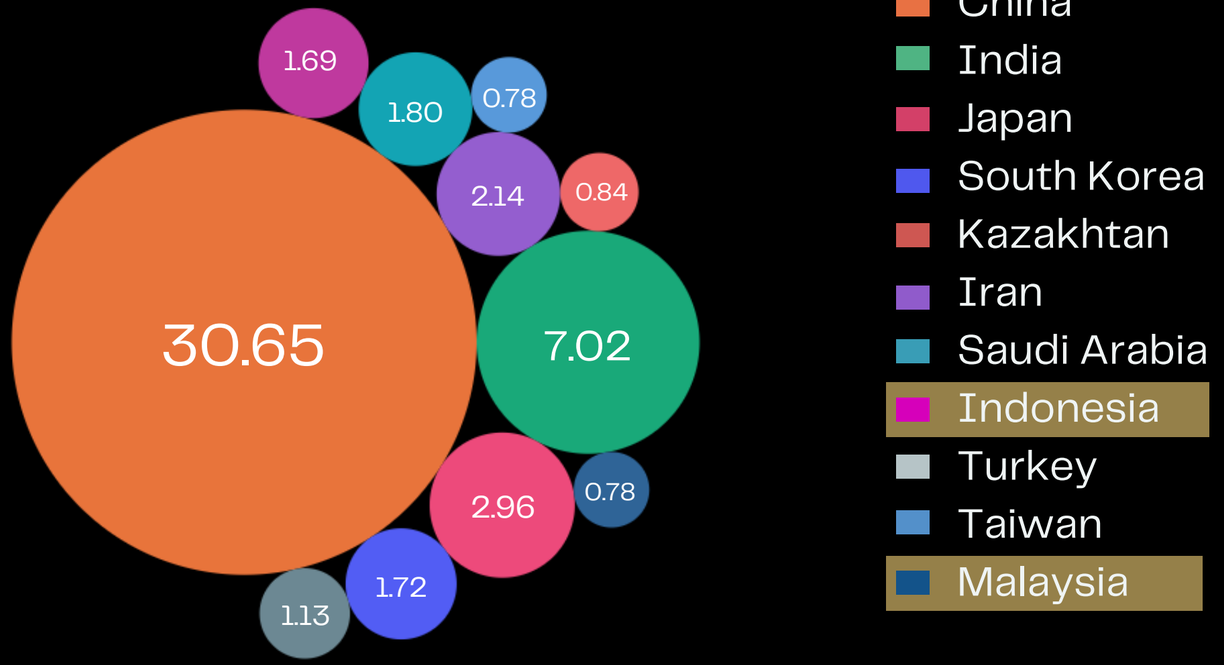
Source : un.org

Human activities have been the **main driver** of climate change since 1800s, due to burning fossil fuels. Burning fossil fuels generates greenhouse gas emissions (**CO_2**) that cause climate change.

Source : www.un.org

TOP 10 Most Shared CO2 Emissions in ASIA (in percent)

