Way Forward to 2050:

Action Plan for Reducing Transport Emissions in Southeast Asian Countries

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OUR AIM

Clean Air Asia leads efforts to enable Asia's

1,000+ CITIES

to reduce both air pollution and CO_2 emissions, and thereby contribute to more livable and healthy cities with blue skies and a low carbon footprint. Emissions can be reduced through policies, plans, programs, and concrete measures that cover air quality, transport and industrial emissions, and energy use.

OUR ROLE

Decision makers use **reliable analysis, knowledge, data and effective tools** to understand the program and identify solutions.

Stakeholders at the city, national and regional level **cooperate better through networks and partnerships.**

Policies and programs are in place that are **science-based, stakeholder-inclusive and effective.**

Future Societies

http://www.bersih.org/wp-content/uploads/2012/08/bersih-3-crowd1.png

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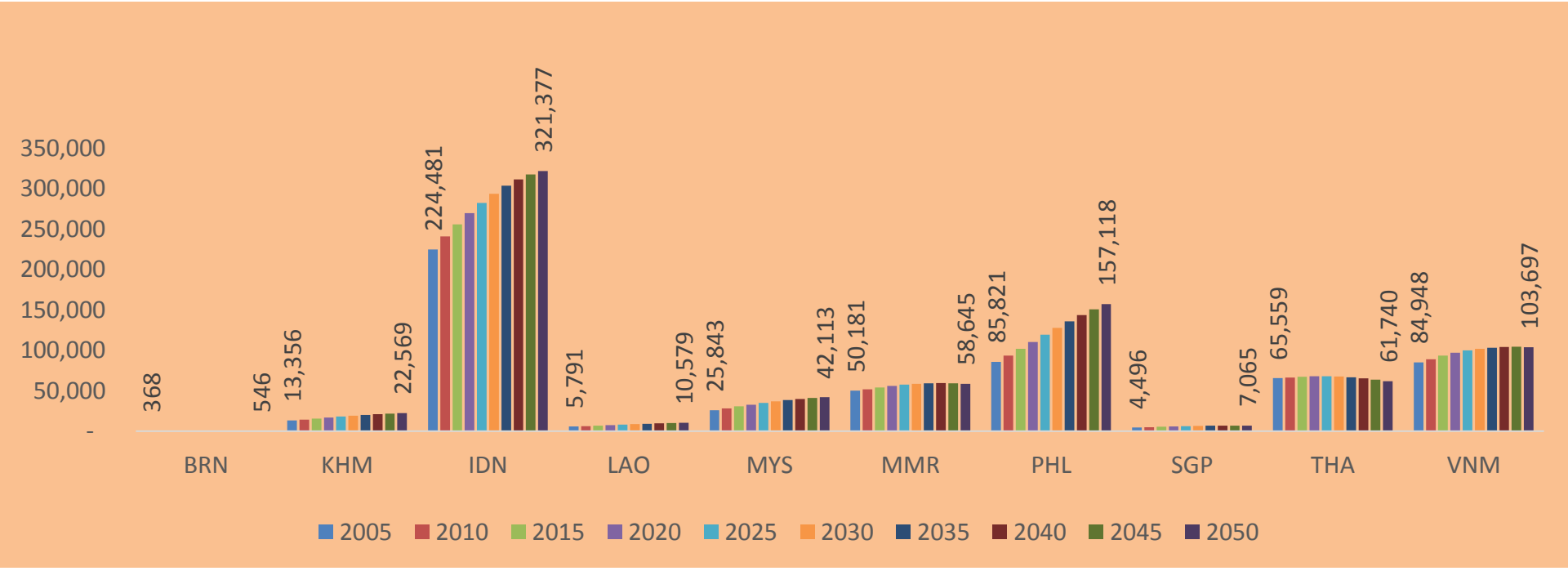
Population

- Southeast Asia will be home to 785 million people in 2050, 8% of the world's population
- 4.9 million people are to be added each year



