

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



Meet Our Team –Team Phoenix



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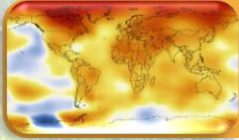
Introduction

- 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 background is a light blue gradient. In the center is a large, circular, low-poly representation of Earth with various colored segments (blue, green, yellow, orange, red, brown). Surrounding the Earth are several icons: a blue water droplet with a splash in the top left; a stylized sun with orange and yellow rays in the top right; a grey cloud with raindrops in the middle left; a thermometer with a red liquid level in the middle right; a green leaf with two ladybugs in the bottom left; and a pile of white ice cubes in the bottom right. White lines with circular endpoints connect the central Earth to the sun, the rain cloud, and the thermometer.

The Effects & Impacts of Climate Change

What are the Effects of Climate Change?



Rise in Temperature



Droughts



Severe Storms



Increased Sea Level



Poor Air Quality



Extinction of Animals



Human Health Risks



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

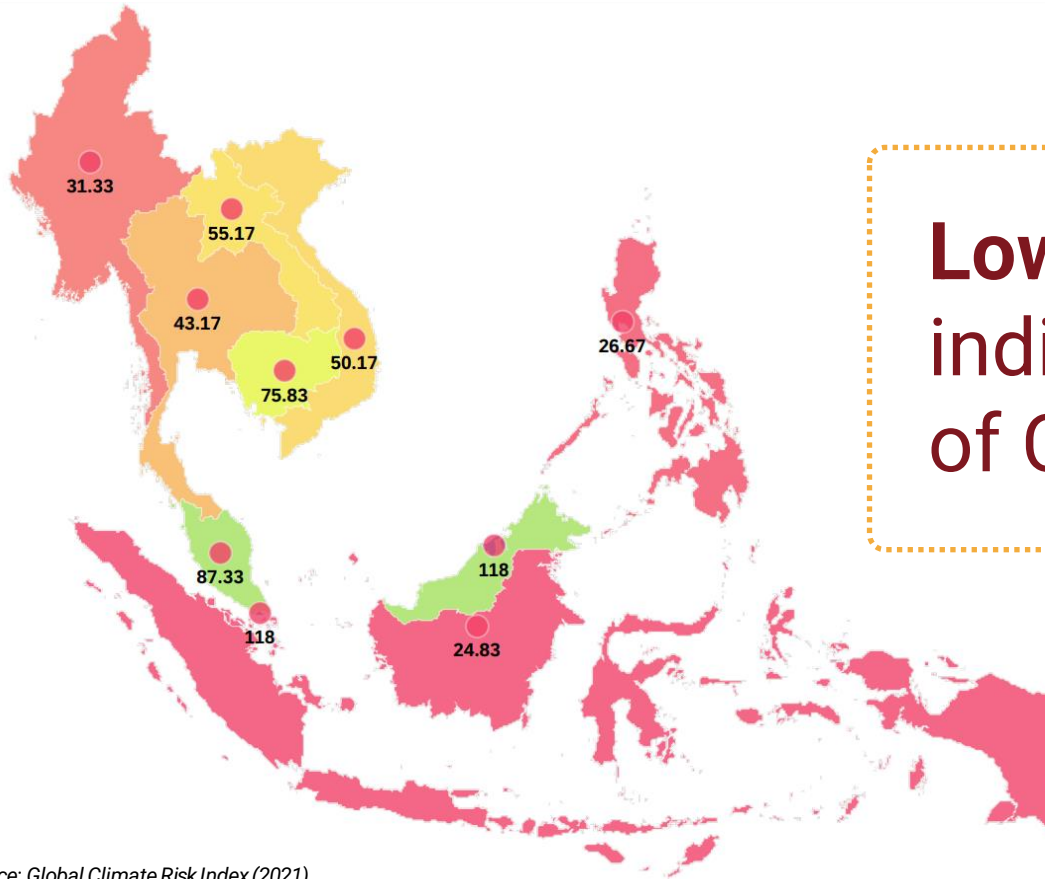
4. Elevated Risks Due to global integration, Including Supply Chains and Transboundary Rivers

