

Transitioning to the Green Energy for the Better Climate

Encouraging the Transition to Green Energy for the Reduction of the
Green House Gas Emissions into the Earth's Atmosphere

7 AFFORDABLE AND
CLEAN ENERGY



13 CLIMATE
ACTION



Meet Our Team –Team Phoenix



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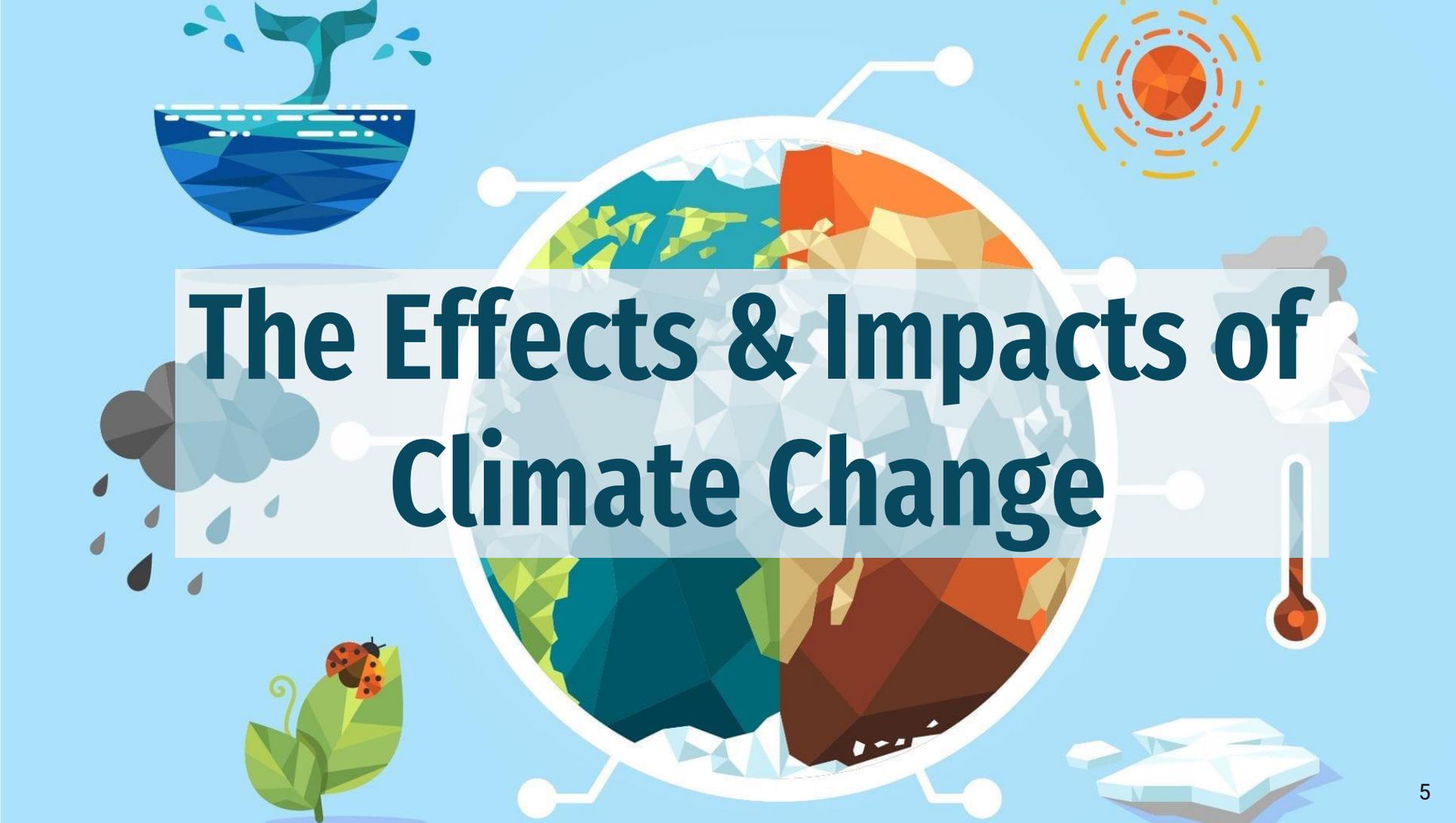
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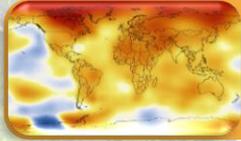
Introduction