Source: Based on UN Population Projections

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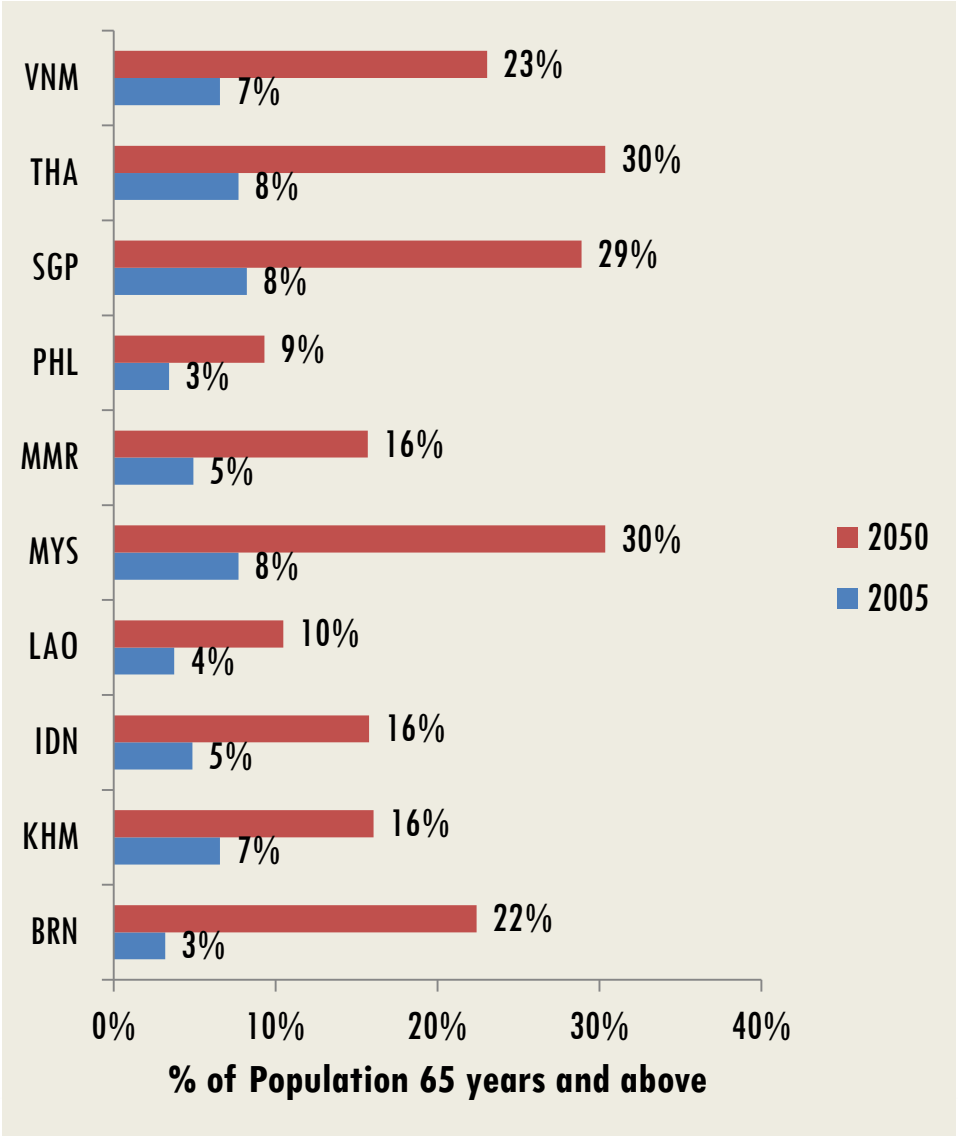
Ageing Population



- In 2050, 462 million people will be 65 years old and above
- 17% of the population in ASEAN

http://www.ready.gov/seniors

Source: Based on UN data

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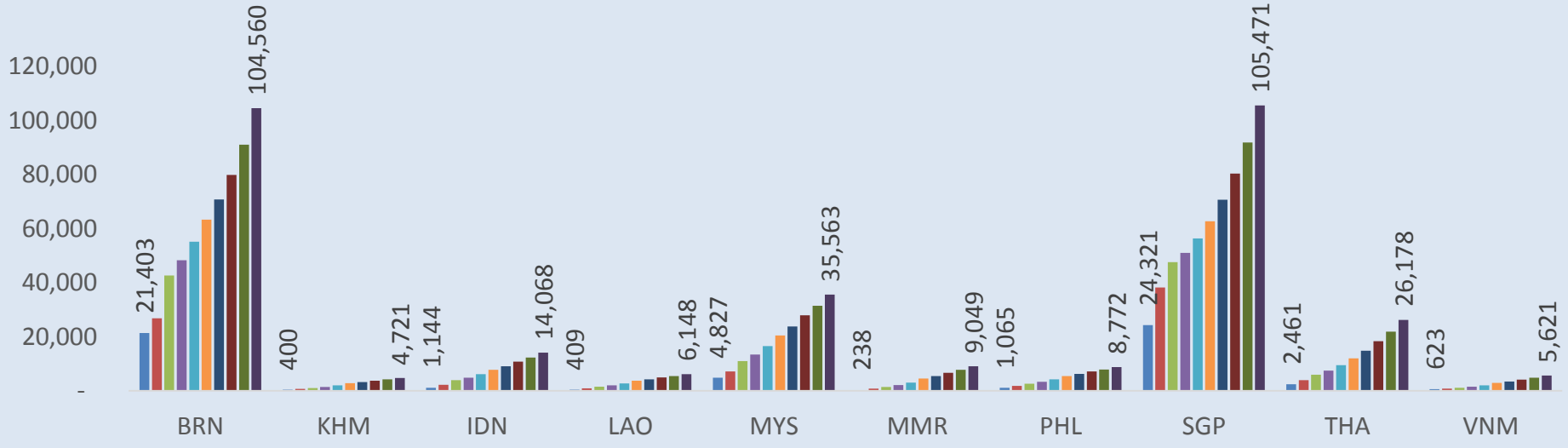
GDP/Capita

- The weighted average GDP per capita will increase almost 10-fold from 2005-2050
- 2005 = 1,469 USD , 2050 = 14,132 USD
- 3.91% annual growth rate (long term average)



