

ENERGY LAW: ADAPTING TO THE CLIMATE CHANGE IN THE REGION
4 OCTOBER 2017 AIKOL IIUM

**CLIMATE CHANGE & CARBON EMISSION
REDUCTION: MALAYSIA & INDONESIA
CIRCUMSTANCES**

By:

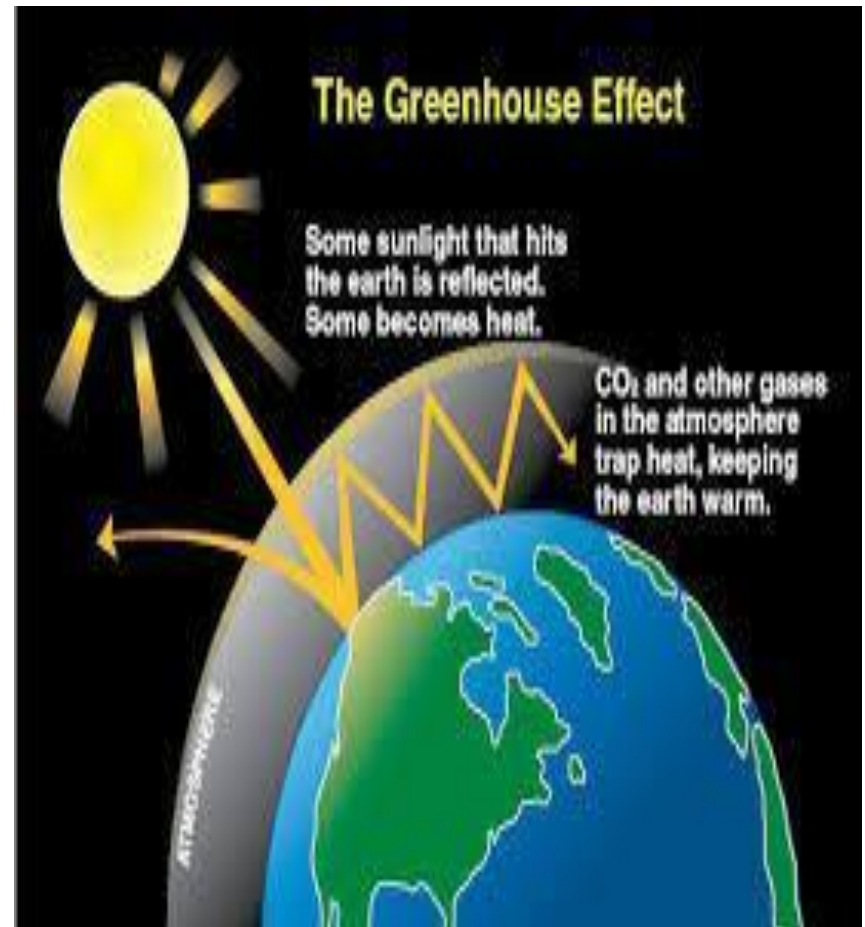
Assoc. Prof. Dr. Maizatun Mustafa

Ahmad Ibrahim Kulliyyah of Laws

IIUM

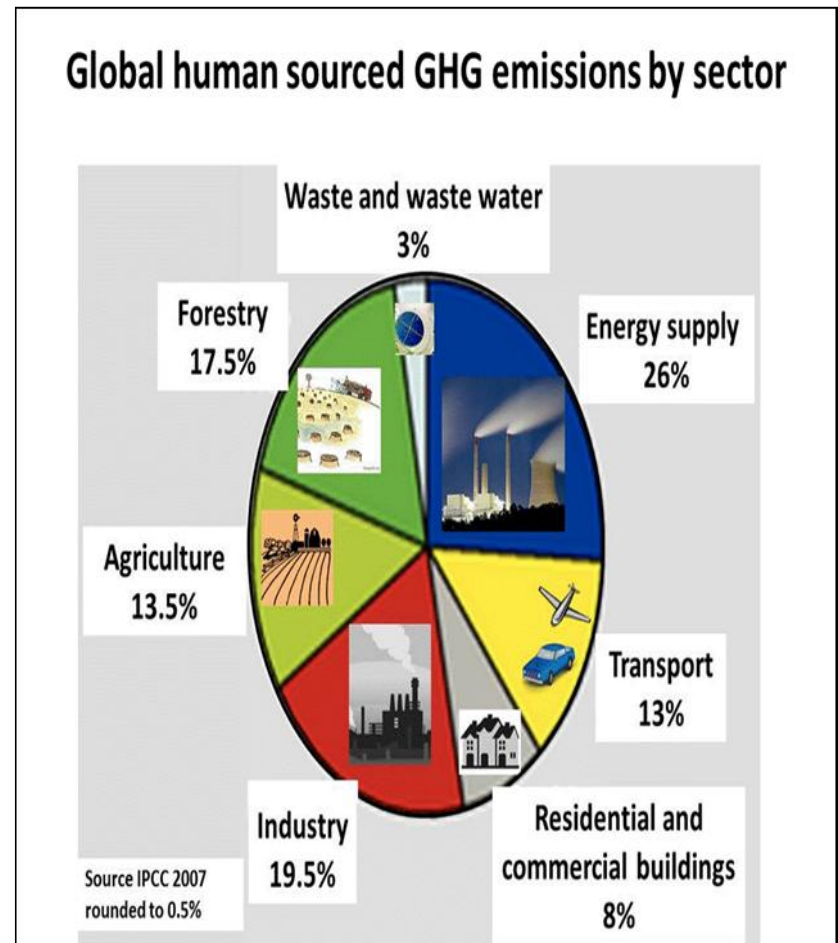
Global Warming due to Greenhouse Effect

- Greenhouse Effect as a natural phenomenon.
- Greenhouse gases (GHG) trap heat within the atmosphere.
- Greenhouse Effect keeps the earth warm enough to sustain life.