- The PowerPoint delves into the **effects, consequences, and origin of the escalating climate change.**
- In terms of addressing the prevention of climate change, our team has selected the **renewable energy as the primary solution** and will elaborate on the **recommendations that can be implemented** within the ASEAN regions to **combat further climate change.**



The Effects & Impacts of Climate Change

What are the Effects of Climate Change?



Rise in Temperature



Poor Air Quality



Droughts



Extinction of Animals



Severe Storms



Human Health Risks



Increased Sea Level



Famine and Poverty

Climate Change Impacts on ASEAN

1. Increased Level of Extreme Poverty

2. Substantial Reliance on Climate-Sensitive Sectors

3. Ongoing Region-Wide Stress Caused by Natural Disasters

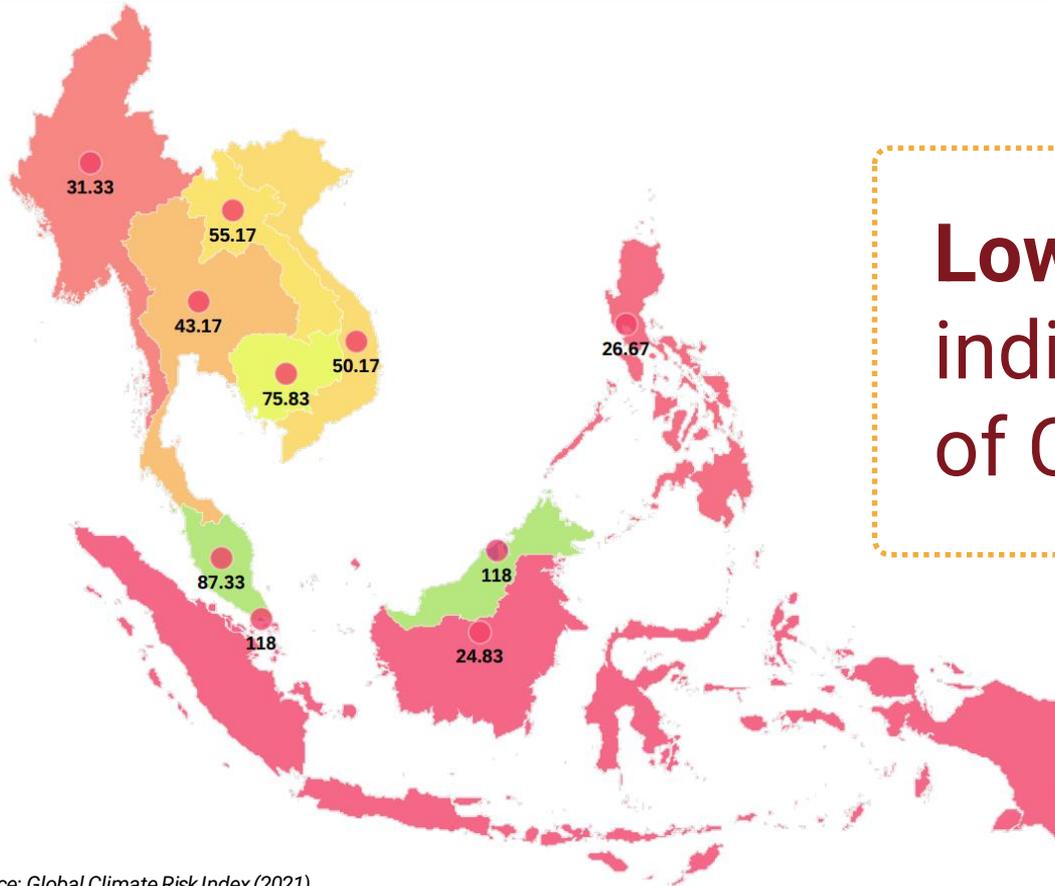
4. Elevated Risks Due to global integration, Including Supply Chains and Transboundary Rivers