Source: Based on UN Data and growth rates by the ADB Institute

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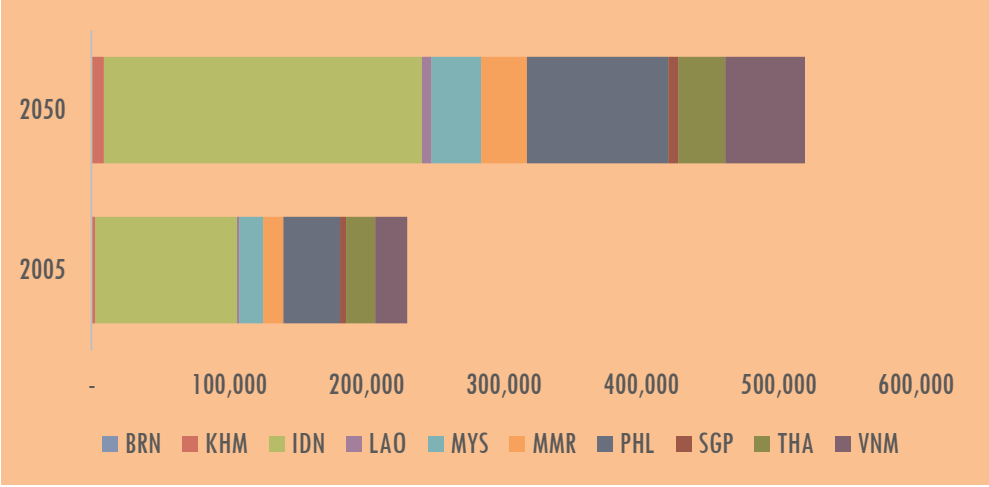
Urbanization

- 519 million, or 66% of the population in the region will be living in urban areas by 2050
- 2.3 million people will be added or will migrate into urban areas each year



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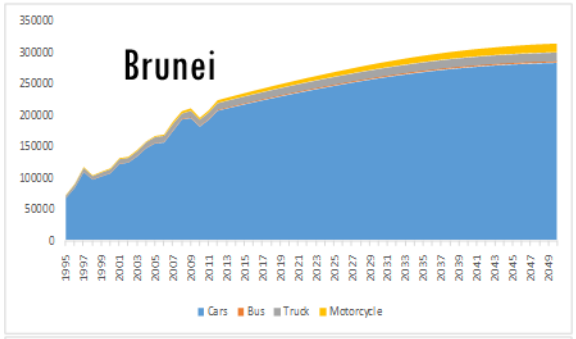
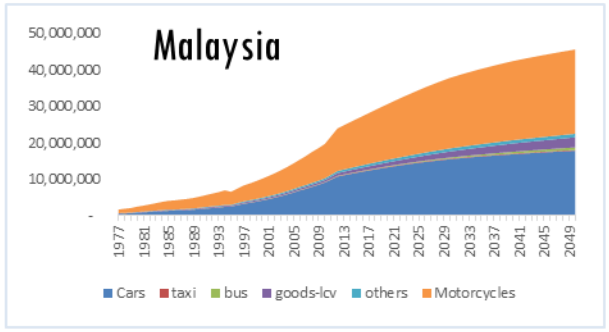
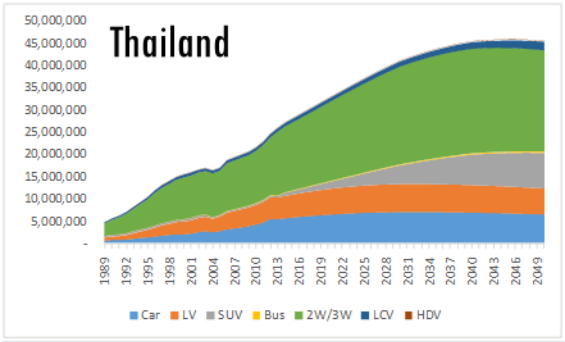
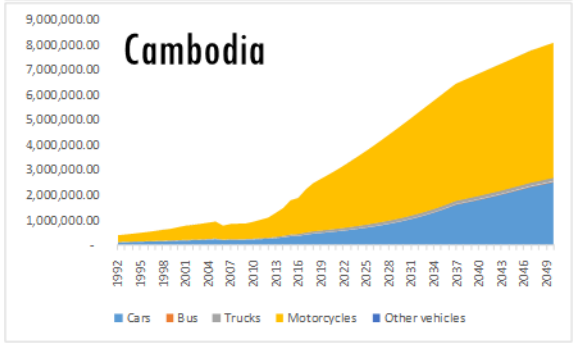
Future Transport

