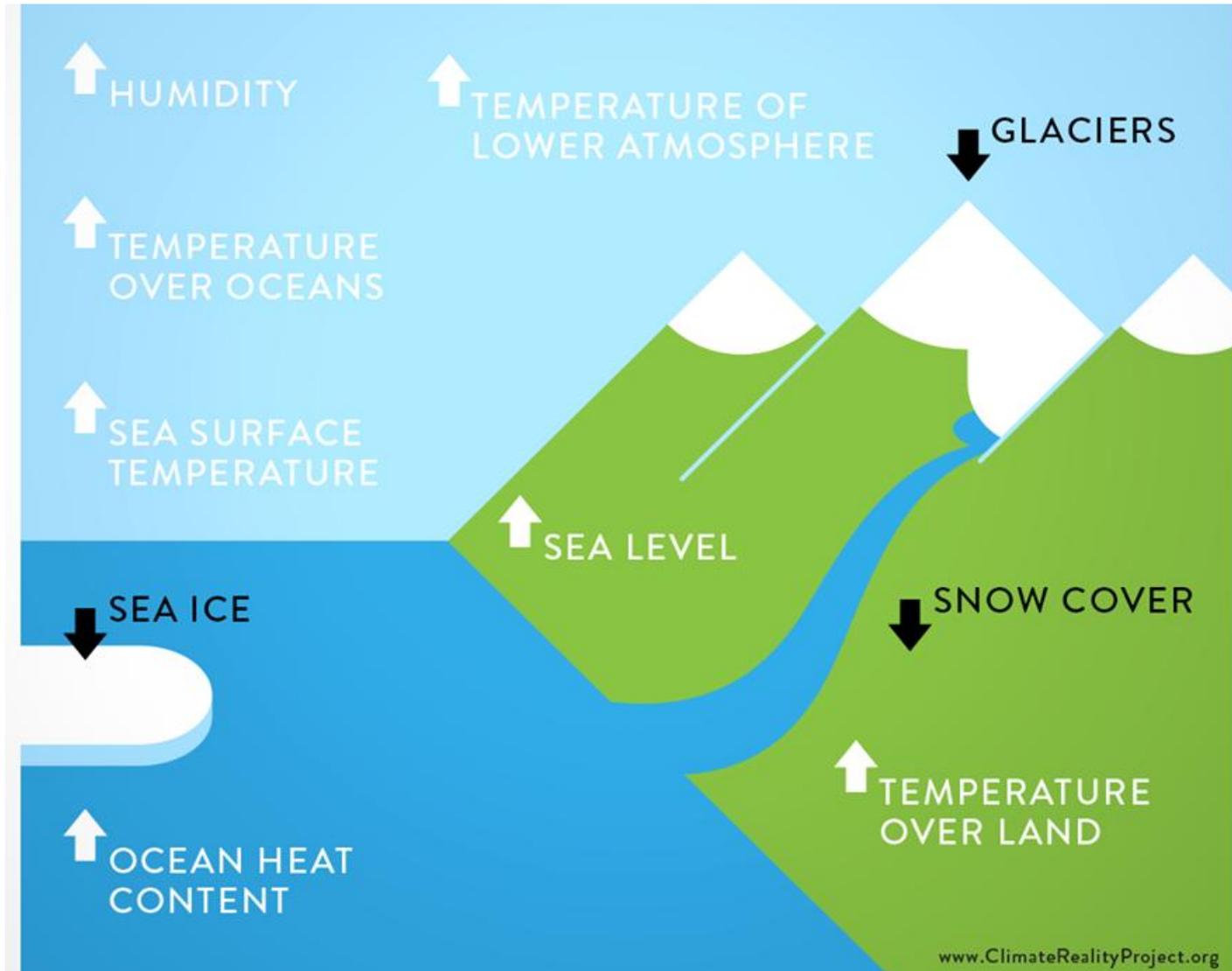




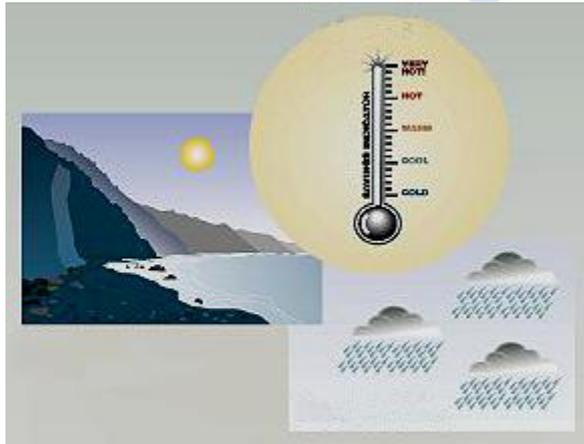
CLIMATE CHANGE AND CARBON EMISSIONS: MALAYSIA'S POLICY AND RESPONSE

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Ministry of Natural Resources and Environment
Malaysia

THE INDICATORS OF A WARMING WORLD



CONSEQUENCES OF CLIMATE CHANGE



- > Temperature increase
- > Sea level rise
- > More rain



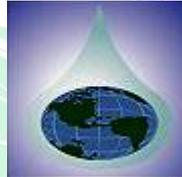
Agriculture and food security

Crop yields, irrigation demands...



Forest

Composition, health and productivity...



Water resources