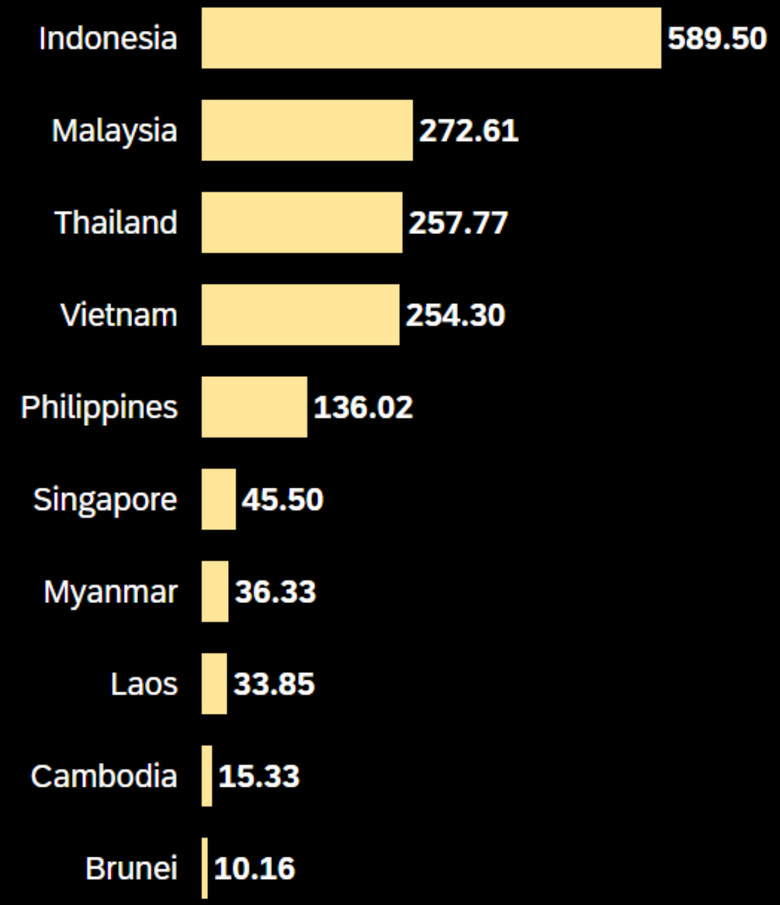
Subtitle | Explorer Available



Source : ourworldindata.org

Compiled by : SAP Analytics

CO2 Emmision 2020 per Country for Actual (Million Tons)



Source : ourworldindata.org

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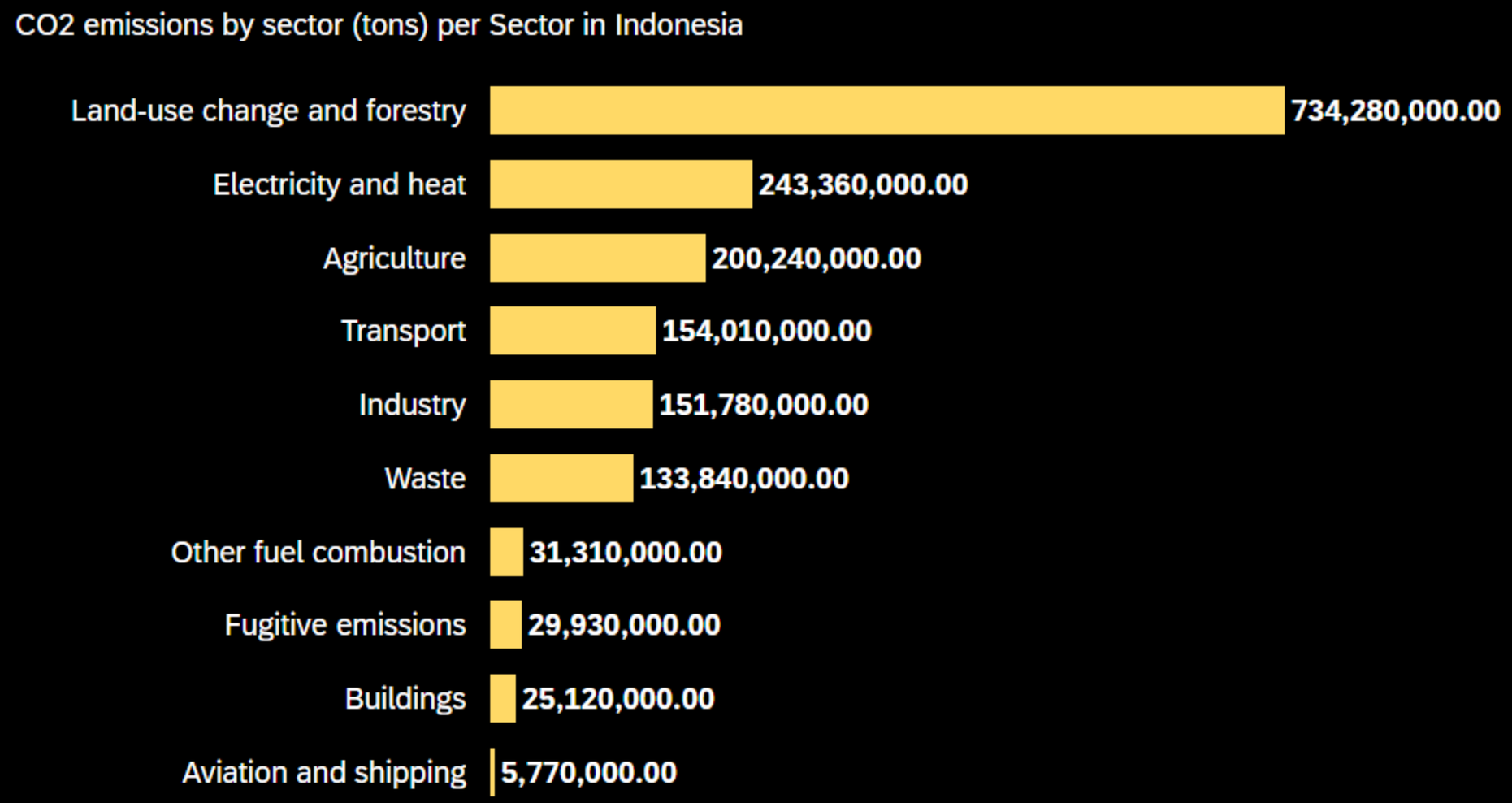
Indonesia is South East Asia's **largest contributor** to CO_2 emissions in Asia, followed by **Malaysia**.