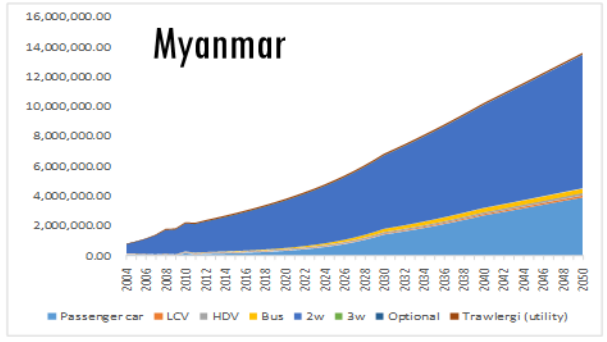
Vehicle Population Growth

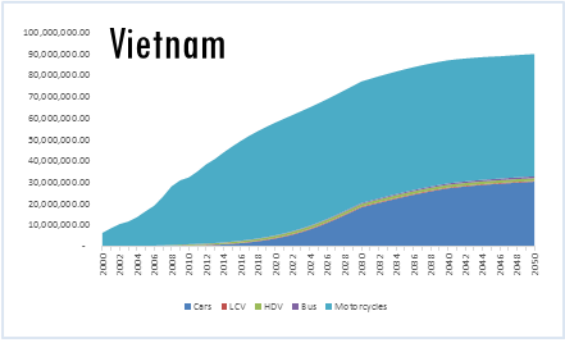


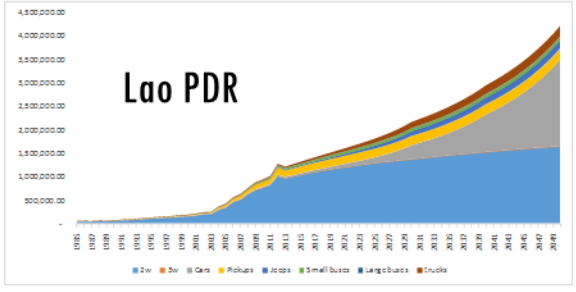


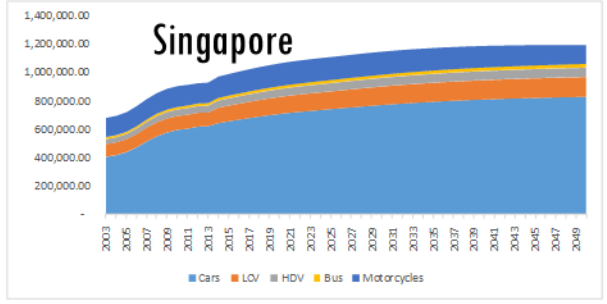












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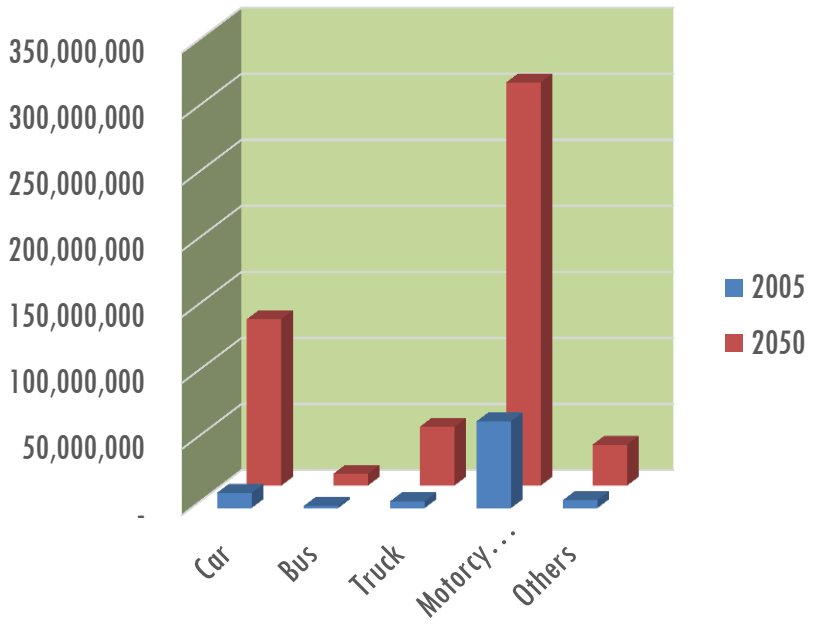
Vehicle Population : 2050 (BAU)



- **515 million** vehicles in 2050
- **389** 4-wheeled vehicles/1000 people
- **388** 2 and 3-wheeled vehicles/1000 people
- **2.5** million cars will be added per year
- **5.3** million motorcycles will be added per year

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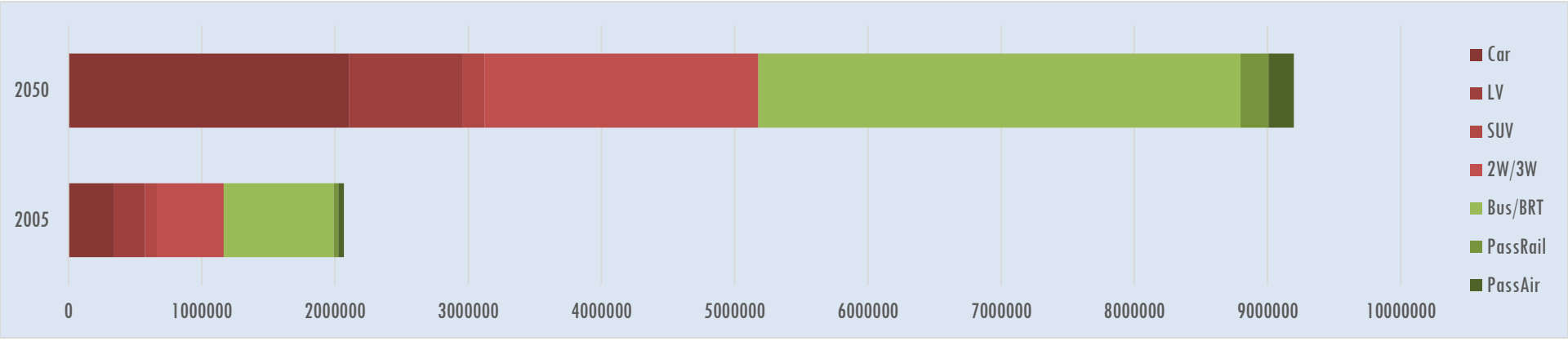
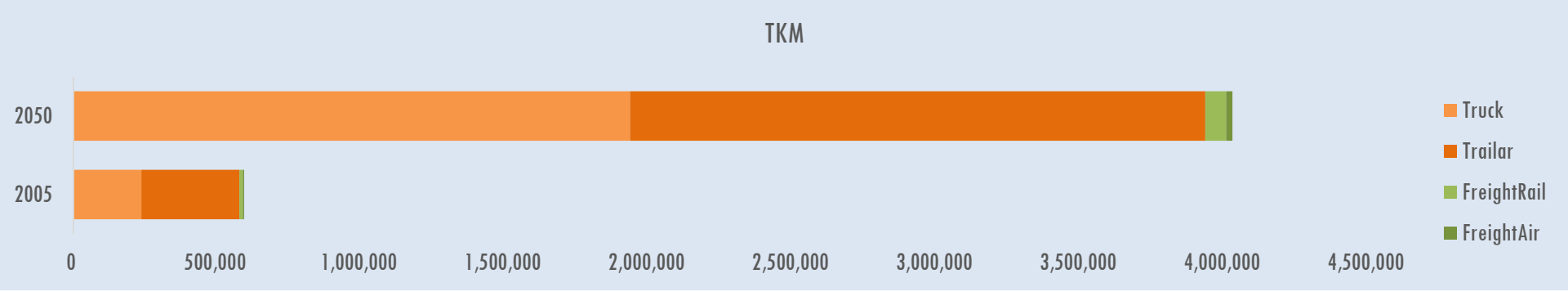
Activity and Mode Shares (BAU)