Water supply, water quality...



Coastal areas

Erosion, inundation, cost of prevention...



Species and natural areas

Biodiversity, modification of ecosystems...



Human health

Infectious diseases, human settlements...

McCarty Glacier, Alaska

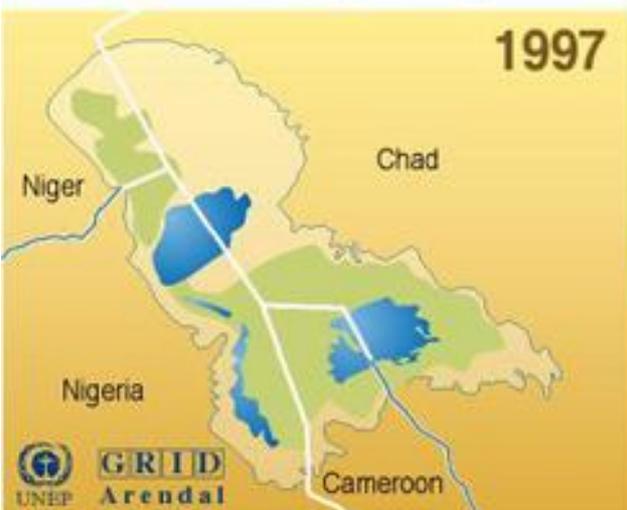
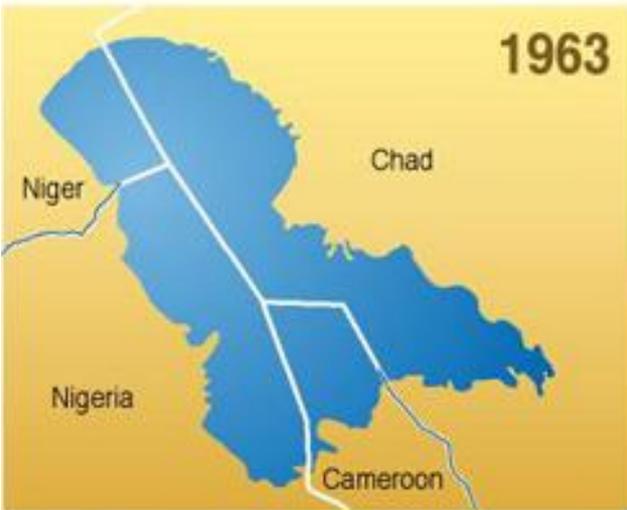


2004



1909

The Disappearance of Lake Chad



-  Water
-  Former outline of the lake
-  Vegetation

Source: This collection of maps has been drawn after a series of satellite images provided by NASA Goddard Space Flight Center, available at:

<http://www.gsfc.nasa.gov/gsfcearth/enviro/fakechad/chad.htm>

PHILIPPE REKACEWICZ
MAY 2002

OBSERVED AND PROJECTED CLIMATE CHANGE IN MALAYSIA

	Observed	Projected (by 2050)
Temperature	0.6-1.2C per 50 years (1969 – 2009)	<ul style="list-style-type: none"> • 1.5-2C Increase
Rainfall (amount)	no appreciable difference	<ul style="list-style-type: none"> • (-) 5% to (+) 9% change in regions within PM • (-) 6% to (+) 11% change in regions within Sabah and Sarawak
Rainfall Intensity	Increased by 17% for 1 hour duration (2000-2007 compared to 1971-1980)	<ul style="list-style-type: none"> • Increase in extremes within wet cycles • Increase in frequency of extreme weather
Sea Level Rise	1.3 mm/yr (1986-2006, Tanjung Piai, Johor)	<ul style="list-style-type: none"> • 0.5m rise (Global high worst case at 10mm/yr)

Estimated Annual Economic Loss: RM 1 billion

Source: 'National Register of River Basins (JPS, 2003)



ATMOSPHERIC CO₂ CONCENTRATION

Year 1750
280 ppm

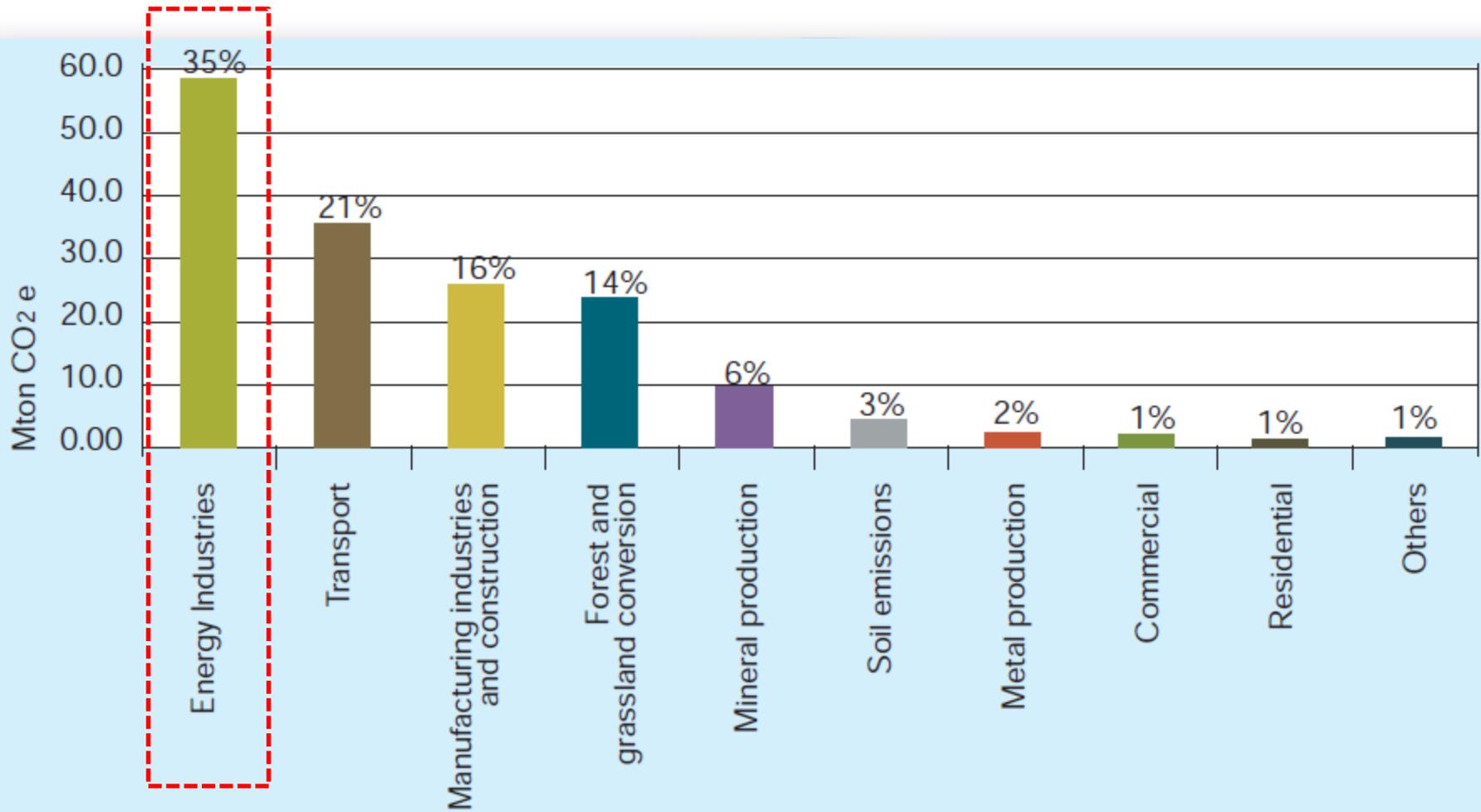
Year 2008
385 ppm
38% above pre-industrial

Year 2013
400 ppm
A First in Human History

WHERE: The IPCC reports..