Source : ourworldindata.org

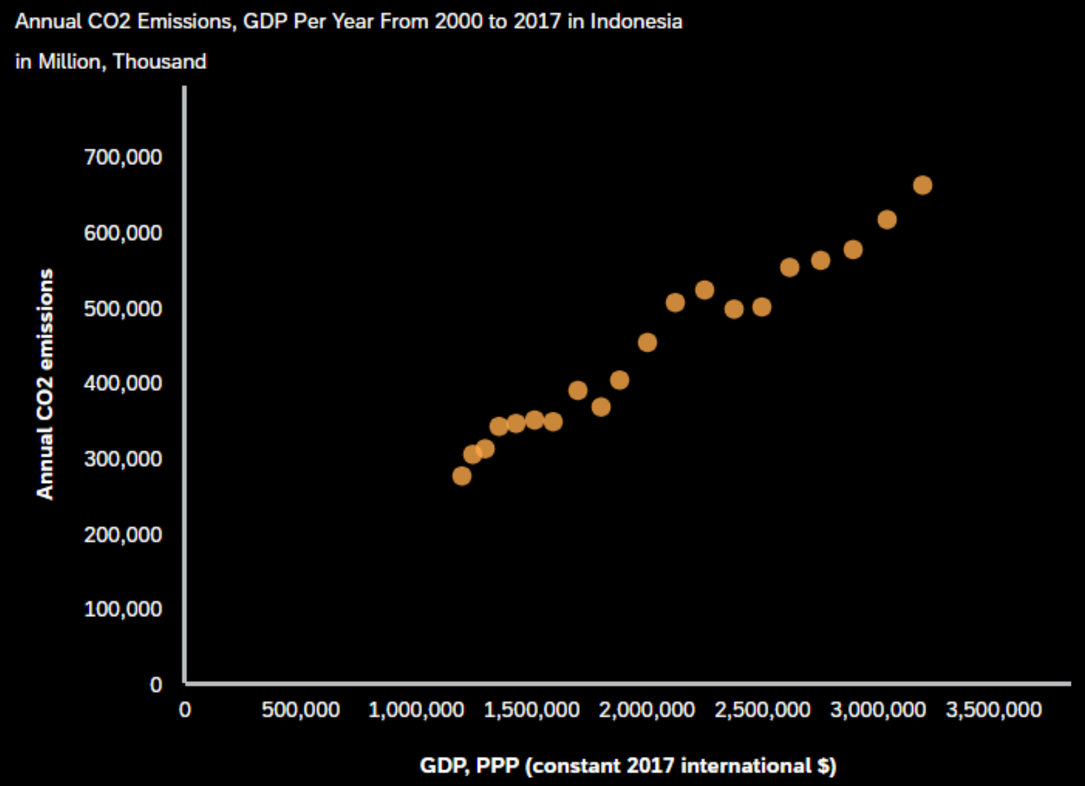
Compiled by : SAP Analytics

Land Use Change, **Electricity**, **Agriculture**, **Transport**, and **Industry** activities are the top 5 main sources of carbon dioxide emissions in Indonesia.