Private modes will dominate passenger travel



Freight transport will heavily be dominated by trucks



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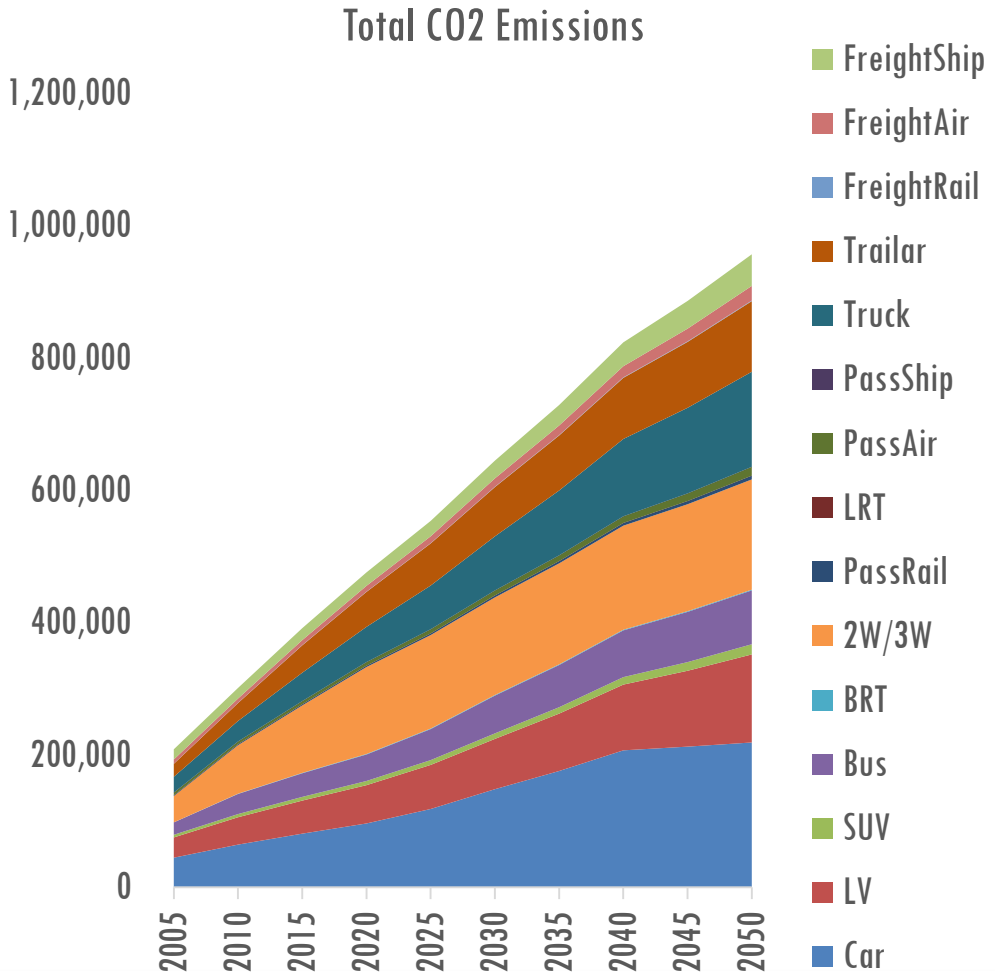
Results

CO2 Emissions from Transport (BAU)

- Transport CO2 emissions will increase by 4.6 -fold from 2005-2050
- 208 million tons CO2 2005 → 956 million tons CO2 in 2050
- CO2 emissions per capita will increase to 1.32 tons/year from 0.37 in 2005.