5. Extensive Coastline with Concentrated Coastal Cities and Economic Activities

6. Significant Intra-Regional Migration

7. Extensive Deforestation Harming Local Resilience and the Environment

Climate Risk Index of ASEAN region (2019)



**Lower CRI score
indicates Higher Risk
of Climate Change**



Causes of Climate Change

What is Causing Climate Change?

Burning of the Fossil Fuels

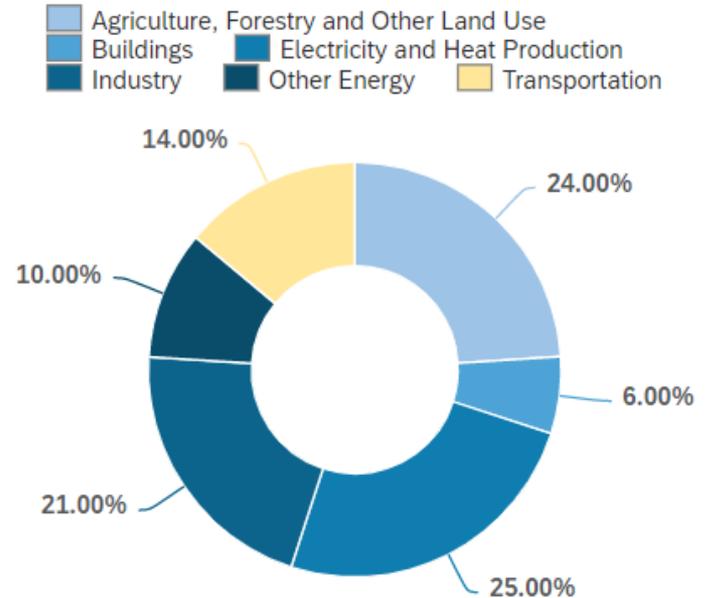
Deforestation

Excessive Farming

Overreliance on devices that emits F-Gases

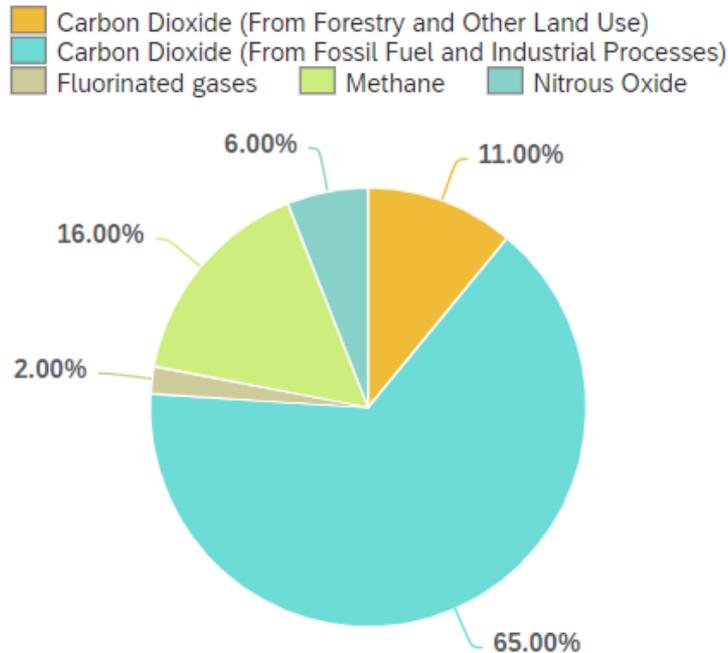
All Boils Down to the Great Scale Emission of the Greenhouse Gases

