

Thailand's Transport Transition: Analyzing Deep Decarbonization, Economic Impacts, and Co-benefit

Achiraya Chaichaloempreecha¹, Tatsuya Hanaoka¹, Runsen Zhang², Bundit Limmeechokchai³

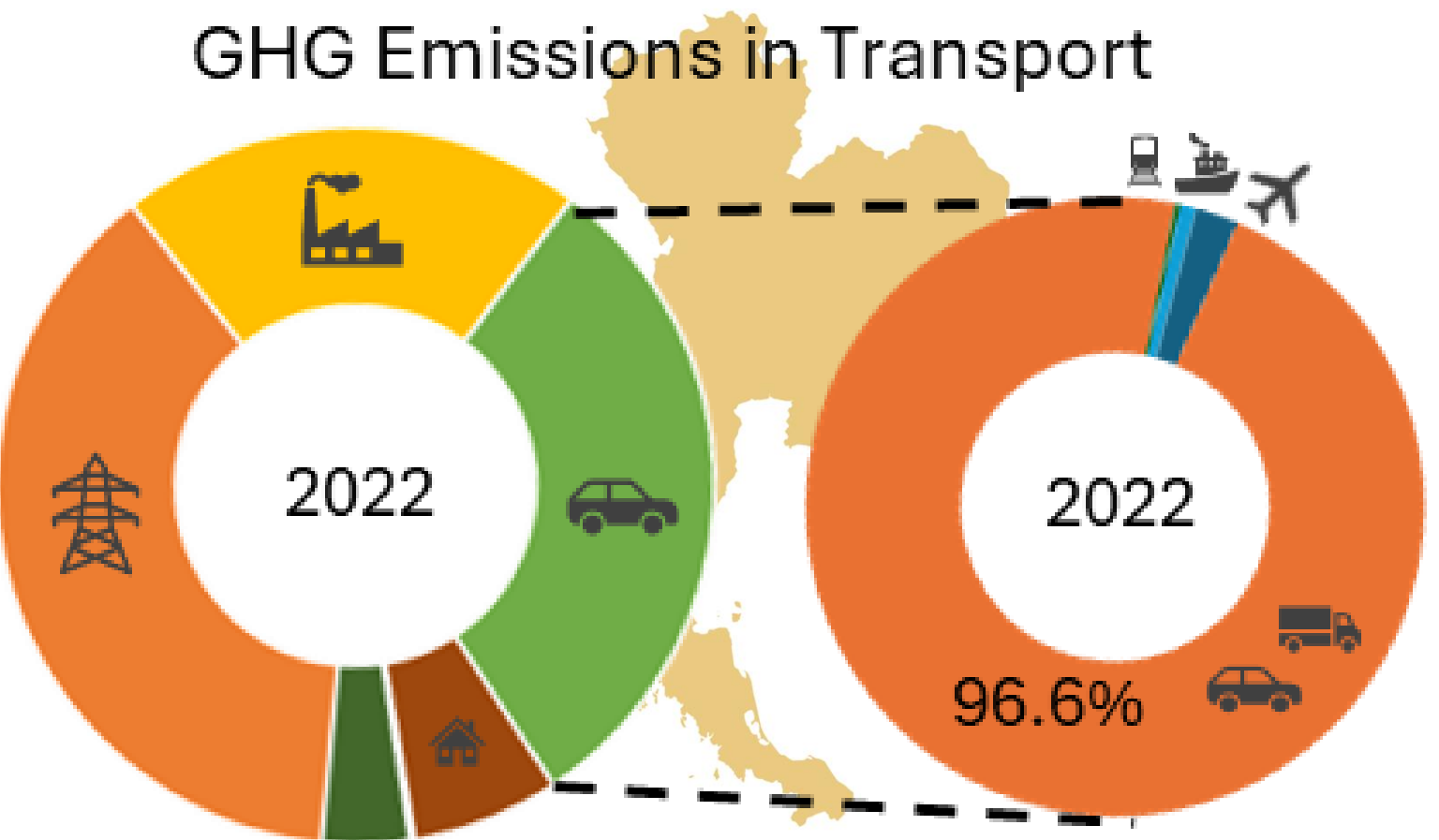
¹Social Systems Division (Global Sustainability Integrated Assessment Section), National Institute for Environmental Studies (NIES), Tsukuba, Japan.