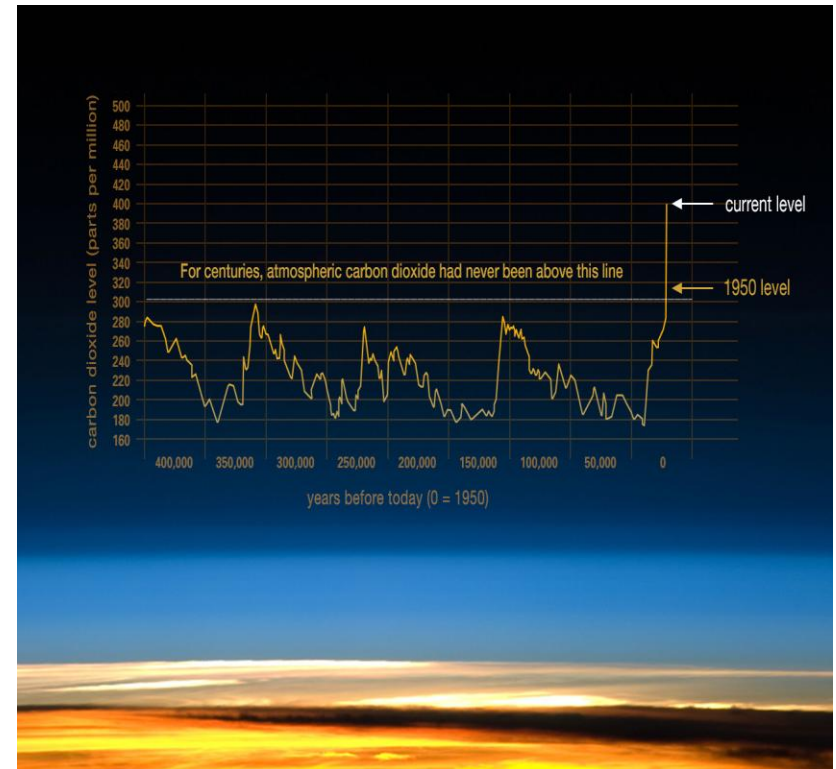
Global Warming due to Human Activities

- Over 250 years human use of fossil fuels which releases GHG causes global warming.
- Burning of carbon-containing fuels like coal and oil produces massive amounts of carbon dioxide.
- Since 150 years, human has released 270 billion tons of carbon into the air.



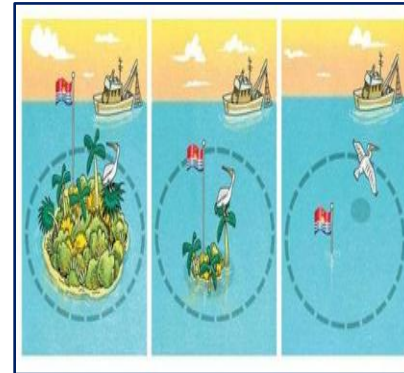
Climate Change & Global Warming

- Global warming refers only to the Earth's rising surface temperature.
- Climate change includes warming **and** the “side effects” of warming.