Impact

Economic ⟵ ⟶ **Environment**

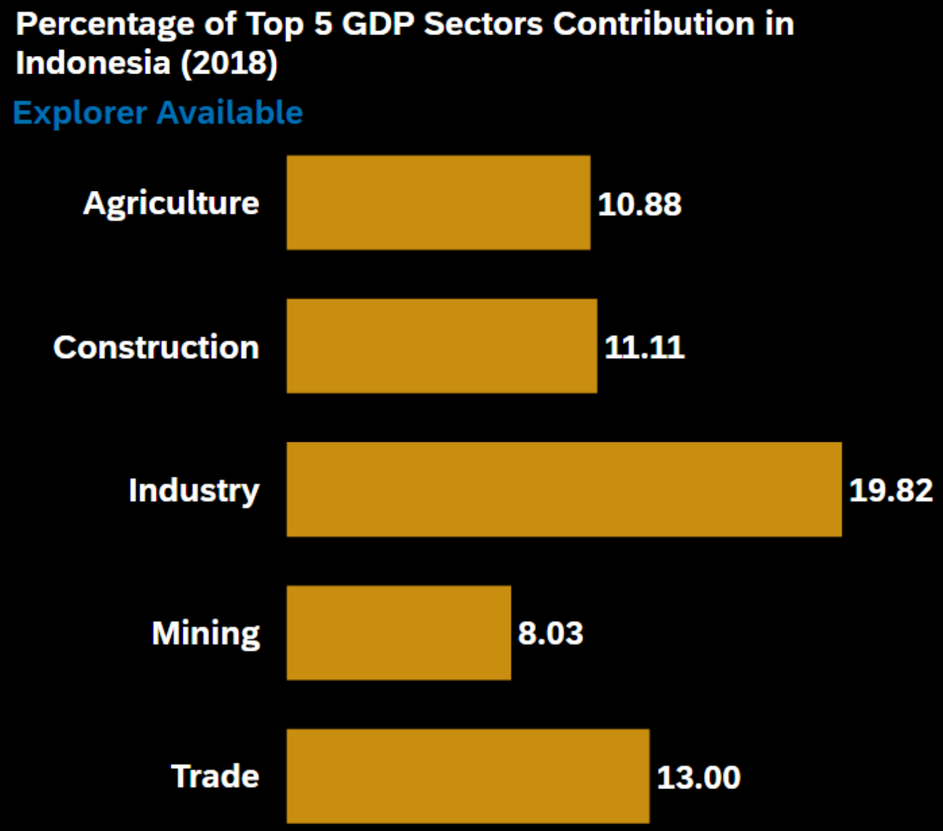
For many periods after World War II, many economic growths were **closely linked** to increased greenhouse gas emissions (CO_2).



Source : ourworldindata.org

Compiled by : SAP Analytics

Source : policyoptions.irpp.org



Source : databoks.katadata.co.id

Compiled by : SAP Analytics

In Indonesia, GDP has a **positive relationship** with CO_2 emissions.

Impact

Economic

Environment

Since 1990, mean **annual temperature** has **increased** by about **0.3°C**

Projected warming from 0.2 to 0.3 °C per decade in Indonesia

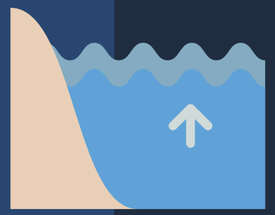
Annual precipitation has decreased by **2%** to **3%**

The seasonality of precipitation **has changed**

Wet season in the southern region has **increased**

Dry season in the northern region has **decreased**

Sea level increasing at **1–3 mm/year** in coastal areas of Asia



Projected to **accelerate** to a rate of about **5mm/year** by the year 2100

Source : awsassets.panda.org

What we aim to solve today?

Situation	CO_2 Emissions is like double-edged sword, on one side it has positive impact to economic but at the same time it damages the environment.
Barriers	The majority of sectors that contribute to GDP in Indonesia are mostly sectors that emit CO_2 emissions.
Vision	Green Eco-life: Take the chance or lose the change

Solution : Green Eco-life

Activity 1 : Use CO_2 as an new and affordable energy

Goal :

Focus	Action Plan
Short term	Collaborating with expertise to create projects for processing CO_2 emissions into methanol.
Long term	Make our own tool to convert CO_2 emissions into methanol independently and conduct independent research how to convert CO_2 emissions into methanol.