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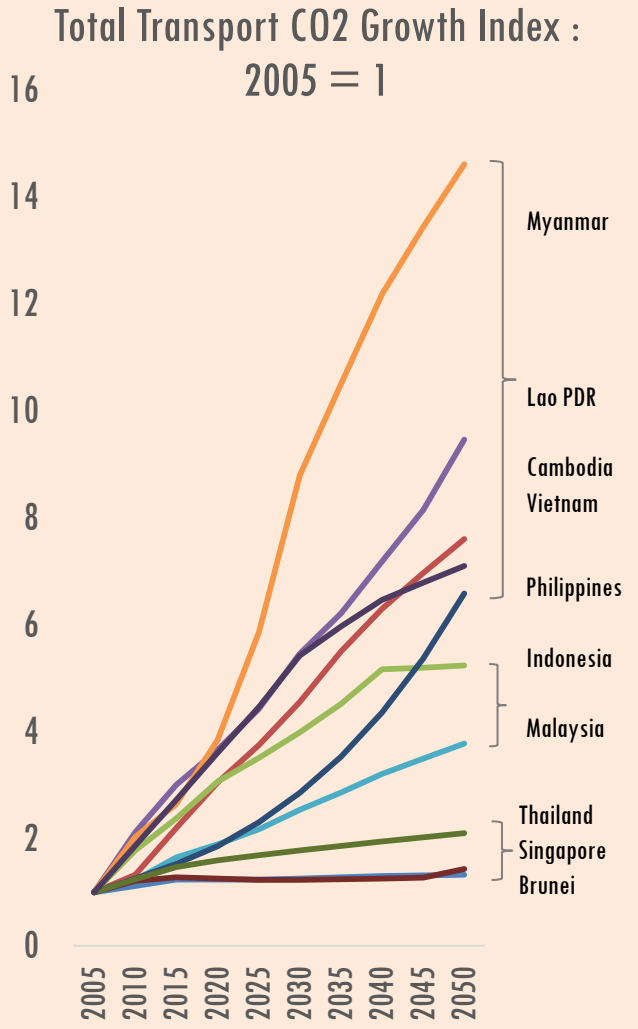
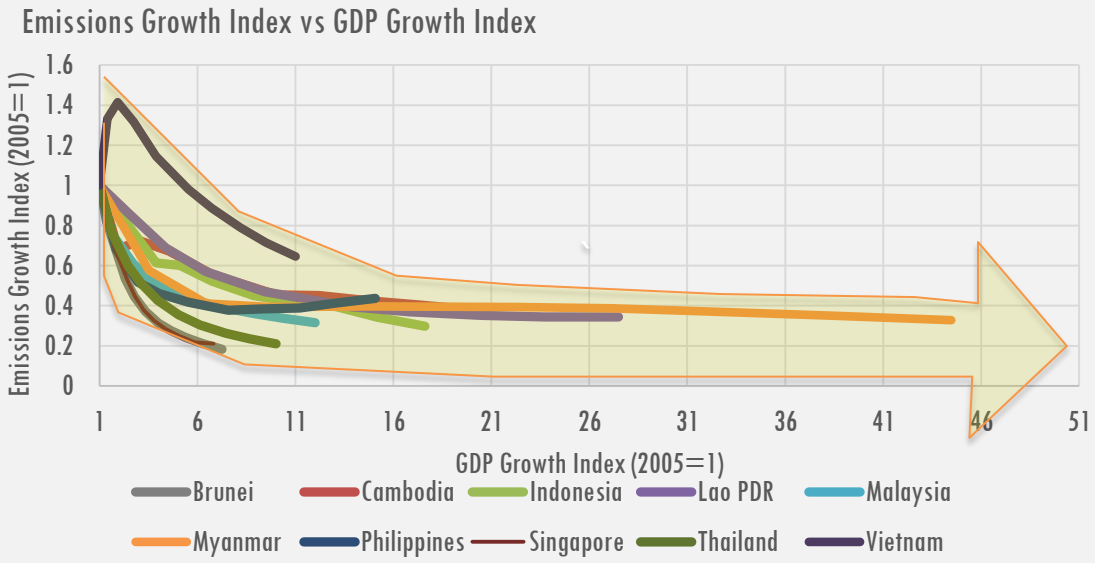
Growth



- High growth rates in total emissions will be in "take-off" countries (Myanmar, Lao PDR, Cambodia, Philippines)
- Countries in general are growing in a less CO2 intensive way
- For every 1% increase in GDP, .27% increase in CO2



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Summary of Action Plans

- Avoid policies → Southeast Asia must not avoid it anymore
- Shift policies
  - Context-driven ; inclusion of endemic modes in discussions
  - Main thrust for primary cities
  - Significant efforts towards shifting freight and inter-urban travel must be given
- Improve policies
  - Mass supply and promotion, when possible
  - Complete assessment is key