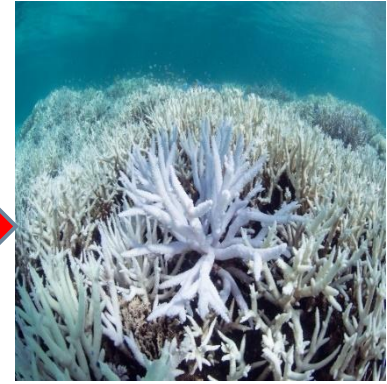
Scientists prefer the term climate change as it covers effects other than warming

- Sea level rise - increasing flooding risks to low lying communities.
- Melting of glaciers - impacting on freshwater ecosystems.
- Growing intensity of hurricanes.
- Dangerously hot weather – heat stroke.
- Disruption of food supply.
- Health implications.



Climate Change

- Climate Change are affecting Malaysia & Indonesia too!
- What should be do about it?
- International and regional cooperation to reduce green house emission.



Malaysia & Indonesia: National Circumstances



- Malaysia & Indonesia have an equatorial climate with temperature between 26C and 28C.
- Malaysia & Indonesia are two of 17 world's megadiverse countries.

Malaysia & Indonesia: National Circumstances

□ MALAYSIA

- Population: 30 million
- **GDP sectors:**
- agriculture: 8%
- industry: 37%
- services: 54%
- Global carbon contribution: 0.6%

□ INDONESIA

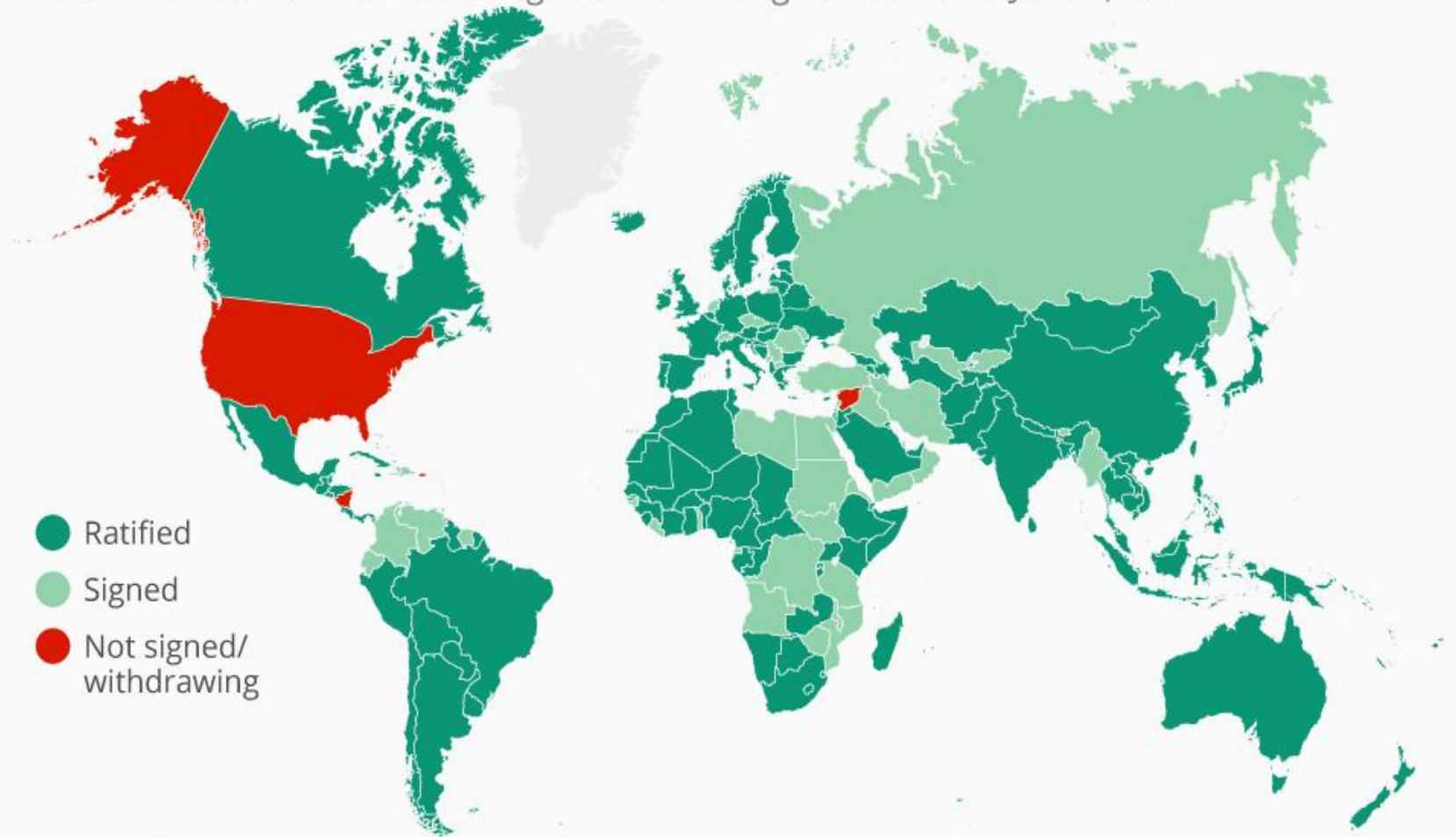
- Population 260 million
- **GDP sectors:**
- agriculture: 13.7%
- industry: 40.3%
- services: 46%
- Global carbon contribution: 1.4%

