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LOW CARBON CITIES



There is no universally applicable definition of a low-carbon city.

Cities and towns
that pursue a
SYSTEMATIC
PROCESS to
achieve ambitious
GHG emission
reductions

- NLCCM (draft) MFSTFCC 2019 a community
"that PURSUES
A SYSTEMATIC
PROCESS to
achieve GHG
emission
reductions".
- Word Wildlife
Fund

LOW-EMISSION
DEVELOPMENT
STRATEGIES (LEDS) are
generally used to
describe forwardlooking national
economic development
plans or strategies that
encompass lowemission.

NORLD BANK, 2014 It pursues a step- bystep approach towards
carbon neutrality,
urban resilience and
energy security,
supporting an active
green economy and
stable green
infrastructure.

- ICLEI and C40 Cities A city's ability to take effective action on MITIGATING CLIMATE CHANGE, AND MONITOR PROGRESS, depends on having access to GOOD QUALITY DATA

- ICLEI and C40 Cities

on GHG emissions.

a city that comprises
of SOCIETIES THAT
CONSUME
SUSTAINABLE GREEN
TECHNOLOGY, GREEN
PRACTICES AND EMIT
RELATIVELY LOW
CARBON or GHG as
compared with present
day.

- PLANMalaysia, 2010

WHY LOW CARBON CITY PLANNING



CITIES CONSUME 75% OF THE WORLD NATURAL RESOURCES and account for 80% OF GLOBAL GREENHOUSE GAS EMISSIONS
-UNITED NATION-

THE MAIN SOURCES OF THE EMISSIONS



Energy (Electricity Consumption),



Mobility (Vehicles)



Waste (Municipal Solid Waste That Ends Up In Landfills)

Source: BP Statistical Review of World Energy 2019

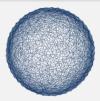
MALAYSIA COMMITMENT EMISSION OF INTENSITY CARBON











COP 15, Copenhagen mengurangkan 40% pembebasan karbon dalam KDNK pada 2020 berasaskan nilai pembebasan karbon dalam KDNK pada 2005.

CITIES

KERANGKA BANDAR RENDAH KARBON (LCCF) DI LANCARKAN

2009



COP 21, Paris – Pengurangan karbon 45% menjelang 2030















MALAYSIA umum pengurangan 33% pembebasan karbon, **United Nation Climate** Summit, NEW YORK 2014