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)

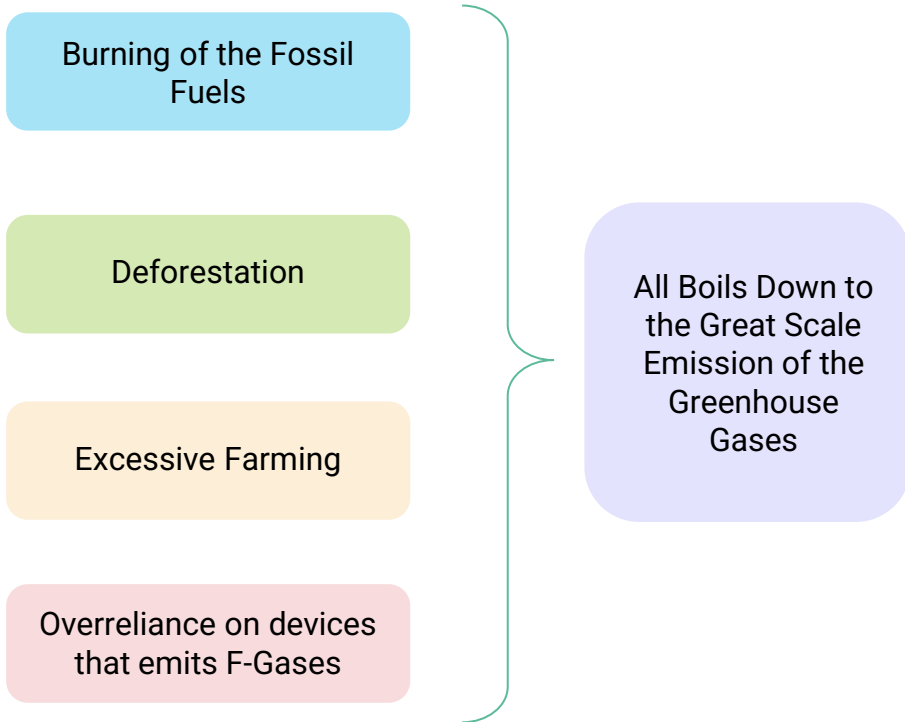


**Lower CRI score
indicates Higher Risk
of Climate Change**

Causes of Climate Change

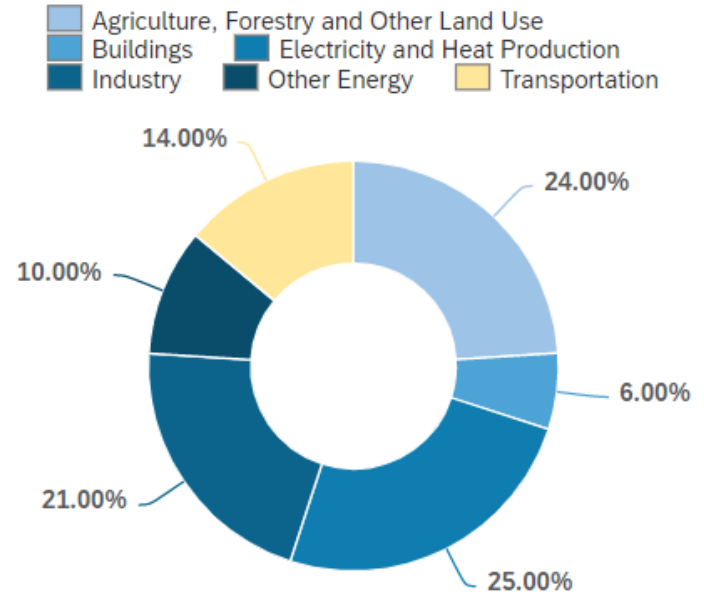


What is Causing Climate Change?