Malaysia & Indonesia International Commitments



The State of the Paris Agreement

Countries that have ratified or signed the Paris agreement as of June 1, 2017



-  Ratified
-  Signed
-  Not signed/
withdrawing



@StatistaCharts Sources: UNFCCC, Business Insider

Objectives of the Paris Agreement

- 195 countries including Indonesia & Malaysia adopted the Paris Agreement.
- Aims:
- Keep the global temperature rise **below 2 degrees Celsius**.
- Limit the temperature increase **to 1.5 degrees Celsius**.

□ WHY WE ARE CONCERNED?

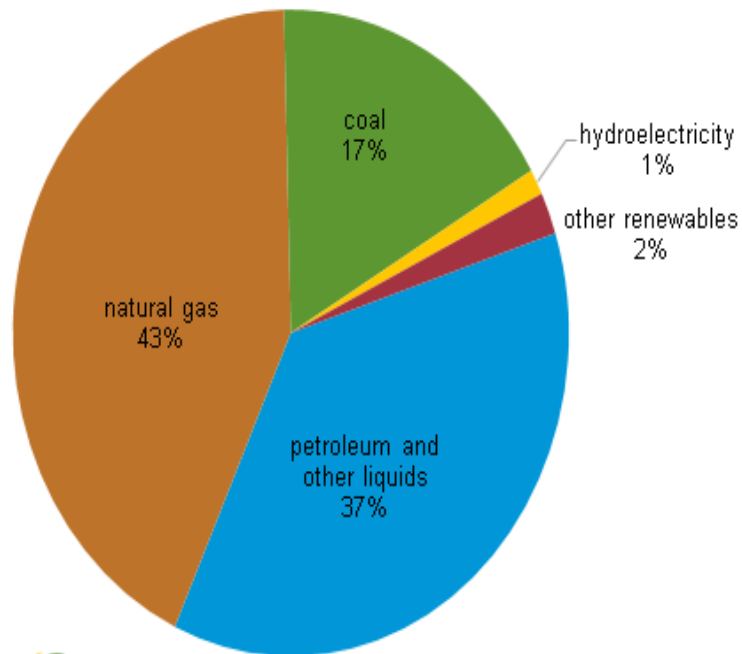
- Global temperature increase up to 2.5 degrees for every 1000 billion tonnes of carbon emitted.
- By 2100, the global average temperature would rise by 1.4 – 5.8 °C compared with that in 1990.
- If the temperature rose over 2 °C, it would result in quicker and more unpredictable climate response, with irreversible and disastrous consequences.

Climate change strategy: Mitigation & Adaptation

- **Mitigation** is any action taken to eliminate or reduce the long-term risk of climate change.
- **Mitigation** involves reductions in human emissions of greenhouse gases.
- **Adaptation** refers to the ability of a system to adjust to climate change to moderate potential damage, to take advantage of opportunities, or to cope with the consequences.