Percentage of Greenhouse Gases Emitted from the Economic Sector



Greenhouse Gases

Greenhouse Gas Composition



Main Source of Emissions

Carbon Dioxide - Fossil Fuels, Deforestation, Agriculture

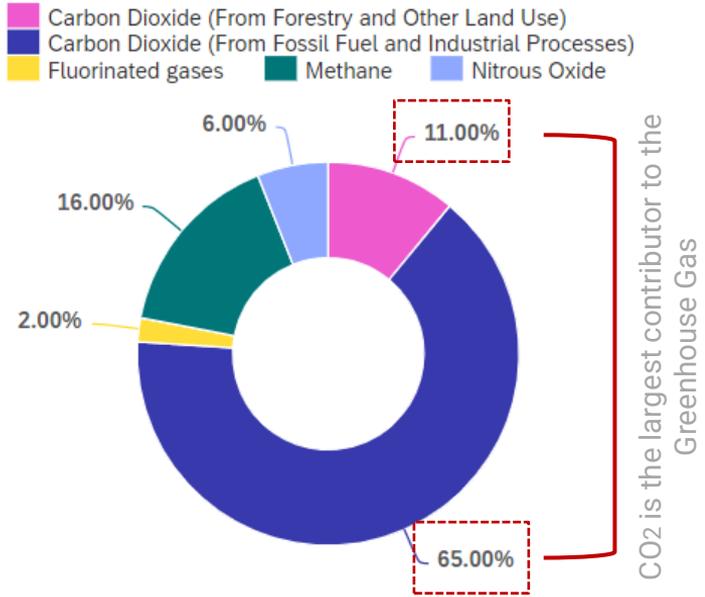
F-Gases - Industrial Processes, Consumer products (e.g., Refrigerators, Air Conditioners)