²Graduate School of Frontier Sciences, The University of Tokyo, Japan

³Sustainable Energy and Built Environment Research Unit, Thammasat Design School, Faculty of Architecture and Planning, Thammasat University, Thailand

Introduction & Objectives

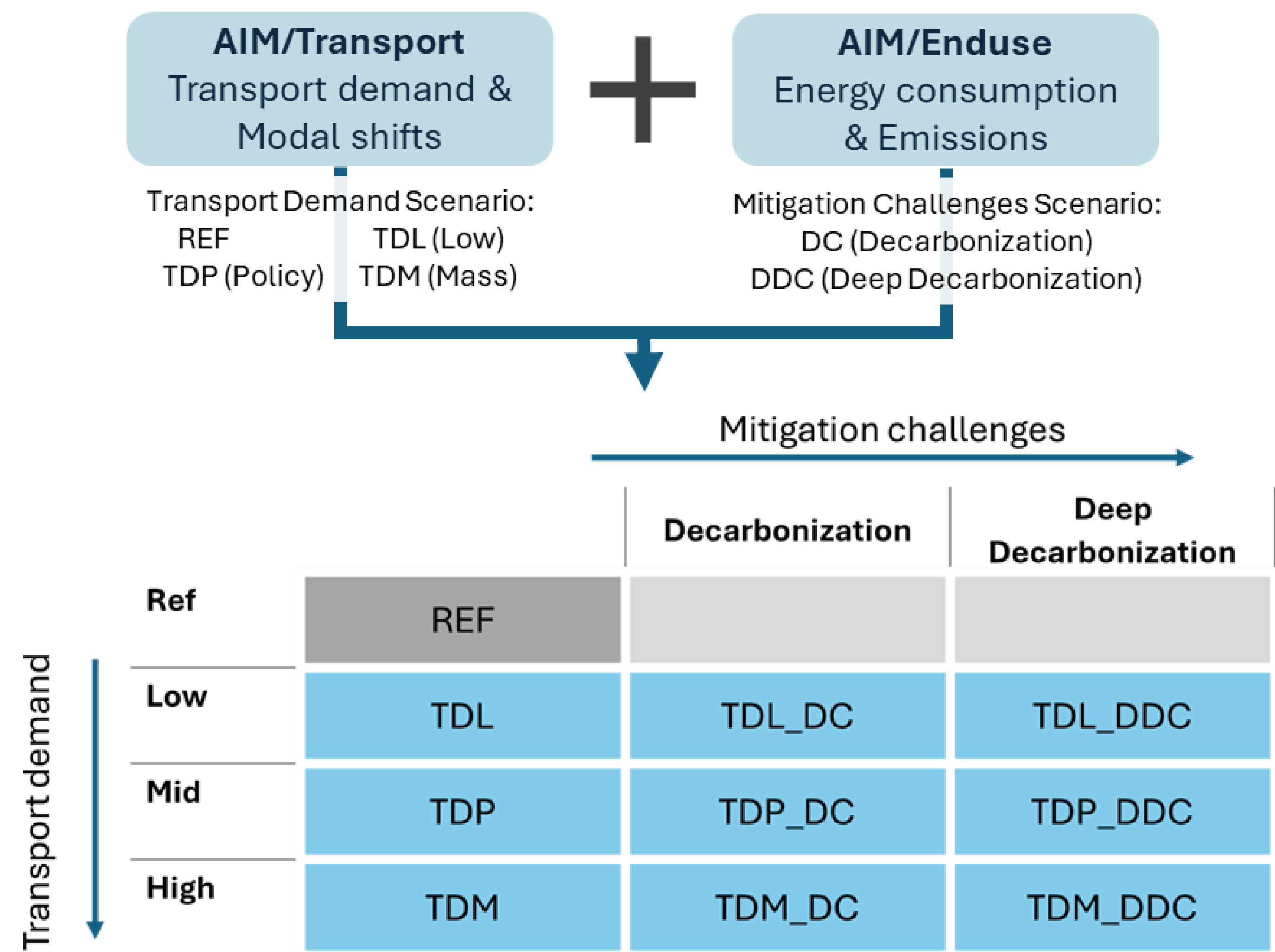
Thailand's transport sector is a significant and growing source of GHG emissions, driven by a heavy reliance on road transport. This dependence on fossil fuels poses a major challenge to the country's climate goals, including achieving carbon neutrality by 2050 and net-zero emissions by 2065.