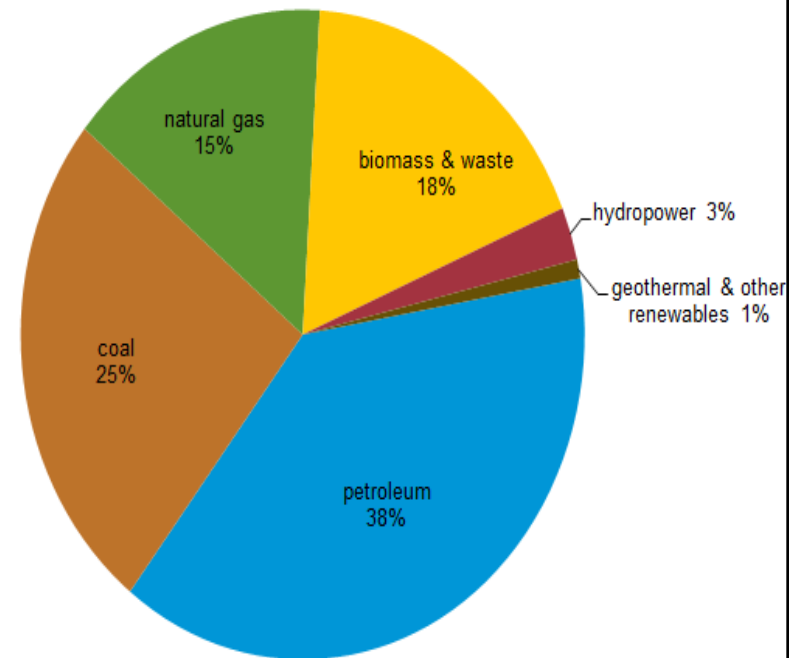
Energy consumption

Figure 2. Malaysia primary energy consumption, 2014



Source: International Energy Agency

Figure 1. Indonesia total primary energy consumption, 2013



Source: Indonesia's Ministry of Energy and Mineral Resources

Malaysia Mitigation & Adaptation policy

- **Mitigation strategy:**
- Projected outcomes from 11th Malaysian Development Plan .
- a. National Petroleum Policy (1975)
- b. National Energy Policy (1979)
- c. National Depletion Policy (1980)
- d. Four-Fuel Diversification Policy (1981)
- e. National Forestry Policy 1978
- f. National Policy on Biological Diversity (1998)
- g. Five-Fuel Policy (2001)
- h. National Policy on the Environment (2002)
- i. National Strategic Plan for Solid Waste Management (2005)
- j. National Biofuel Policy (2006)
- k. National Energy Policy (2008)
- l. National Green Technology Policy (2009)
- m. National Policy on Climate Change (2009)
- n. New Economic Model, Government Transformation Programme and Economic Transformation Programme (2010)
- o. Renewable Energy Policy and Action Plan (2010)
- p. Second National Physical Plan (2010)
- q. Low Carbon Cities Framework (2011)
- r. National Agro-food Policy (2011)
- s. National Water Resources Policy (2012)
- t. National Automotive Policy (2014)

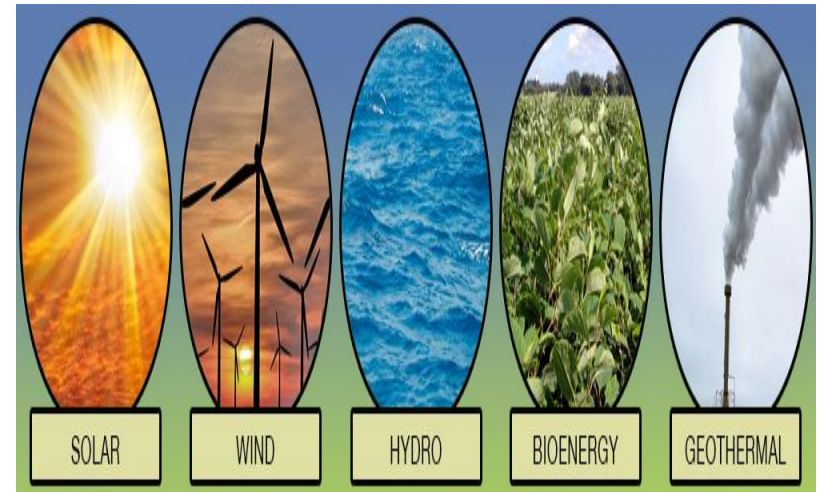
Examples of Mitigation Actions

□ Launching the Central Forest Spine and Heart of Borneo initiatives:

- to promote sustainable forest management.
- to conserve biodiversity and ecosystem services.



□ Introducing initiatives to increase use of non-fossil fuel energy & Emissions Intensity Reduction in Malaysia.



Energy consumption from Electricity

	Malaysia	Indonesia
Electricity production	139 billion kW	224.9 billion kW
Electricity consumption	131 billion kW	217.8 billion kW
Electricity from fossil fuel	87.6 %	83.2 %
Electricity from hydro electric plants	11.6 %	11%

Malaysia: National Circumstances

□ **Energy Sector**

- Main source of energy supply: oil & gas, crude oil and petroleum products.

- Main energy demand are:
 - transport sector,
 - industrial sector,
 - residential and commercial,
 - agriculture sector .

□ **Renewable Energy**

- The promotion of renewable energy (RE).

- Introducing initiatives to increase share of use of non-fossil fuel energy in Malaysia.

- The generation of electricity from renewable energy sources.

Thank you