Methane - Agriculture, Waste (e.g., Industrial, Household), Biomass Burning

Nitrous Oxide - Agriculture, Burning of Fossil Fuels

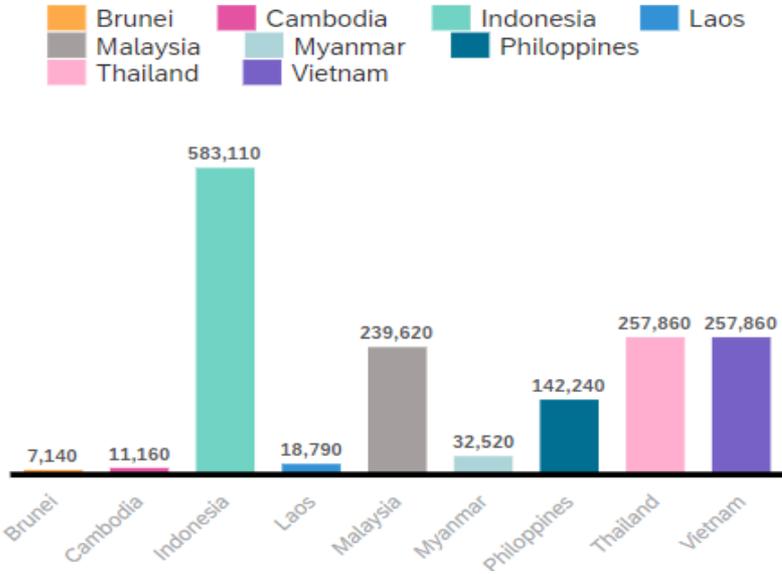
CO₂ Emissions

Composition of the Greenhouse Gas



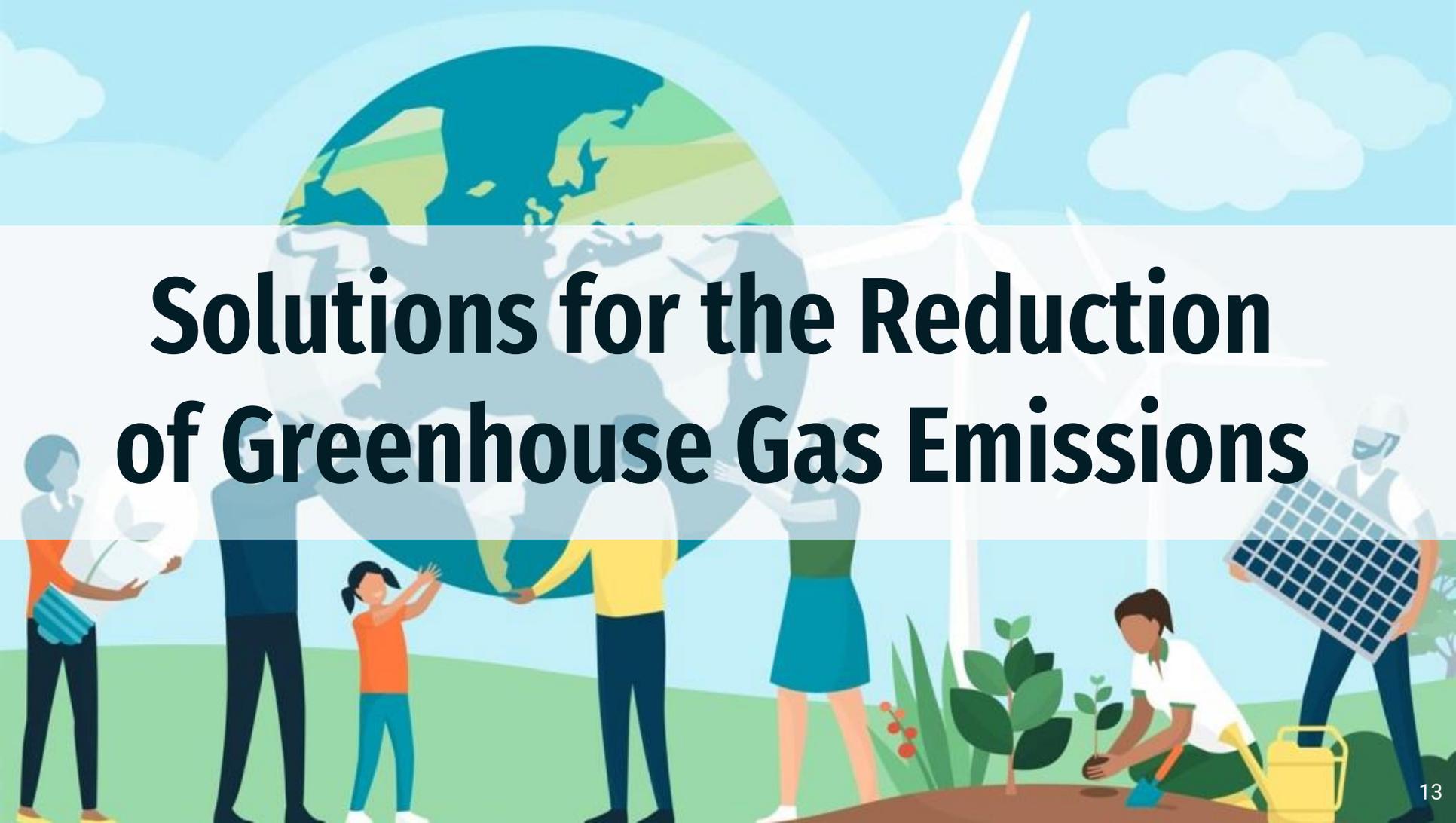
Source: Global Greenhouse Gas Emissions Data (EPA) Last Updated: Feb15, 2023

CO₂ Emissions in SEA



CO₂ Emissions per Country in 2021

Source: Decarbonization, the Southeast Asian Way (ReportingAsean) Last Updated: Sep 23, 2021

An illustration depicting environmental and sustainable development themes. In the center, a group of diverse people (a woman, a man, a child, and another woman) are holding a large globe. To the right, there are two white wind turbines. In the foreground, a person is kneeling and planting a small green tree sapling, with a yellow watering can nearby. On the far right, a person is carrying a large solar panel. The background features a blue sky with white clouds and a green landscape.

