



# PNNL-UTM June 2022

June 22/23, 2022

**SE Asia Digitalization Project**



PNNL is operated by Battelle for the U.S. Department of Energy



# Agenda



- Upcoming Deliverables
- Scenario Discussion
- Review Socioeconomic Assumptions
- Data Requests
- Next Steps

# Upcoming Deliverables

**Project Time Period:** 15 June 2022 to 30 June 2023

**Objective:** Explore policy and technology pathways to carbon neutrality by 2050 in Kuala Lumpur through technical analysis and engagement with local stakeholders and experts.

GCAM Training Session	Timeline
GCAM training 1	Aug 2022
GCAM training 2	Nov 2022
GCAM training 3	Feb 2023

Workshops	Timeline
Workshop 1 with local institutions	Dec 2022
Workshop 2 with local institutions	Mar 2023
Workshop 3: ASEAN Best Practices workshop	Jun 2023

Deliverables	Timeline	Milestones
<b>Memo 1:</b> 1 Page memo with list of official UTM team members and roles	Jul 2022	Milestone 1
<b>Workshop Plan 1:</b> 1 Page Agenda and Participant list for Workshop 1	Oct 2022	Milestone 2
<b>Memo 2:</b> 1-2 Page Memo with Feedback on Input Data	Nov 2022	
<b>Workshop Plan 2:</b> 1 Page Agenda and Participant list for Workshop 2	Jan 2023	Milestone 3
<b>Memo 3:</b> 2-3 Page Memo with Feedback on Scenario 1 and Scenario 2	Mar 2023	
<b>Workshop Plan 3:</b> 1 Page Agenda and Participant list for Workshop 3	Apr 2023	Milestone 4
<b>Memo 4:</b> 2-3 Page Memo with Feedback on Scenario 3	Jun 2023	



