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Why climate change matters for Malaysia?

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GHG Data for SE Asia



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Country	Total GHG Emissions (MtCO ₂ e) as of 2012 ^{*(1)}	Total GHG Emissions (MtCO ₂ e) as of 1990 ^{*(1)}	% of GHG emissions growth 1990–2012 ^{*(2)}	% of Total Global GHG Emissions (MtCO ₂ e) as of 2012 ^{*(2)}	Global Ranking of GHG Emissions (MtCO ₂ e) as of 2012 ^{*(2)}	GHG Emissions Per Capita* (tCO ₂ e) as of 2010 ⁽³⁾	GHG Emissions Per Capita* (tCO ₂ e) World ranking (out of 186) as of 2010 ⁽³⁾
Brunei	22.07	14.76	33%	0.05%	119	57.44	1
Burma	184.71	171.48	7%	0.40%	43	3.39	130
Cambodia	49.12	42.48	14%	0.11%	85	4.58	106
Indonesia	1981.00	1025.74	48%	4.30%	5	8.45	66
Laos	36.28	30.23	17%	0.08%	95	7.07	79
Malaysia	433.33	-139.27	132%	0.94%	18	15.17	26
Philippines	157.59	103.30	34%	0.34%	47	1.56	164
Singapore	56.13	32.28	42%	0.12%	82	13.80	31
Thailand	375.71	171.41	54%	0.82%	24	5.19	99
Vietnam	251.18	93.10	63%	0.55%	32	2.88	139
UK (Comparison)	550.66	745.99	-35%	1.20%	14	9.23	58
SE Asia	3547.12	1545.50	45% (average)	7.70%	~	11.95 (average)	~

Data from World Resources Institute: <http://cait.wri.org/>

Current situation



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- Malaysia is a high middle income size, export driven emerging economy - 3rd largest economy in Southeast Asia.
- Oil and gas, agriculture (palm oil, rubber and timber) and the manufacturing sectors are the largest contributors to its GDP.
- Economy stood at \$376 billion in 2014 and ranks 28th globally.
- Per capita income of \$12,127 with a population of 30 million.
- Considered to be the most competitive emerging Asian country and aims to reach developed economy status by the year 2020.
- The UK is Malaysia's second largest market in Europe, whilst Malaysia is the UK's third largest market for goods in South-East Asia.
- Malaysia already accounts for almost 1% of global greenhouse gas (GHG) emissions
- Almost 80% of its emissions is from its energy related sectors – power generation; transport; industrial; residential and commercial .
- Malaysia is ASEAN's fastest GHG growth country between 1990 and 2012.
- Its energy demand is set to grow by more than 6% (in correlation with its GDP growth) annually between 2015 and 2020.
- Malaysia currently has an energy policy that would enable significant increases on coal burning for power generation, and
- Domestic oil demand is set to soar.

continue....

Energy

- Individual energy consumption is relatively high in Malaysia at 2.63 toe per capita.
- 2nd highest energy demand per capita in Southeast Asia.



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Government commitment

- The government has committed to voluntarily reduce its emissions intensity of GDP by up to 40% based on 2005 levels by 2020.
- Up to 2013, Malaysia have achieved 33% reduction.



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However, improvements in emission Intensity have thus far been outstripped by rapid economic growth, meaning that the absolute level of emissions produced in Malaysia is rising rapidly.

Cities and Urbanisation



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- This broader context on energy has substantial implications for urban areas. 73% (21.1 million) of the 29.2 million people of Malaysia live in cities.
- And over 90% of national economic activity is conducted in cities. Energy consumption and greenhouse gas emissions are therefore likely to be concentrated in cities for the foreseeable future.
- Although Kuala Lumpur dominates the Malaysian economic landscape – the wider Klang Valley that includes Kuala Lumpur is home to 7.2 million people and produces 38% of national GDP.
- 48% of the Malaysian population live in other urban regions, which generate 52% of national GDP.

Potential mitigation options in key sectors identified

Sector

Sector Potential Mitigation Options

Energy

Implementation of RE for power generation
Implementation of EE in the industrial, commercial and residential sector
Implementation of RE in industrial, commercial and residential sector
Transportation – Hybrid & electric vehicles, integrated transportation system, bio fuels, low carbon petrol & diesel

Waste

Encourage methane capture facilities at new sanitary landfills
Encourage palm oil millers to capture biogas for power generation
Encourage composting of organic waste, especially food waste and 3R (Reduce, Reuse and Recycle)

Agriculture


Rice Management with water saving production: Intermittent flooding Aerobic rice
Livestock waste management through Aerobic manure composting
Biogas capture
Partial replacement of synthetic Nitrogenous Fertilizer

Industrial Processes

Employ new processes and materials to reduce clinker use in cement production



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A nighttime photograph of a city skyline. A tall, dark skyscraper with a pointed top is the central focus, illuminated from within. The background shows other buildings and city lights, creating a bokeh effect. The sky is dark with some light clouds.

However, there are two ongoing obstacles to effectively exploiting these opportunities:

Firstly, the multi-level governance arrangements are currently fragmented and centralised. This hinders effective action on climate change at a local scale.

- Analysis suggests a need to improve the coordination among different levels and sectors of government, so that cities can undertake sustainability experiments such as municipal green building standards or congestion pricing. These can build capabilities and public support, and can be replicated elsewhere in Malaysia if successful.

Efforts are being made to address this at the local level in Putrajaya/ Cyberjaya, Melaka city, Iskandar Regional Development Centre in Johor Bahru (in collaboration with Uni of Leeds) and PJ City Council (with the help of UK Carbon Trust)

A nighttime photograph of a city skyline. A tall, dark skyscraper with many lit windows is the central focus on the left. The rest of the city is visible in the background with various lights and smaller buildings.

Secondly, low carbon measures often entail higher upfront costs and can sometimes have longer payback periods than higher carbon alternatives.

- Households, firms and local governments will often require enabling policy frameworks and innovative financing mechanisms to act – such as revolving funds or congestion pricing.

- In the absence of ambitious national climate commitments, local governments need to be empowered with the resources and capacities to pilot these kinds of initiatives.

If necessary, international actors can provide crucial technical assistance and catalytic funding or if the local investment policies are right, foreign investments in these sectors can be attractive.



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Thank you

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