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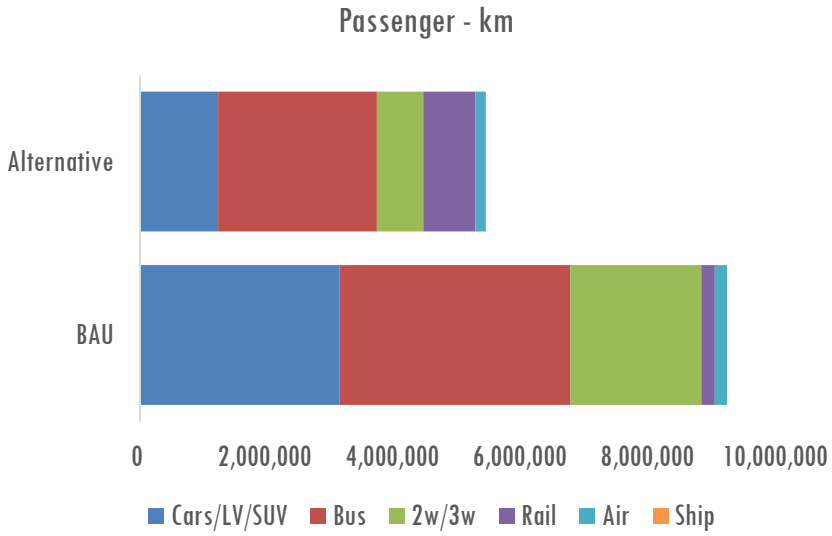
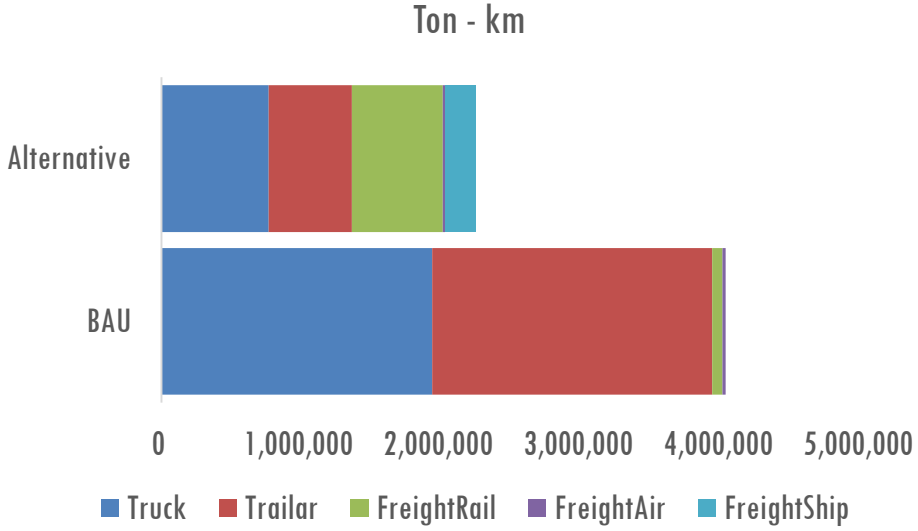
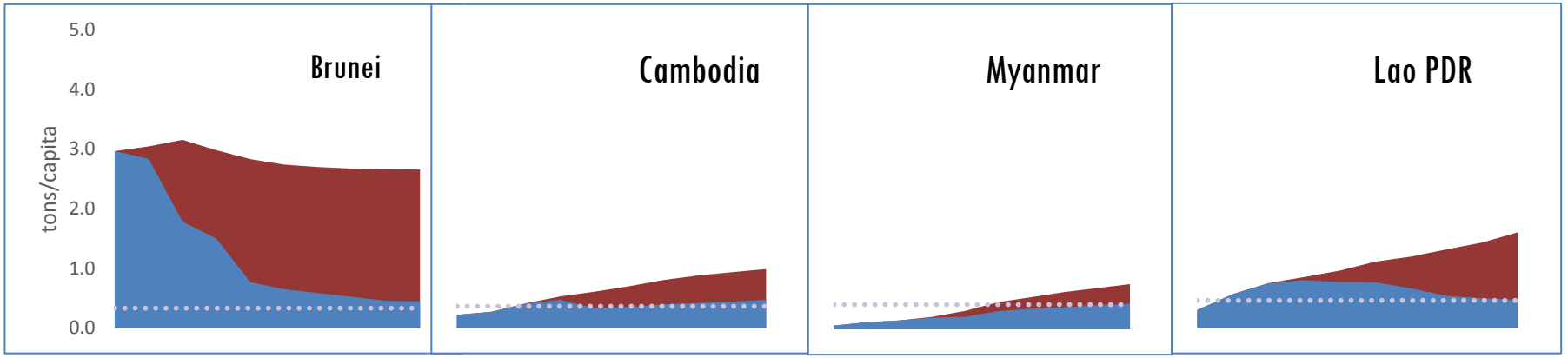
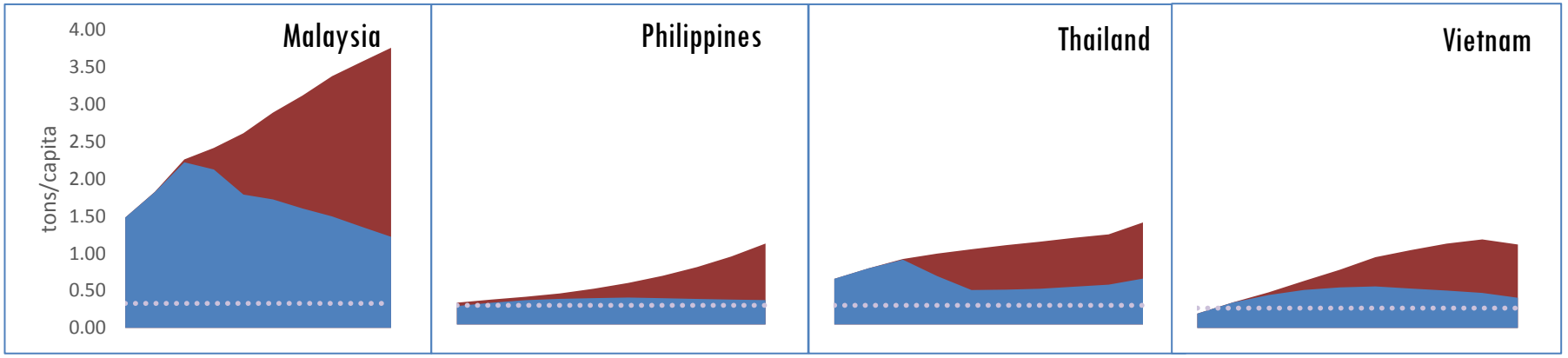
Impacts of Simulation of Action plans