2015













2016





Senarai Semak LCCF DI Perkenalkan

2017

2011

CLIMATE SUMMIT 2014 CATALYZING ACTION

2014



COP23|FIJI **UN CLIMATE CHANGE CONFERENCE**

BONN 2017-18

GTALCC - GREEN **TECHNOLOGY** APPLICATION FOR **LOW CARBON CITIES**

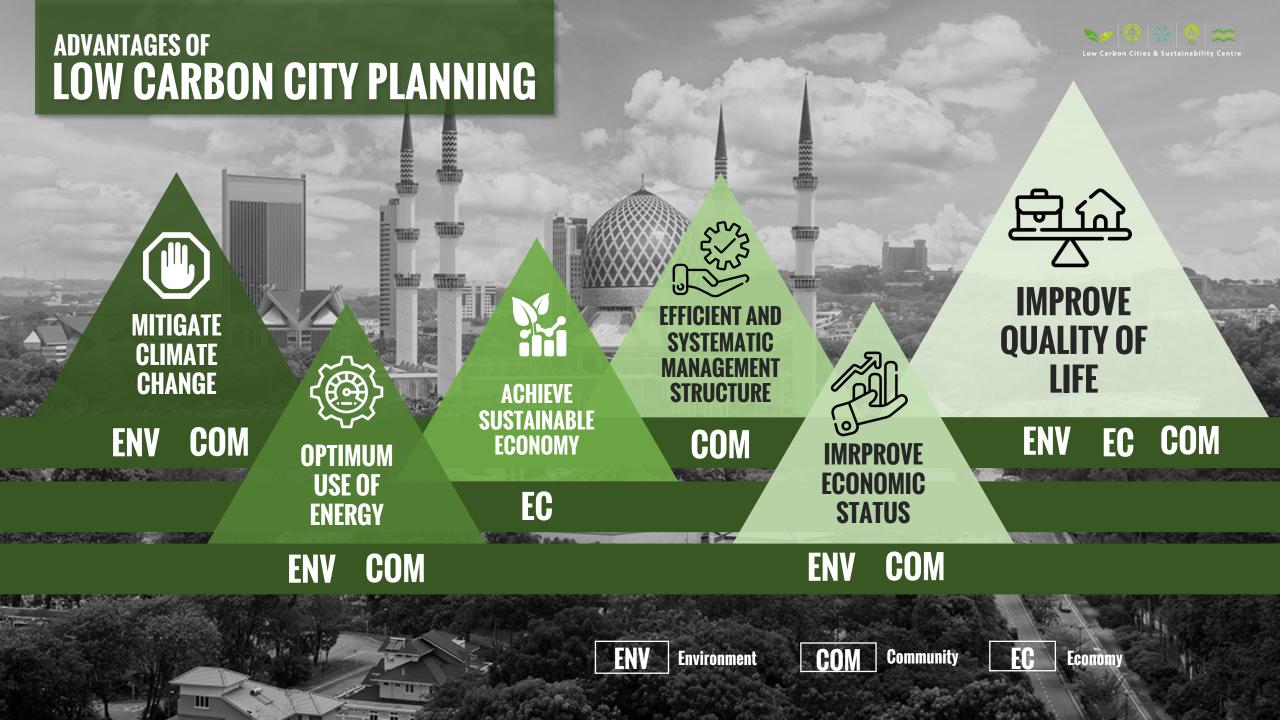








COP 23, BONN Malaysia lapor komitmen masih "on track" untuk mencapai komitmen COP21



EMISSION LEVEL



Malaysia



8.13 mt/capita (2014)
Ranked 33rd emitter in the world rank (2016)

Singapore



10.31 mt/capita (2014)

Ranked 20th contributor in the world rank (2016)

Indonesia



1.82 mt/capita (2014)

Ranked 113th emitter in the world rank (2016)

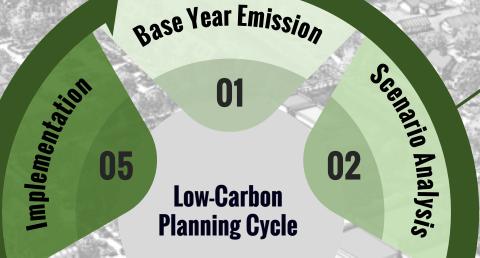
Source: Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, United States.

WHY CALCULATE CARBON





To track progress and benchmarking



To Identify emission sources and reduction opportunities

To develop action plans

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To set target

CARBON EMISSION











ABSOLUTE BASED CALCULATION

Refer to the total quantity of greenhouse gas emissions being emitted. Calculation based on scale and sector.



Gombak

50,901.32 tonne CO₂



INTENSITY BASED CALCULATION

Refer to the volume of emissions per unit of GDP (economic output).



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21. CMP11

Reduction of carbon emission intensity to 45% per GDP by 2030, as compared to 2005 levels.

VARIOUS TYPES OF CARBON ASSESSMENT TOOLS

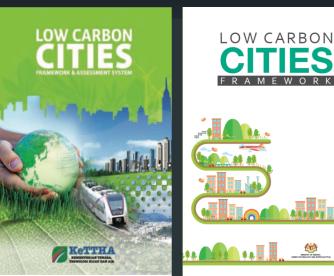
	LCCFTrack	LCCF Checklist	GBI	GreenRE	MyCrest	Green PASS	PH JKR	SUSDEX	MY GHI	Melaka Green Seal	CASBEE Iskandar
Date of Establishment	2011	2014	2009	2013	2016	2012	2012	2010	2014	2014	2016
Developed by	MESTECC	MESTECC	PAM and ACEM	REHDA	CIDB	CIDB	JKR	Sime Darby Property	UTM LLM	Melaka Green Development Organization (MGDO)	Iskandar Malaysia (IRDA)
Certification Process	Voluntary	Voluntary	Voluntary	Voluntary	Mandatory for JKR new projects worth 50 million and above	Voluntary	Voluntary	Mandatory for all Sime Darby development project	Voluntary	Voluntary	For urban development, City and Building
Nature of Assessment	Performance Based	Design Based	Design Based	Design based	Design and Performance Based	Performance Based	Design Based	Design Based	Design Based	Design Based	Performance Based
Assessment Design & Construction	Design Construction, Operation and Maintenance	Design Construction, Operation and Maintenance	Design & construction	Construction & Operation	Refurbishment and Demolition	Construction and Operation	Design & Construction	Design and Construction	Design and Construction	Design & Construction	Design & Construction
Mode of Assessment	Calculation of CO ₂	Criteria Checklist	Criteria Checklist	Criteria Checklist	Criteria Checklist Calculation of CO ₂	Calculation of CO ₂	Criteria Checklist	Criteria Checklist	Criteria Checklist	Criteria Checklist	Scoring System Criteria Checklist
Building Type © TPr Noraid	Township	Township	Building	Building Chalid	Building	Building	Building	Township	Highway	Building	Building and Township



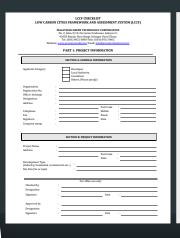
Serves as a guide to uses on pertinent areas (elements) that contributes to the reduction of GHG emission. It comprises 4 key elements, 15 criteria and 41 subcriteria. This information would help the user identify areas in which they could target an overall carbon reduction.