Source: Climate Change (European Commission)

Percentage of Greenhouse Gases Emitted from the Economic Sector

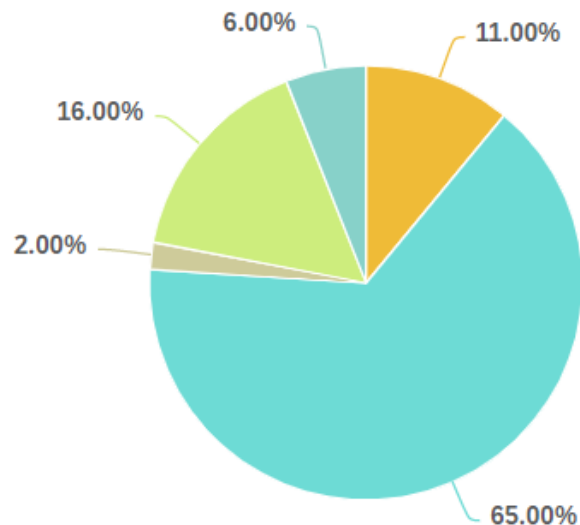


Source: Global Greenhouse Gas Emissions Data (EPA) Last Updated: Feb15, 2023

Greenhouse Gases

Greenhouse Gas Composition

Carbon Dioxide (From Forestry and Other Land Use)
Carbon Dioxide (From Fossil Fuel and Industrial Processes)
Fluorinated gases Methane Nitrous Oxide



Main Source of Emissions

Carbon Dioxide - Fossil Fuels, Deforestation, Agriculture

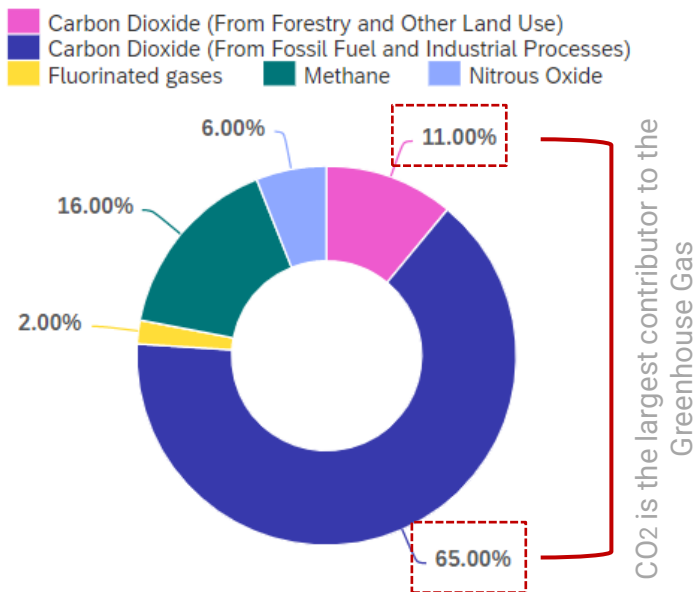
F-Gases - Industrial Processes, Consumer products (e.g., Refrigerators, Air Conditioners)