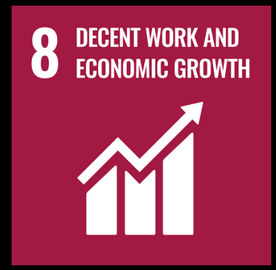
Why Methanol?

Because it **reduces** carbon **emissions** by **65%** to **95%** depending on the feedstock and conversion process.

Source : www.methanol.org

Solution : Green Eco-life

Activity 2 : Transition and Upgrade for Economic Productivity Goal :



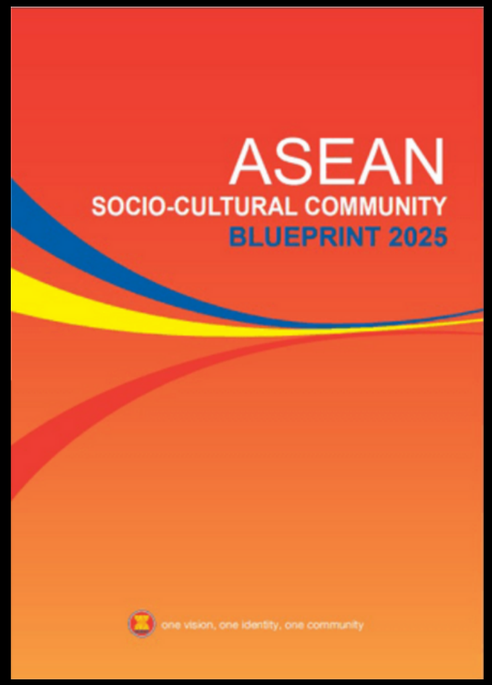
Focus	Action Plan
Indonesia energy transition	1. The result of processing is methanol which can be used as fuel cells whose function is to fuel electric cars and maritime transportation. 2. Pure methanol as an alternative cooking fuel, as well as fuel for the industrial sector.
Indonesia GDP growth opportunities	1. Apply for carbon tax. 2. Import how many percentage of the processing results. 3. Save on spending on fuel for sectors that still use fossil fuels.

BLUEPRINT

Section C.1 –ASCCBP
Conservation and Sustainable Management of Biodiversity and Natural Resources

Section C.4 –ASCCBP
Sustainable Consumption and Production

Section C.2 –ASCCBP
Environmentally Sustainable Cities



Section B.8–ASCC
Sustainable Economic Development

Section C.1–ASCC
Conservation and Sustainable Management of Biodiversity and Natural Resources

Section C.2–ASCC
Environmentally Sustainable Citie

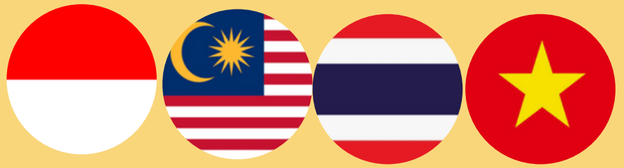
IMPLEMENTATION PLAN

Country Cluster

CLUSTER 1

High proportion of CO_2 Emmision

1



CLUSTER 2

Medium proportion of CO_2 Emmision

2

CLUSTER 3

Low proportion of CO_2 Emmision

3

Phase 1
2022-2023

- Strategies planning for the implementation of activities 1 and 2.
- Research and reaching expertise
- Preparing regulations for carbon tax.
- spread awareness about the carbon tax that will be applied.

Phase 2
2024-2026

- Collaborating with people to make the project.
- Apply Carbon tax : The government start establishes a cost for each ton of greenhouse gas emissions that emitters must pay.