FRAMEWORK

PART 01









PART 02

ASSESSMENT SYSTEM

An in built carbon calculator will help a user determine their current baseline. The user will then apply the various strategies recommended in the framework to achieve a reduction level



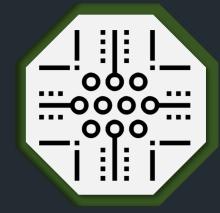
Elements

Performance Criteria

Sub Criteria

ELEMENTS







UE Urban Infrastructure UT Urban Transportation



SDG GOALS





LCCF DELIVERING TEN (10) SDG GOALS



COVID-19 CURENT SITUATION

Low Carbon







1.6 billion people working in the informal sector are estimated to be at risk of losing their livelihoods.

Millions (estimates range from around 35 to 60 million) could be pushed into extreme poverty.

(United Nations, 2020; World Bank)

Inability to access the internet for remote learning, this could result in out- of-school rates in primary education

(UNDP, 2020)

School closures have affected over 90 per cent of the world's student population—1.6 billion children and youth

(UNESCO, 2020)

10 million of the world's children could face acute malnutrition

(WFP, 2020a)

the number of people facing acute food insecurity could almost double relative to 2019, rising to 265 million

(WFP, 2020b)

Air quality has improved across the world, and daily global CO₂ emissions fell an estimated 17% in early April, relative to mean levels of 2019

(Le Quéré, et al., 2020).

However, these improvements may turn out to be only transitory with no real impact on climate change unless the recovery from the pandemic also leads to a rapid transition to a low-carbon way of life.

COVID-19 **IMPACT ON SDG PROGRESS**

Source: United Nations Department of Economic and Social Affairs, 2020

1 in 4 health care facilities lack basic water services; 3 billion people lack soap & water at home

Lack of health care workers: insufficient

health facilities & medical supplies; high

mortality rates from NCDs & air pollution



Some 46% of people are without Internet access needed for remote education & health services.

increase risk



More than 1 billion people live in slums with crowded housing & no running water; overcrowded public transport



Over 1/5 of the Earth's land is degraded; the number of species at risk of extinction continues to increase; wildlife trafficking has puts lives at risk through exposure to zoonotic diseases



IMPACT CHANNELS



Virus

(e.g.exposure, infection rates, fatalities



Control Measures

(e.g. travel restrictions, social distancing





(e.g. economic recession, falling revenues, emission drop

2030



35–60 million people could be pushed back into extreme poverty—the first increase in global poverty in more than 20 years



Economic slowdowns and supply chain disruptions are exacerbating hunger & food insecurity



School closures have affected 90% of the world's student population—1.6 billion children and youth



Women make up 70% of health care workers, do the bulk of unpaid care work, are at risk of domestic violence & depend on informal work



Disruption of the global economy has left 1.6 billion people working in the informal sector at risk of losing livelihoods



GHG emissions are projected to drop 4–7% in 2020 & air quality has improved, but this is temporary without systemic shifts

MITIGATING THE IMPACTS and BUILDING BACK BETTER





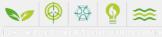
1. Maintain past progress made towards eradicating basic deprivations.

3. Reverse course on the degradation of nature.

> Reverse Environmental Degradation Provide Universal Quality **Essential Services**

2. Accelerate the universal provision of quality essential services

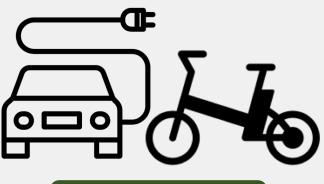
COVID-19 WHAT CAN WE DO?







SAPARATE WASTE AT SOURCE

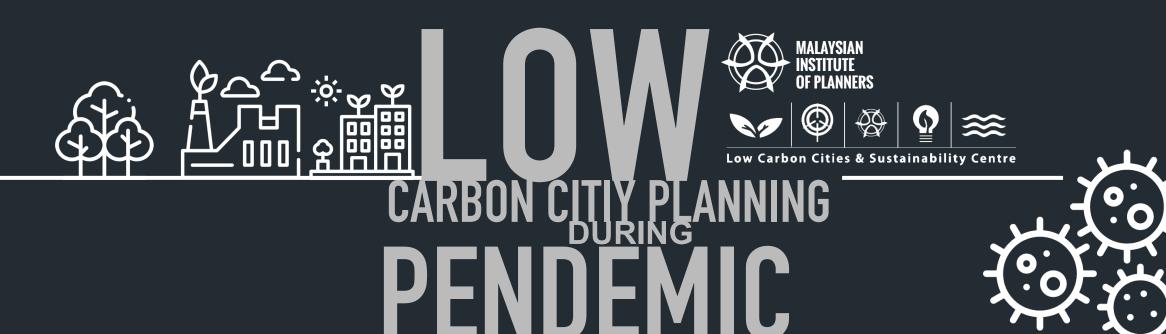


SUPPORT E-MOBILITY









THANK YOU...