- ..the effects of climate change are already occurring on **all continents** and **across the oceans**
- The striking feature of observed impacts (of climate change) is that they are occurring from the **tropics** to the **poles**, from **small islands** to **large continents**, and from the **wealthiest countries** to the **poorest**

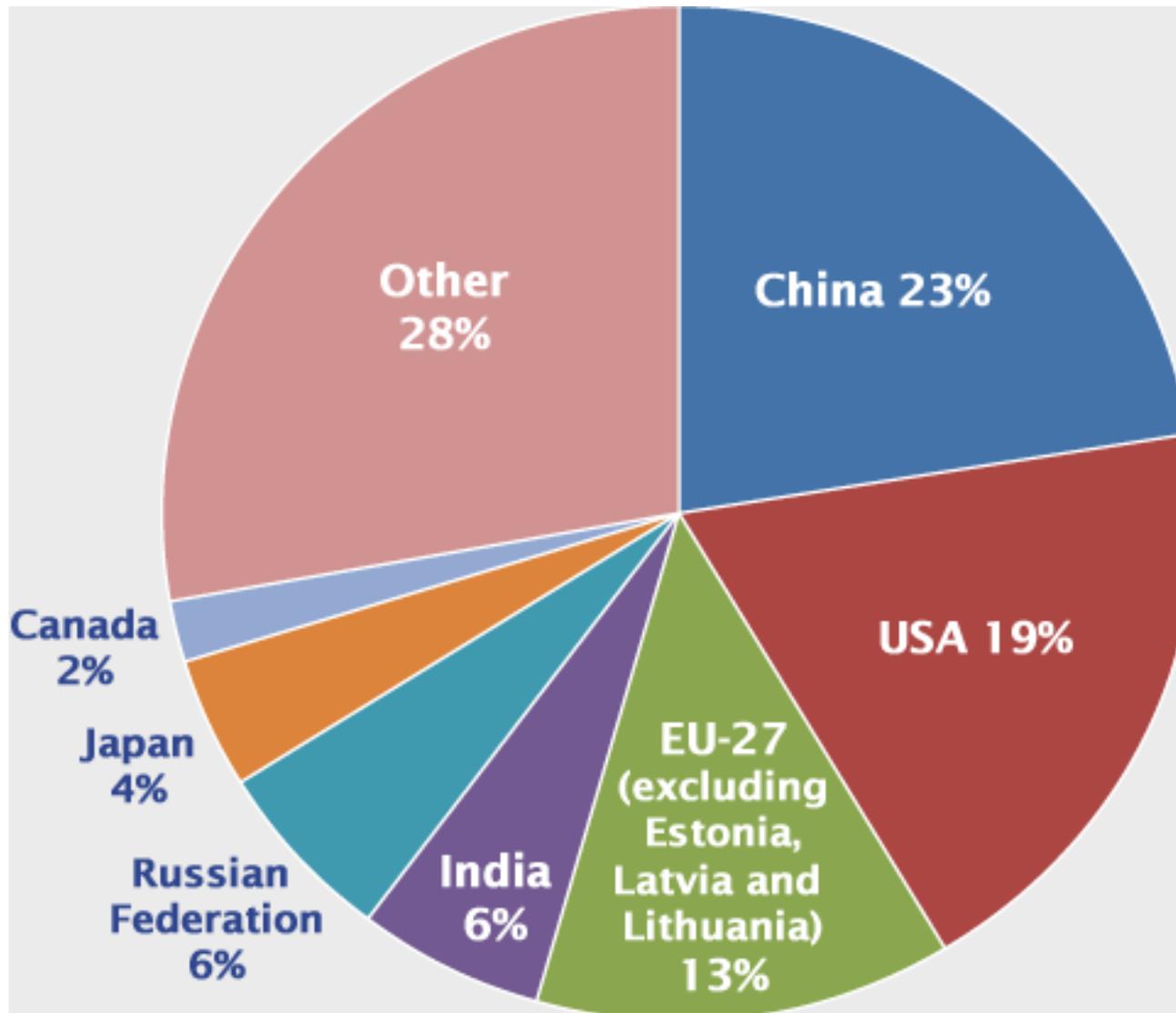
SOURCES OF CO₂ IN MALAYSIA



IPCC REPORTS

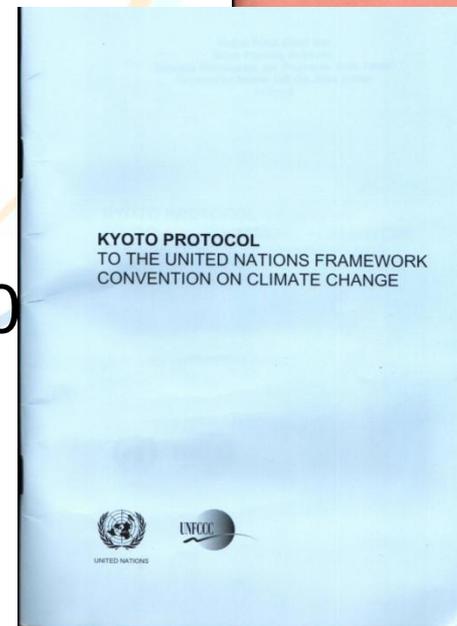
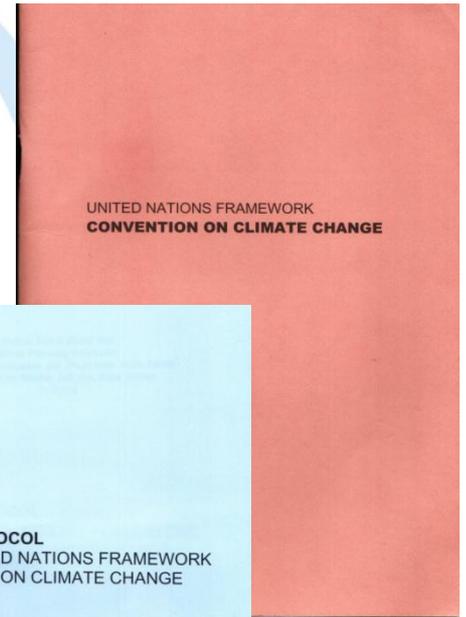
- "Most of the observed increase in global average temperatures since the mid-20th century is very likely **[90% confidence]** due to the observed increase in **anthropogenic** GHG concentrations" (**4th IPCC report 2007**)
- "It is extremely likely **[95 % confidence]** more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the **anthropogenic** increase in GHG concentrations and other anthropogenic forcings together" (**5th IPCC report 2014**)

GLOBAL GHG EMISSIONS



GLOBAL INITIATIVES

- United Nations Framework Convention on Climate Change (UNFCCC)
 - Signed on 9 June 1993
 - Ratified on 13 July 1994
- Kyoto Protocol
 - Signed on 12 March 1999
 - Ratified on 4 September 2000
 - Entered into force on
 - 16 February 2005



UNFCCC

- To stabilize GHG concentrations in the atmosphere at a level that would prevent anthropogenic interference with the climate system
- Report to the UNFCCC on inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases
- Formulate, implement, publish and regularly update national programmes containing measures to mitigate climate change

KYOTO PROTOCOL

- In 1997, the Kyoto Protocol was adopted
 - Calls for **action to reduce GHG** emission
 - Developed countries have a **legally binding commitment** to reduce their collective emissions of 6 GHG by at least 5% compared to 1990 levels by the period 2008-2012.
 - **Establishes an emission trading regime** including CDM to facilitate countries to fulfill their commitments.
- Developed countries can choose to reduce GHG
 - 'At home' in their own country, or
 - In other countries