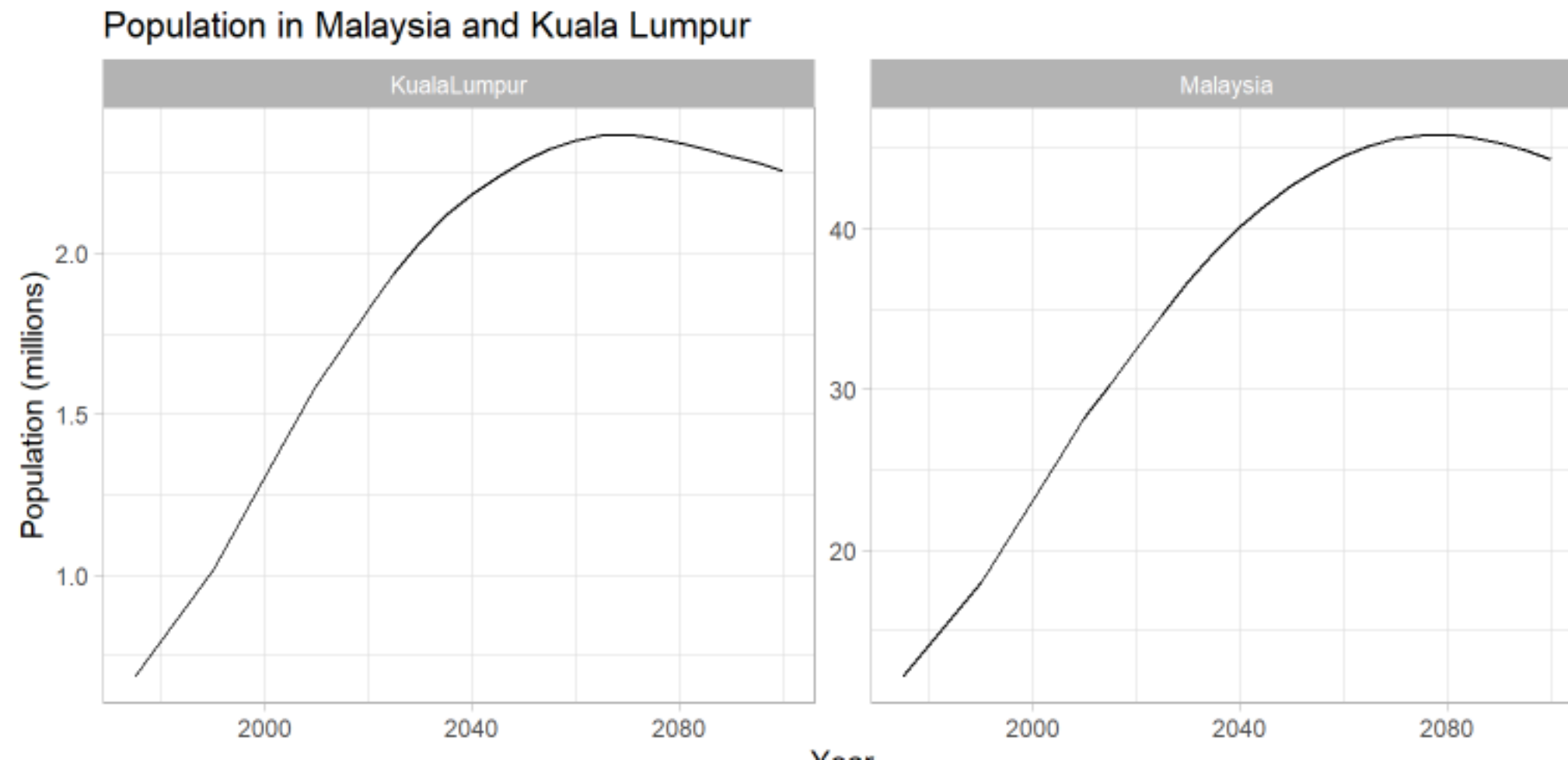
# Scenario Discussion

Current scenarios taken from KL Climate Action Plan 2050

Name	Components
Business As Usual (BAU)	Baseline scenario based on existing policies only, with no additional actions. This will serve as a comparison for the remaining scenarios to assess the magnitude of outcomes. This is the baseline we want GCAM to reflect initially, with values from the 2050 CAP (page 35)
Council-Led (City-Level/Local)	Scenario driven by strategies and actions that are within the authority of KLCH, as reflected in the KLLCSBP 2030 .
Integrated Approach (City-Level/Local + Central Gov)	Scenario relying on cooperation between KLCH, the Malaysian federal government, and other agencies, highlighting the potential emissions reductions that could occur should all parties align.
Carbon Neutral	Scenario using the most efficient pathway to net zero CO <sub>2</sub> emissions by 2050 at the national and city levels. This pathway will be found using GCAM's solving capabilities, and is not outlines in the KLCAP2050.