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

Nitrous Oxide - Agriculture, Burning of Fossil Fuels

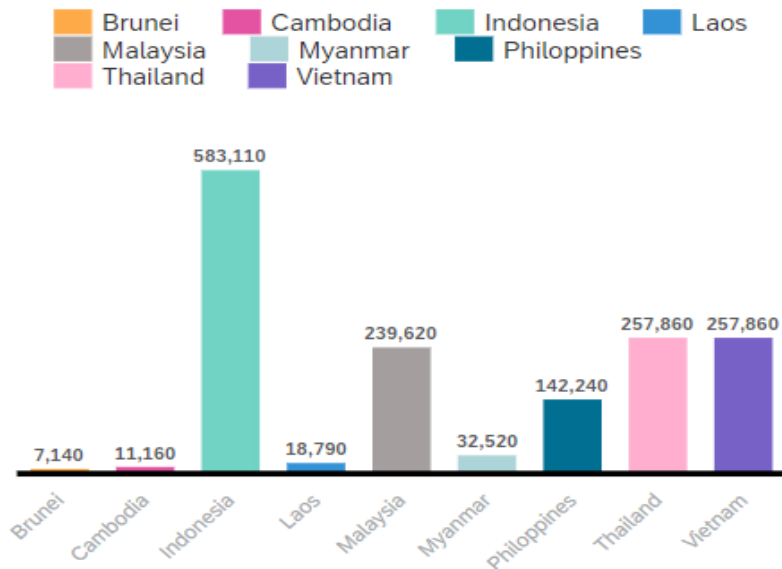
CO₂ Emissions

Composition of the Greenhouse Gas



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

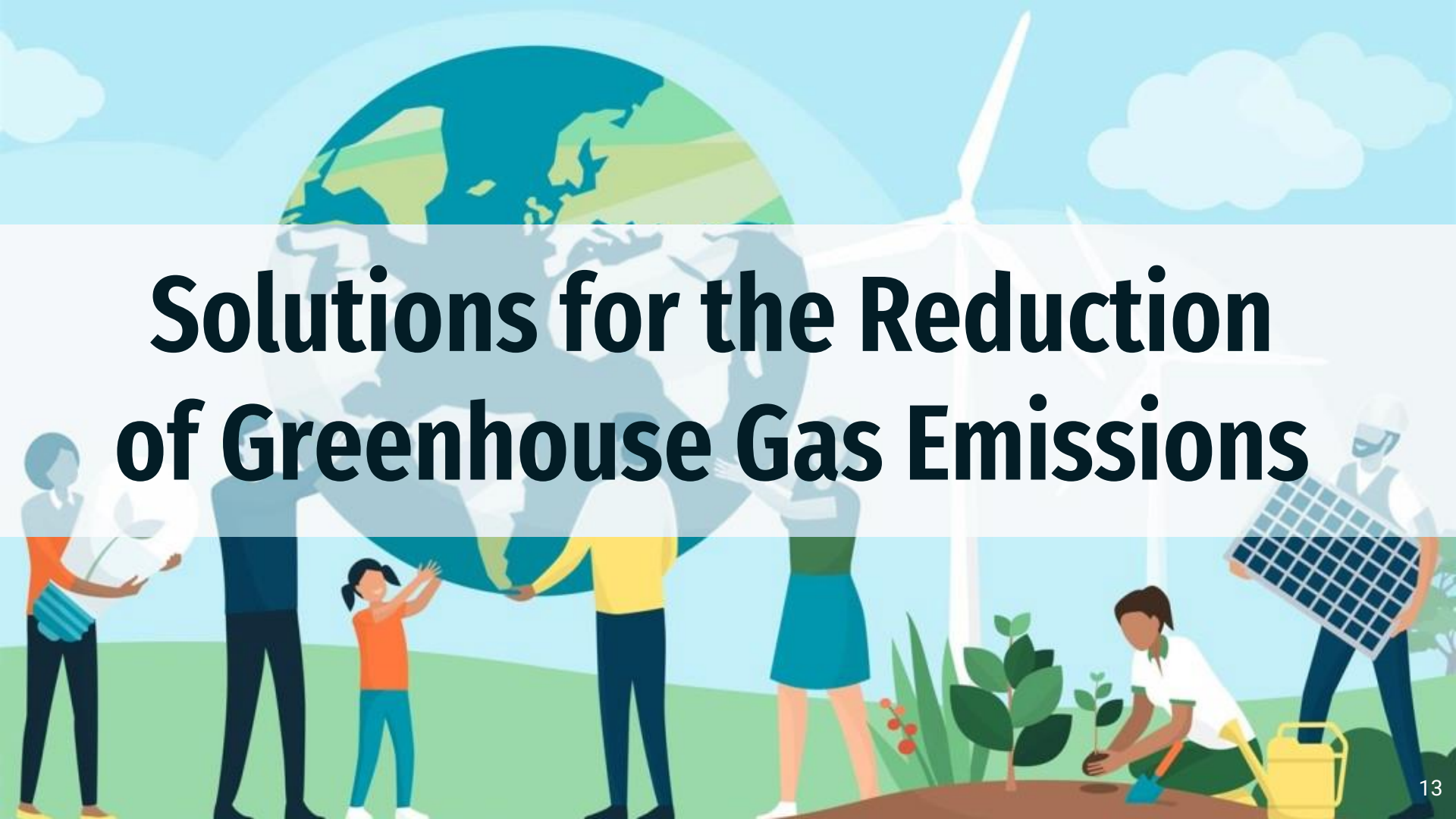
CO₂ Emissions in SEA