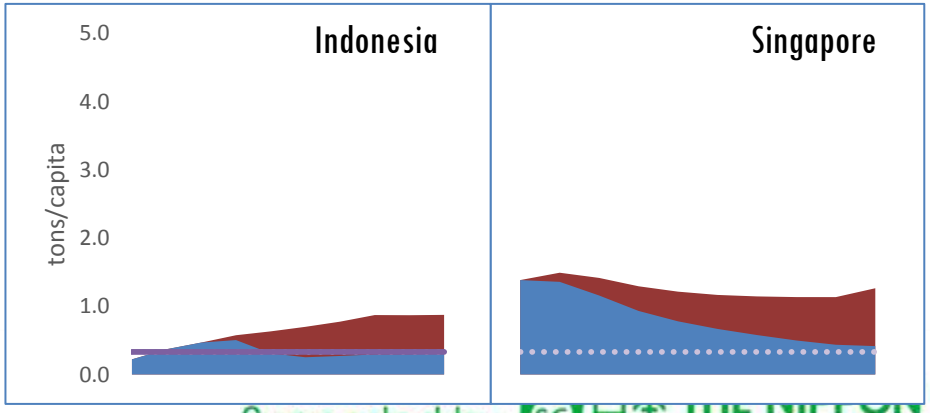




- 41% reduction in total passenger kilometers
- 44% reduction in ton-kilometers
- 56% reduction in transport energy
- 57% reduction in total transport CO2







Weighted Average tCO2/capita

2005	= 0.37
BAU 2050	= 1.32
Alternative 2050	= 0.48

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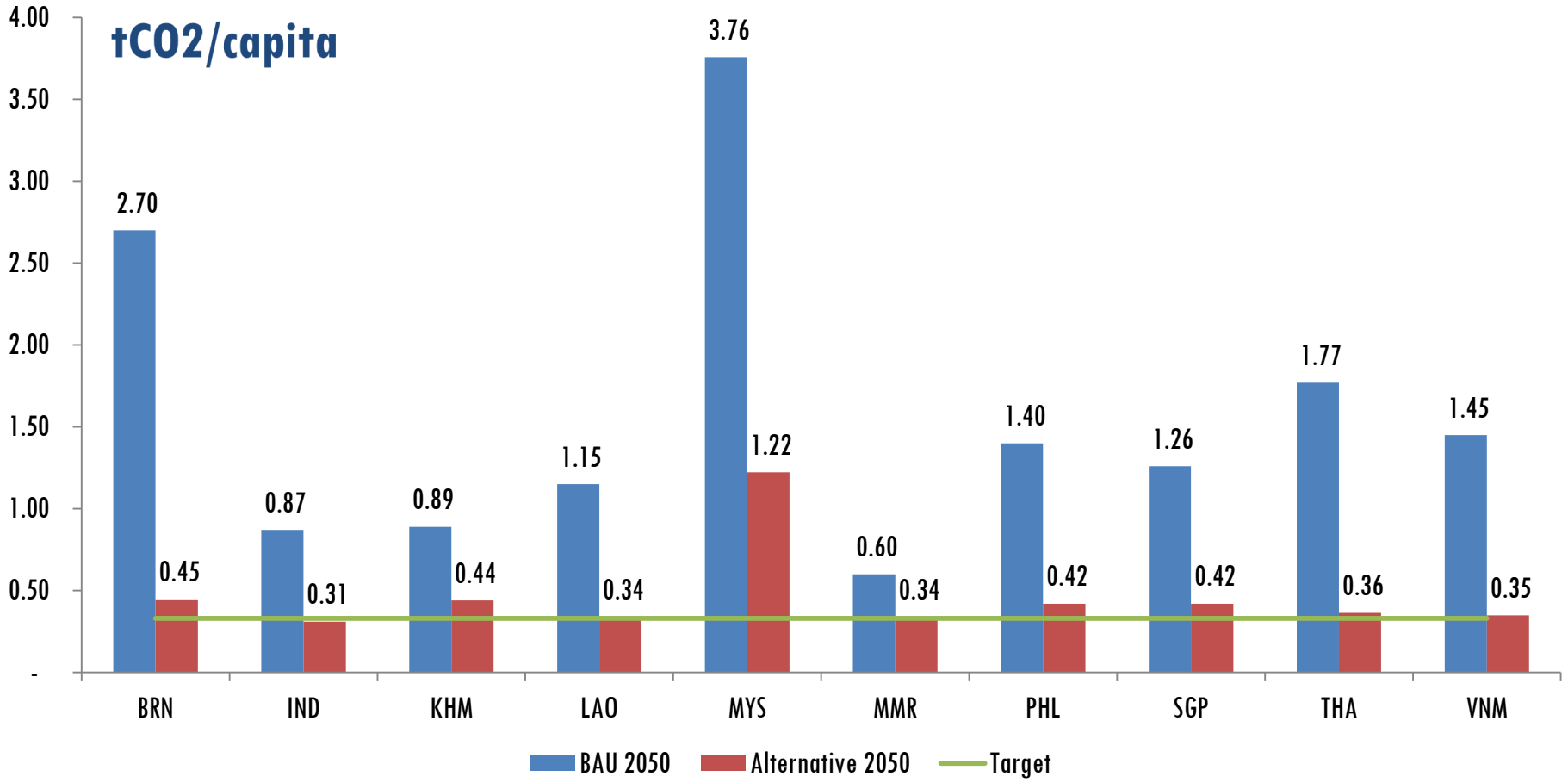
Alternative Scenario vs Target (2050)



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* Malaysia excludes domestic air currently

Conclusions

- Southeast Asia is at a crossroads : opportunity to break trends
- Delays today → higher costs for the future
- Vertical and horizontal integration will be key towards addressing transport emissions
- Anticipate emerging growth : secondary and tertiary cities, freight and inter-urban transport
- Emphasis on the co-benefits of CO2 reduction is needed to communicate the agenda in the region ; CO2 is only part of the puzzle
- Tools are now available to support countries in policy evaluation towards low carbon transport
- Simulations show that ASEAN countries can reach the target, but external assistance will be needed

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