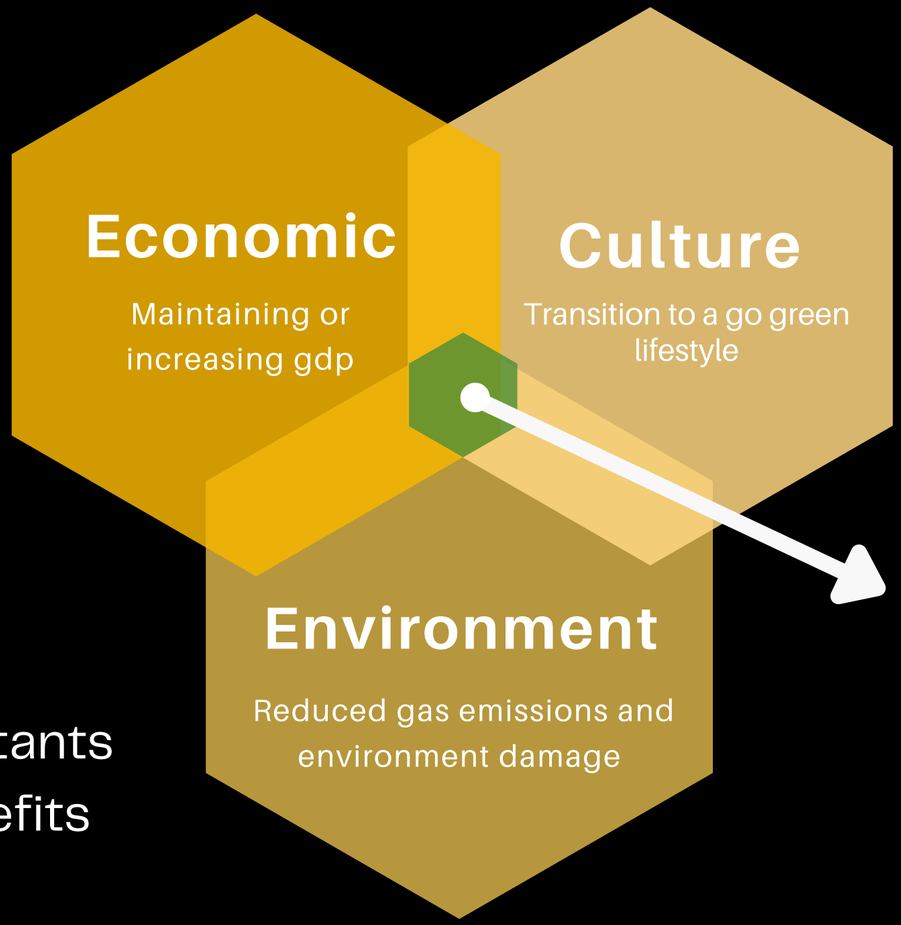
Phase 3
2027-2030

- Research and make tool that convert CO_2 into methanols.
- Importing methanol which can be used as a source of income.
- Transition to processed energy products.

WHAT DO WE WANT TO ACHIEVE?

Global GDP up to **1.1%** in **2030**

Source : www.irena.org



A transition to **renewable energy** is good for people and the planet, it will **mitigate climate change** by **reducing** greenhouse gas emissions.

Source : www.nature.org

Reducing co-emitted air pollutants **improves air quality** and benefits **human health**.

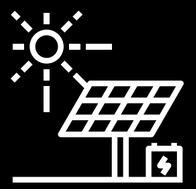
Source : www.niehs.nih.gov

Take the **chance** or lose the **change**.

Thank you.

Appendix

H2O



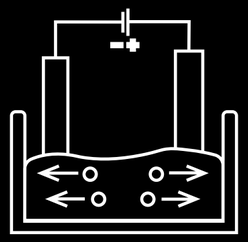
Renewable Energies

Cooking Fuels

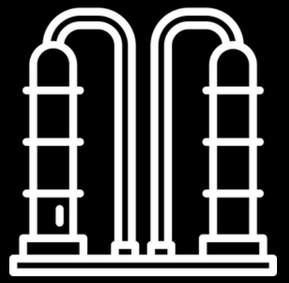
Transportation Fuels

Industrial Fuels

CO_2 to Methanol



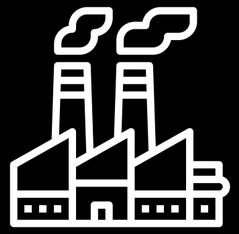
Electrolyzer



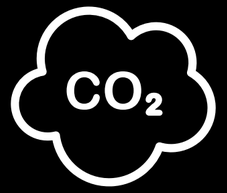
Distilation

H2

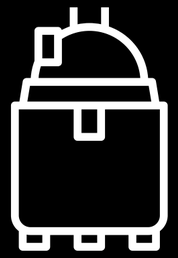
Hydrogen



Waste gas



CO_2



Reactor

Ship's Fuels

Fuel Cells

Source : www.offshore-energy.biz

CARBON RECYCLING INTERNATIONAL

EUROPEAN ENERGY

Some of the companies that work on a project to convert CO2 into methanol

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Image Source :

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