Solutions for the Reduction of Greenhouse Gas Emissions

How can Greenhouse Gas Emissions be Reduced?

Swapping to Renewable Energy

Stopping Deforestation

**Encouraging Alternative
Transportations Methods**

Saving Energy Usage

Switching to Sustainable Agriculture

Reducing Food Loss and Waste

Types of Renewable energy

01 Hydropower

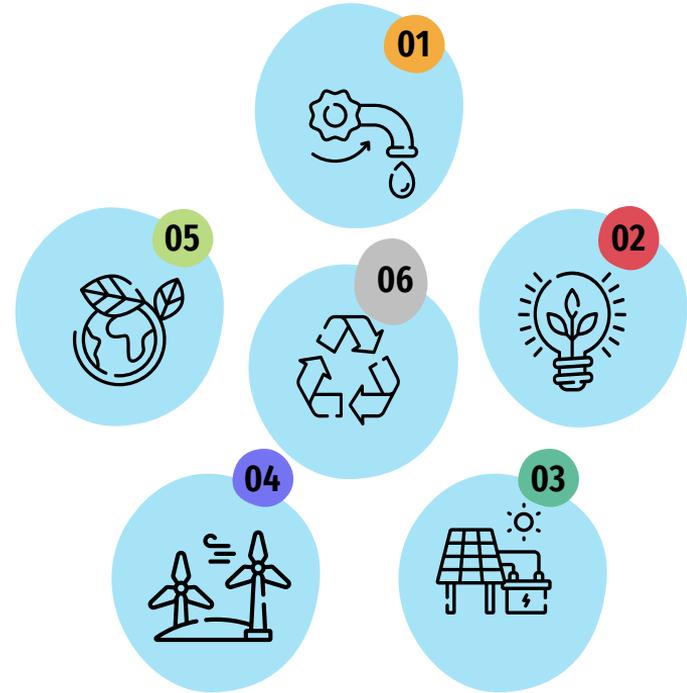
02 Biomass and Bioenergy

03 Solar Energy

04 Wind Energy

05 Geothermal Energy

06 Waste-to-Energy



Worldwide Contribution to Renewable Energy

Biofuel

2,636.03

Contribution (TWh)

Geothermal

114.04

Contribution (TWh)

Hydro

9,863.33

Contribution (TWh)

Renewable waste

74.05

Contribution (TWh)

Solar PV

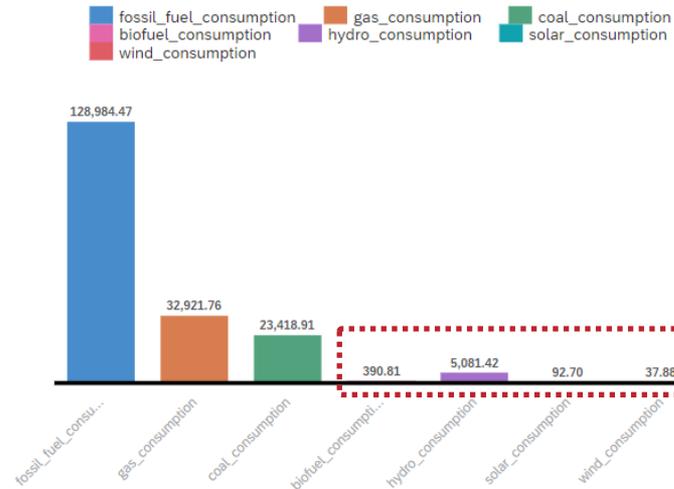
841.87

Contribution (TWh)

Wind

5,882.82

Contribution (TWh)



The total consumption of renewable energy is significantly less than fossil fuel and gas consumption and as renewable energy is replenished by nature and emits little to no greenhouse gases or pollutants, its use needs to be encouraged more.