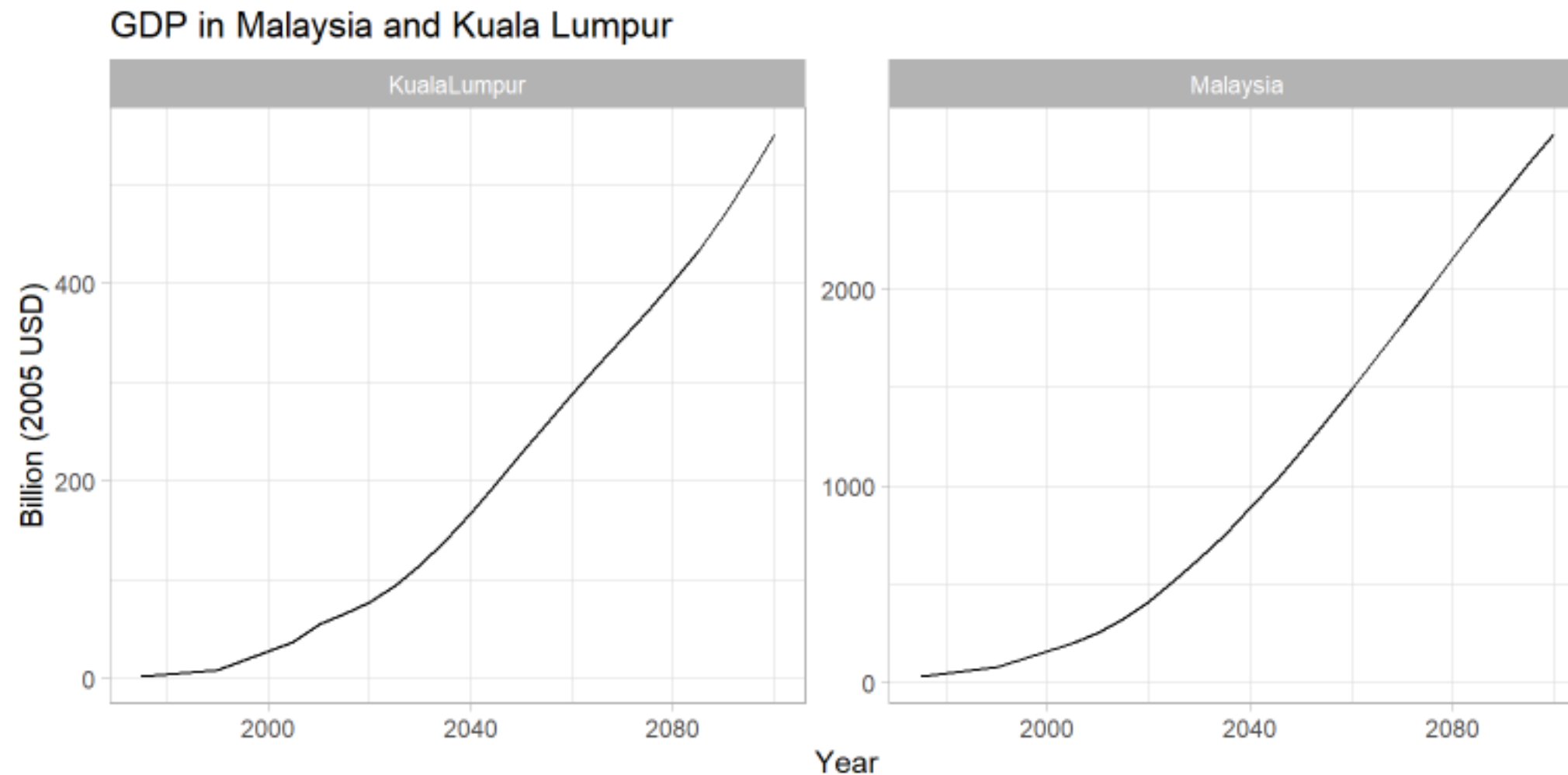
# Review Socioeconomic Assumptions

- Population ([https://github.com/JGCRI/seasia/tree/main/data/Malaysia/socioeconomic\\_inputs](https://github.com/JGCRI/seasia/tree/main/data/Malaysia/socioeconomic_inputs))



# Review Socioeconomic Assumptions

- GDP ([https://github.com/JGCRI/seasia/tree/main/data/Malaysia/socioeconomic\\_inputs](https://github.com/JGCRI/seasia/tree/main/data/Malaysia/socioeconomic_inputs))



# Data Requests



	A	B	C	D	E	F
1	year	class	units	region	value	scenario
2	2017	total emissions	tonnes CO2e	KualaLumpu	25,094,052	BAU
3	2017	composting	tonnes CO2e	KualaLumpu	1,355	BAU
4	2017	landfill	tonnes CO2e	KualaLumpu	572,481	BAU
5	2017	incineration	tonnes CO2e	KualaLumpu	2,269	BAU
6	2017	wastewater	tonnes CO2e	KualaLumpu	201,104	BAU
7	2017	residential	tonnes CO2e	KualaLumpu	2,548,414	BAU
8	2017	commerical	tonnes CO2e	KualaLumpu	6,032,192	BAU
9	2017	industrial	tonnes CO2e	KualaLumpu	1,691,311	BAU
10	2017	fugitive gas	tonnes CO2e	KualaLumpu	82,772	BAU
11	2017	onroad transportation	tonnes CO2e	KualaLumpu	13,875,481	BAU
12	2017	rail	tonnes CO2e	KualaLumpu	86,673	BAU
13	2030	total emissions	tonnes CO2e	KualaLumpu	36,241,841	BAU
14	2030	composting	tonnes CO2e	KualaLumpur		BAU
15	2030	landfill	tonnes CO2e	KualaLumpur		BAU
16	2030	incineration	tonnes CO2e	KualaLumpur		BAU
17	2030	wastewater	tonnes CO2e	KualaLumpur		BAU
18	2030	residential	tonnes CO2e	KualaLumpur		BAU
19	2030	commerical	tonnes CO2e	KualaLumpur		BAU
20	2030	industrial	tonnes CO2e	KualaLumpur		BAU
21	2030	fugitive gas	tonnes CO2e	KualaLumpur		BAU
22	2030	onroad transportation	tonnes CO2e	KualaLumpur		BAU
23	2030	rail	tonnes CO2e	KualaLumpur		BAU
24	2040	total emissions	tonnes CO2e	KualaLumpu	46,796,255	BAU
25	2040	composting	tonnes CO2e	KualaLumpur		BAU
26	2040	landfill	tonnes CO2e	KualaLumpur		BAU
27	2040	incineration	tonnes CO2e	KualaLumpur		BAU
28	2040	wastewater	tonnes CO2e	KualaLumpur		BAU
29	2040	residential	tonnes CO2e	KualaLumpur		BAU
30	2040	commerical	tonnes CO2e	KualaLumpur		BAU
31	2040	industrial	tonnes CO2e	KualaLumpur		BAU
32	2040	fugitive gas	tonnes CO2e	KualaLumpur		BAU
33	2040	onroad transportation	tonnes CO2e	KualaLumpur		BAU
34	2040	rail	tonnes CO2e	KualaLumpur		BAU

Snippet of template for emissions data that needed clarification

## Next Steps

- PNNL
  - Provide feedback on Workshop 1 Draft Agenda and Plan
  - Share initial data for reference case on energy, buildings, transport and industry
  - Organize GCAM training for UTM Team
- UTM
  - Review socioeconomic data
  - Invite DBKL for next PNNL-UTM meeting





**Thank you**