CDM IN MALAYSIA

Registered Projects

143

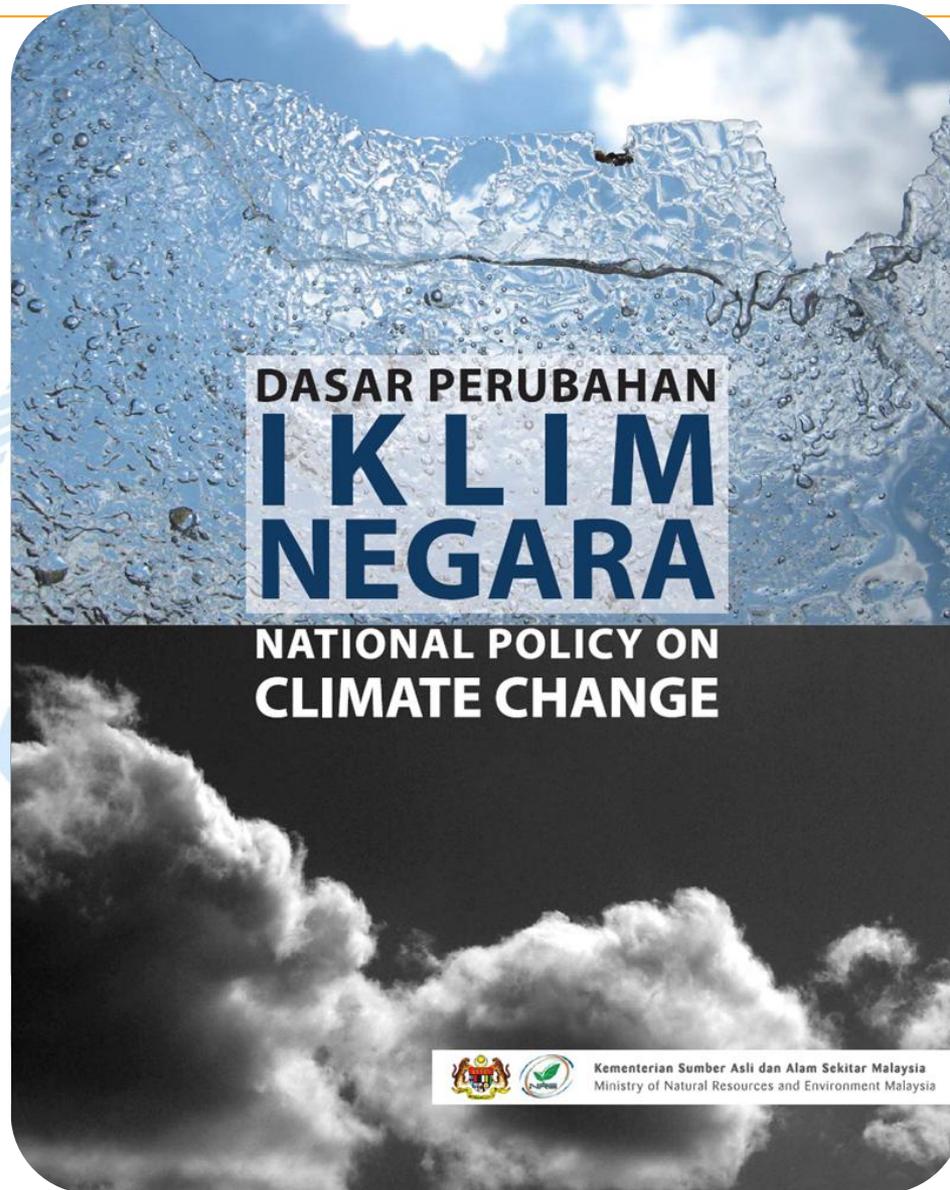
Total CERs issued

8,462,313

NATIONAL INITIATIVES

- National Steering Committee on Climate Change established in 1994
- National Committee on CDM (NCCDM) established on 31 May 2002
- Green Technology & Climate Change Council (MTHPI) established on 26 January 2010

NATIONAL CLIMATE CHANGE POLICY



DASAR PERUBAHAN
**IKLIM
NEGARA**

NATIONAL POLICY ON
CLIMATE CHANGE



Kementerian Sumber Asli dan Alam Sekitar Malaysia
Ministry of Natural Resources and Environment Malaysia

THE IMPORTANCE OF THE CC POLICY

- Climate change is **cross-sectoral** in nature, involves more than environmental issues, also affects economic growth and human well-being
- Climate change is **transcends** all government levels, sectors, stakeholders and major groups
- Climate change measures need to be **mainstreamed** into development plans

OUR PLEDGE TO REDUCE GHG EMISSIONS



“ ...Malaysia is adopting an indicator of a voluntary reduction of up to 40% in terms of emissions intensity of GDP by the year 2020 compared to 2005 level...” “This indicator is conditional on receiving the transfer of technology and finance and effective levels from our Annex 1...”