Benefits of Renewable Energy

Zero Emission

Require little maintenance

Lower cost of electricity

Lower reliance on foreign energy sources

Better for public health

Job creation



Renewable energy sources are the best option to stop the current trend of climate change and as they can be utilized to generate electric power, the increase in the usage of renewable energy can have a huge impact on the climate.

Processes that must be undertaken for the transition to renewable energy

- 01 Enhance Grid Integration and Flexibility
- 02 Encourage Research and Development
- 03 Foster International Cooperation
- 04 Engage Stakeholders
- 05 Implement Supportive Policies
- 06 Raise Awareness and Education



By implementing these processes, we can accelerate the transition to renewable energy and reduce greenhouse gas emissions significantly while also mitigating the impacts of climate change and fostering a sustainable future.

An illustration centered around a globe. At the top, a woman in a blue shirt holds a solar panel. To the left, a man in a blue shirt and orange pants stands by a black vertical pole. At the bottom, a woman in a white shirt and blue pants kneels watering a small potted plant. To the right, a green recycling bin with a white recycling symbol is visible. A black ladder leans against the globe. The background features a bright sun, blue clouds, and green foliage. The word "Recommendations" is written in large, bold, orange letters across the center of the globe.

Recommendations

What Can ASEAN Do to Prevent Climate Change?

01 Prohibit the Use of Motorbikes

Motorbikes can produce harmful gases into the atmosphere including carbon dioxide and hydrocarbons.

As motorbikes are widely used in ASEAN countries, prohibiting the use of motorbikes will have a great impact on the reduction of greenhouse gases while also reducing the accidents caused by motorbikes.

Methods for Implementation

- Encouraging the public to use Bicycles Instead of the Motorbikes
- Making Bike Rental Services Available to all parts of the country
- Penalize people who use motorbikes

What Can ASEAN Do to Prevent Climate Change?

02

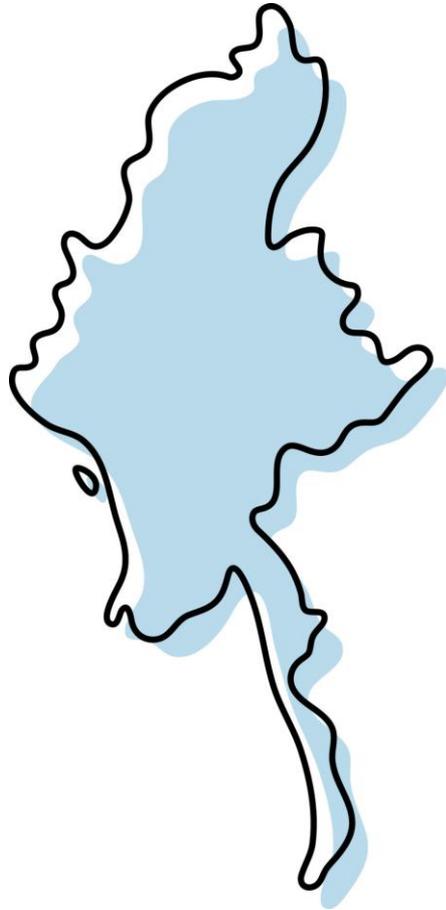
Limit the Electricity Consumption Units per Household

To **prevent** the **overconsumption** of electricity, it is necessary to limit the number of electricity units used per **household** since a household consumes around **800 to 1,000 kWh** of electricity per month according to the studies.

Methods for Implementation

- **Setting different cost ranges** of tax according to the **units consumed** by each household

Total Units	Price per unit
< 800kWh	x
800< <1000 kWh	y
>1000 kWh	z



Practical application in an ASEAN country

During the COVID-19 pandemic in 2020, the government provided **exemption** in **electricity tax payments** for households that did not exceed the **electricity unit usage limit**.

What Can ASEAN Do to Prevent Climate Change?