CO₂ Emissions per Country in 2021

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

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

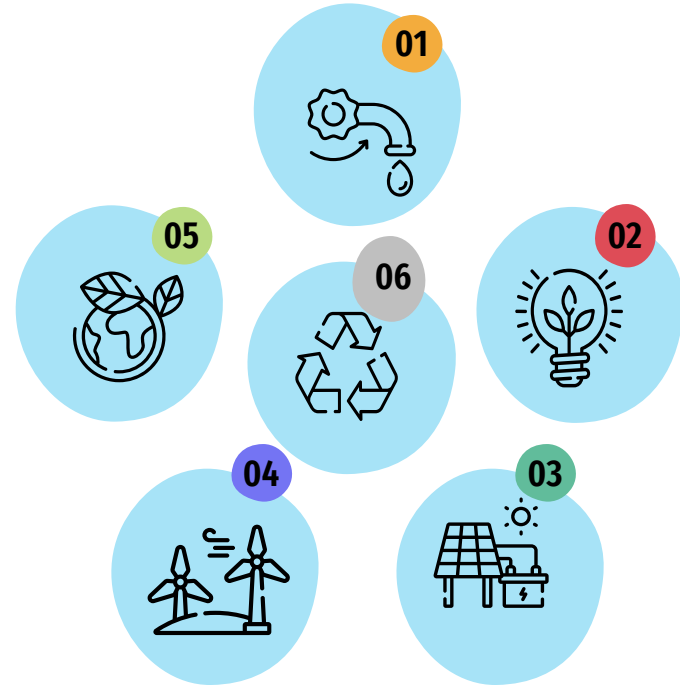
Wind Energy

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

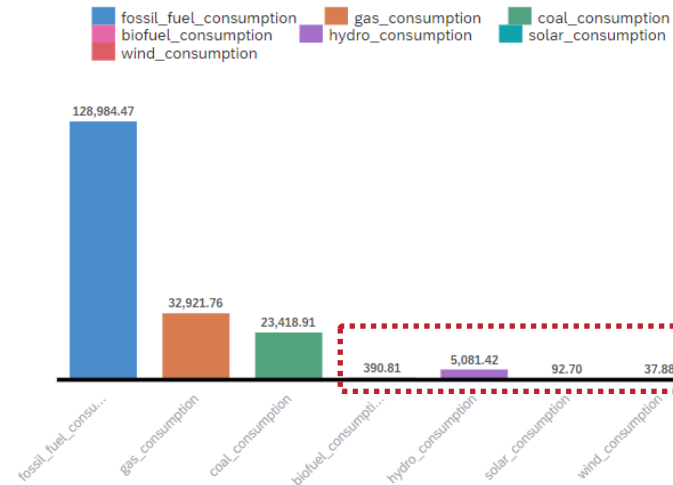
841.87

Contribution (TWh)