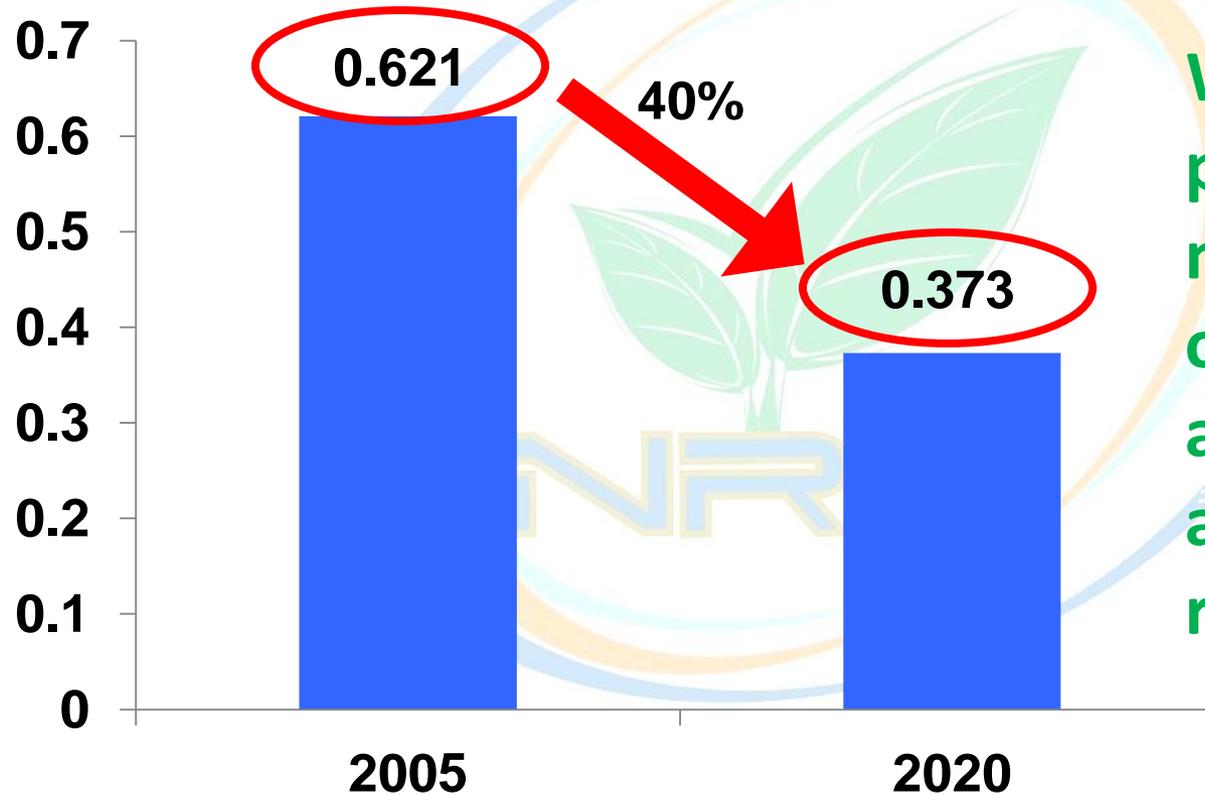
***YAB PM,
Copenhagen, 2009***

TARGET REDUCTION OF CARBON EMISSION INTENSITY

CO₂ Emission Intensity at 2005 Level
(tonnes CO₂ eq/ RM thousand)

The question is...

What are the potential mitigation options that are available to achieve the 40% reduction?



MYCarbon – BACKGROUND & OBJECTIVES

A 5 months study (Jun-Oct 2012) conducted by the Ministry of Natural Resources and Environment in cooperation with the United Nations Development Programme (UNDP) Malaysia



MYCarbon PROGRESS



As of May 2014, 24 organisations have agreed to participate in pilot MYCarbon programme