03

Limit the Electricity Consumption for Industrial Usage

Industrial processes are one of the **largest consumers** of electricity. Thus, **limiting the usage** of electricity in industries will have a **great impact on reducing the electricity consumption**

Methods for Implementation

- **Discount on commercial taxes** by percentages **for industries** according to their ability to reduce electricity usage.
- In contrast, **extra payment for excess usage** above the specified maximum electricity power.

What Can ASEAN Do to Prevent Climate Change?

04

Educating the public about climate change and its impact

The government needs to take part in **spreading awareness of climate change impacts** and in educating the public about the **benefits of less electricity consumption**

Methods for Implementation

- **Organizing campaigns and events to share knowledge** about the **impacts of climate change** and promoting them through official websites and social media.

Actions ASEAN Can Furthermore Take to Prevent Climate Change?

05

Reduce the Unnecessary Consumption of Energy

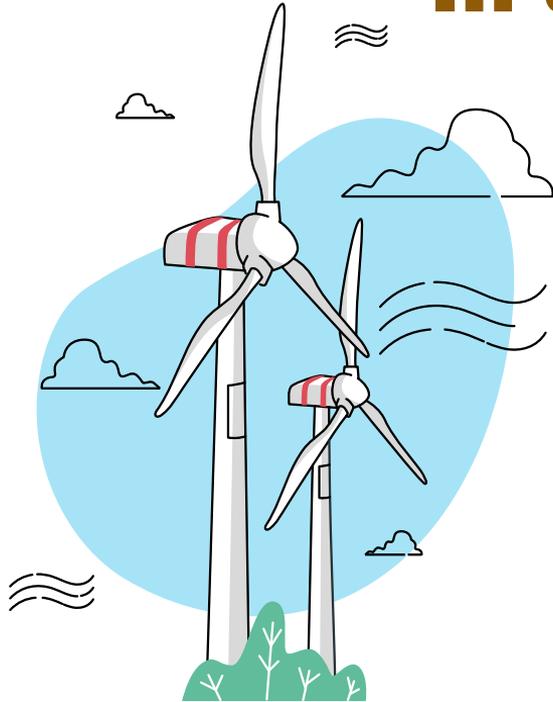
To mitigate harmful gas emissions, it is **crucial to cut down on unnecessary energy consumption**. This can be achieved by **promoting activities like walking or cycling** for short trips and adopting more **fuel-efficient driving habits**.

06

Replace the Renewable Energy In Place of the Fossil Fuels

To prevent further climate degradation, **implementing renewable energy is imperative**. It not only benefits the climate by reducing harmful emissions but also positively impacts public health by producing no harmful pollutants.

Implementation of Renewable Energy In the Public Sector



- 1 **Offering Tax Credits** to those who use Renewable Energy
- 2 **Offering Low-Cost Options of Renewable Energy for the Public Accessibility**

E.g. **Community Solar**- allows many people to access solar energy cheaply which is generated from solar energy fields and is shared among many people

Benefits of Adopting Proposed Solutions in ASEAN

01 Reduced Greenhouse Gas Emissions

02 Improved Air Quality

03 Optimized Energy Efficiency

04 Enhanced Energy Conservation

05 Enhanced Environmental Conservation

06 Increased Utilization of Sustainable Energy

08 Attained Net Zero Emissions

Goals Achieved

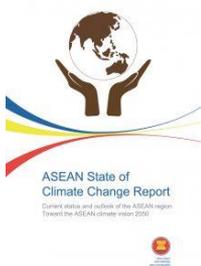


Target 13.2: Integrate climate change measures into national policies, strategies and planning.



Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services

Target 7.3: By 2030, double the global rate of improvement in energy efficiency



Section 3.3. Vulnerability to and impacts of climate change
3.3.1: Current status

Goals Achieved



Section A.1. Engaged Stakeholders in ASEAN Processes
(i), (ii)

Section A.2. Empowered People and Strengthened Institutions
(iii), (iv)

Section C.1. Conservation and Sustainable Management of Biodiversity and Natural Resources
(i),(ii)

Section C.2. Environmentally Sustainable Cities
(i)

Section C.3. Sustainable Climate

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Thank You!!!