Wind

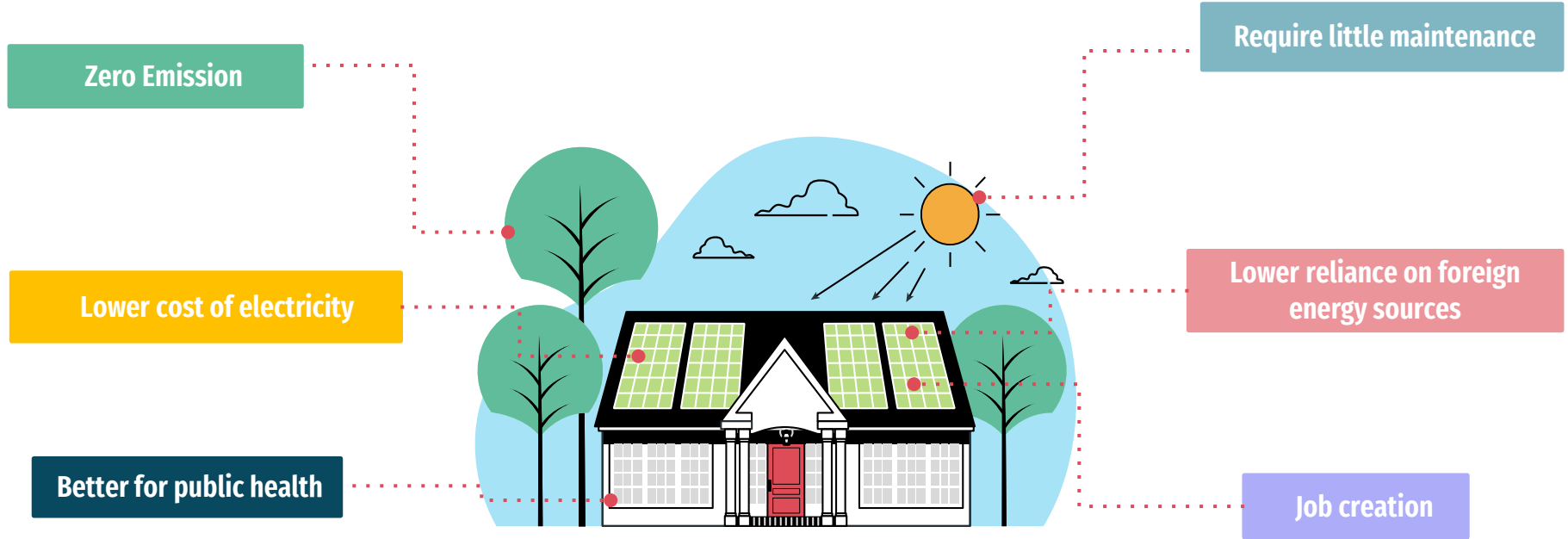
5,882.82

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



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 depicting environmental sustainability. A large globe is the central element. A woman in a blue shirt is at the top, holding a solar panel. A ladder leans against the globe. At the bottom left, a man in a blue shirt is working on a vertical pole. At the bottom center, a woman in a white shirt is watering a small plant. At the bottom right, there is a green recycling bin. The background includes a bright sun and some clouds.

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

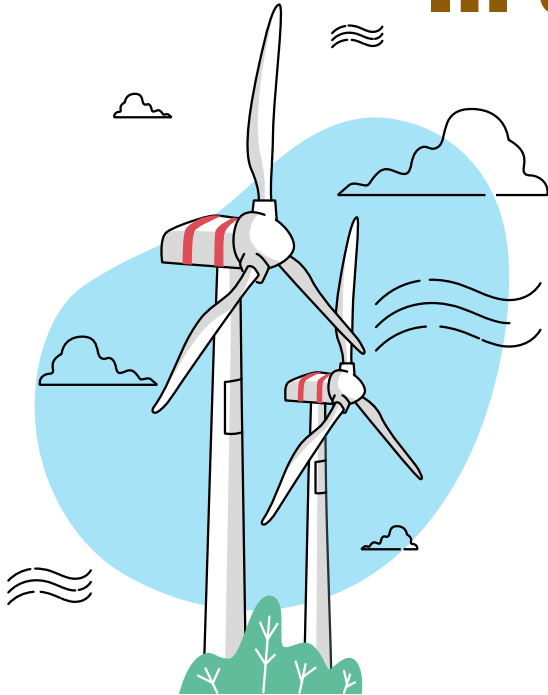
To mitigate harmful gas emissions, it is **crucial to cut down on unnecessary energy consumption**. This can be achieved by **promoting activities like walking or cycling** for short trips and adopting more **fuel-efficient driving habits**.

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

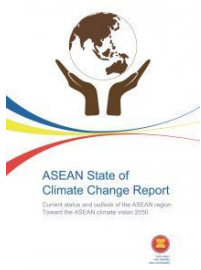


Target 13.2: Integrate climate change measures into national policies, strategies and planning.



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!!!