Objective: To identify and analyze comprehensive decarbonization pathways for Thailand's transport sector by assessing the impacts of modal shifts, technology adoption, and policy interventions on emissions, energy demand, economic costs, and co-benefit.

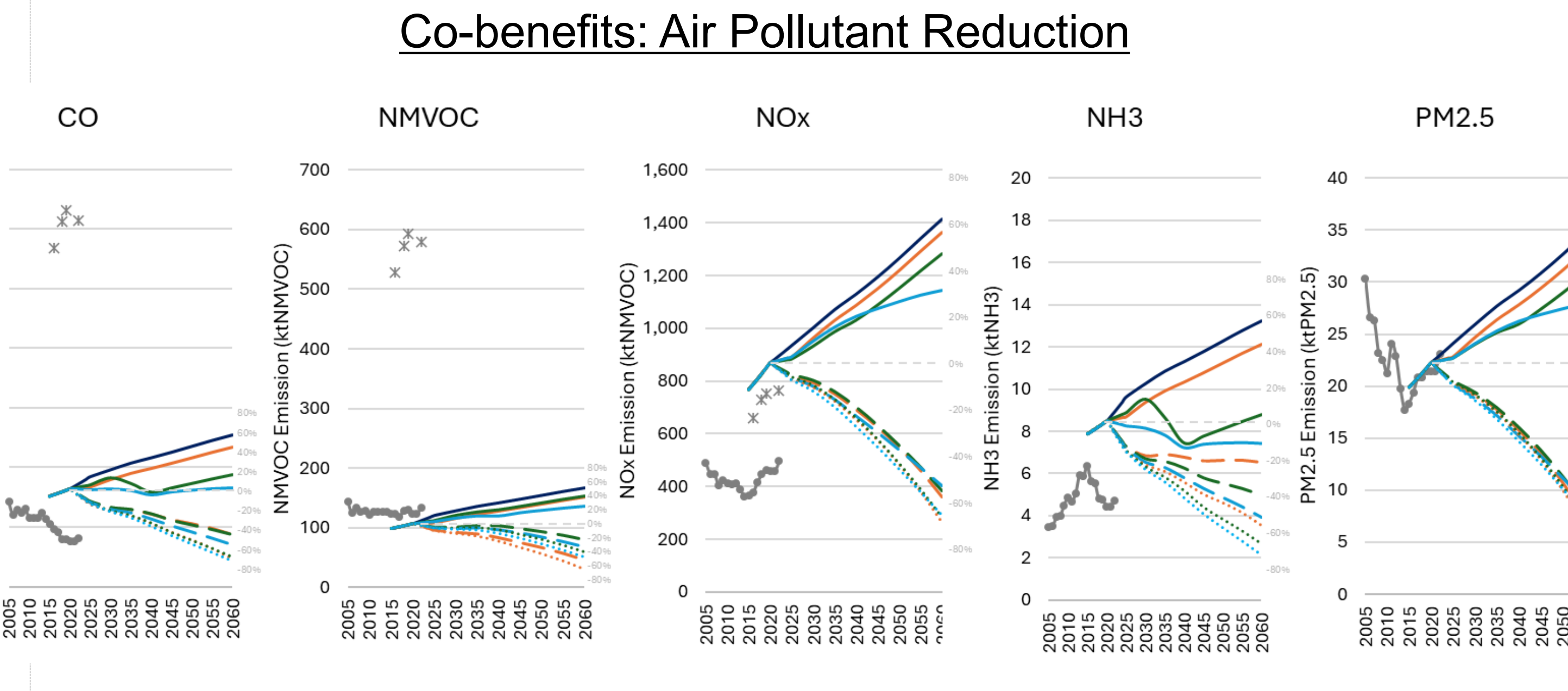
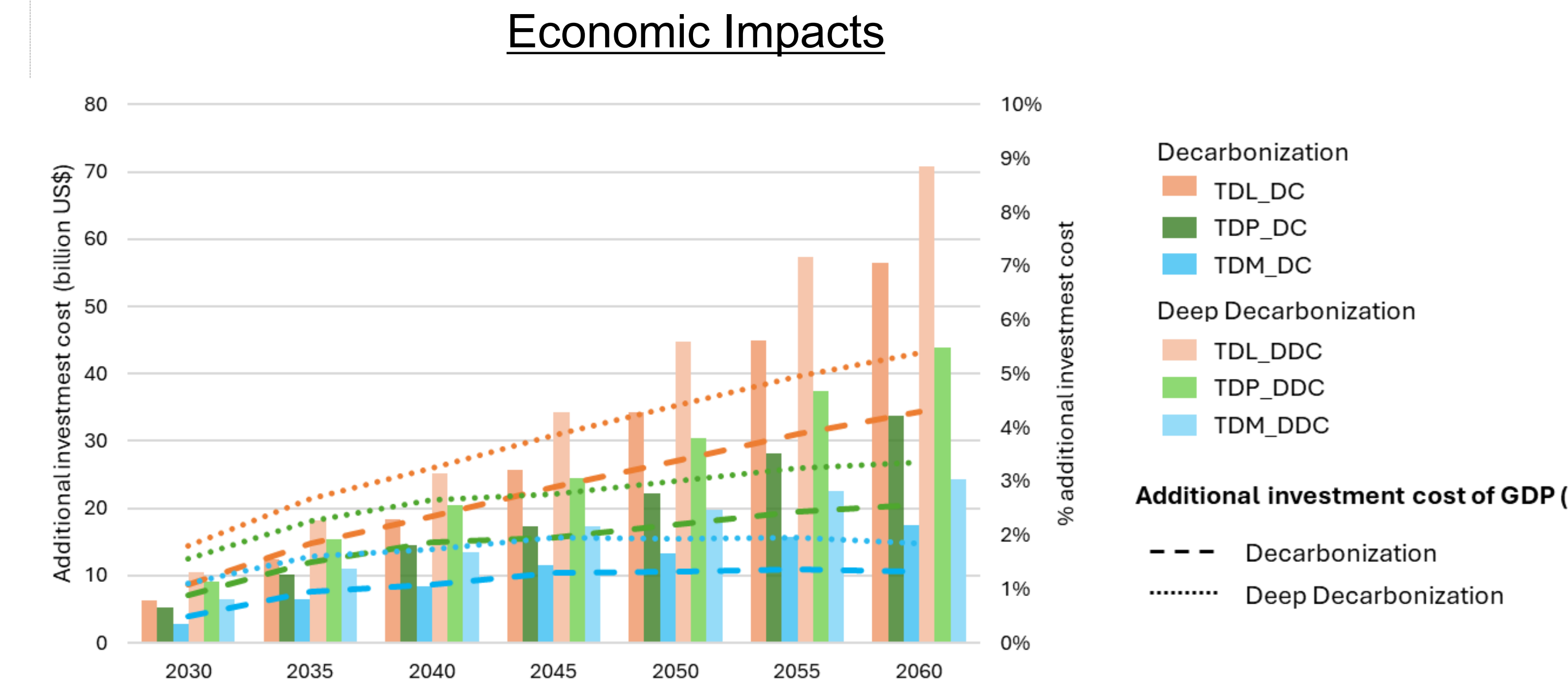
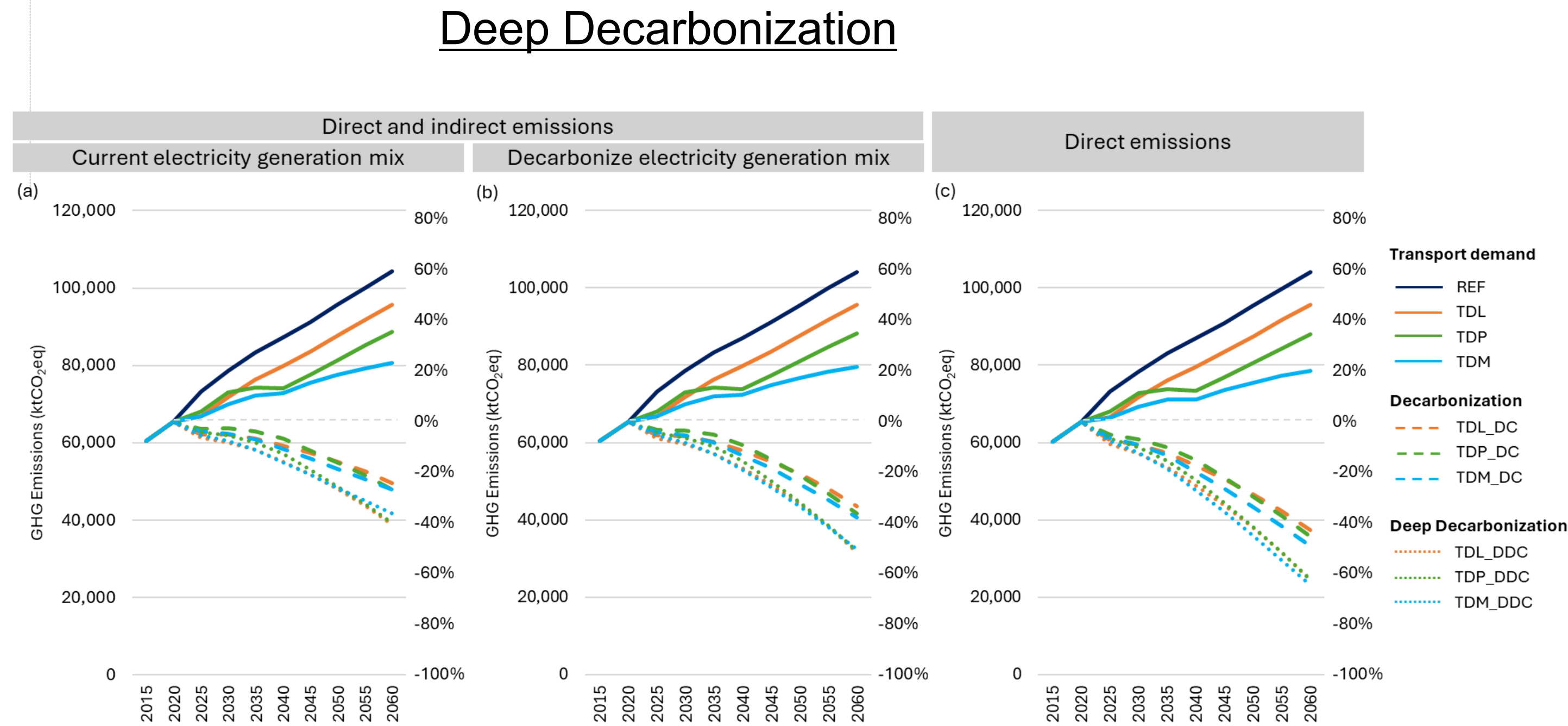
Methodology

This study integrates two Asia-Pacific Integrated Models (AIMs) to analyze four transport demand scenarios and two mitigation pathways.



Finding

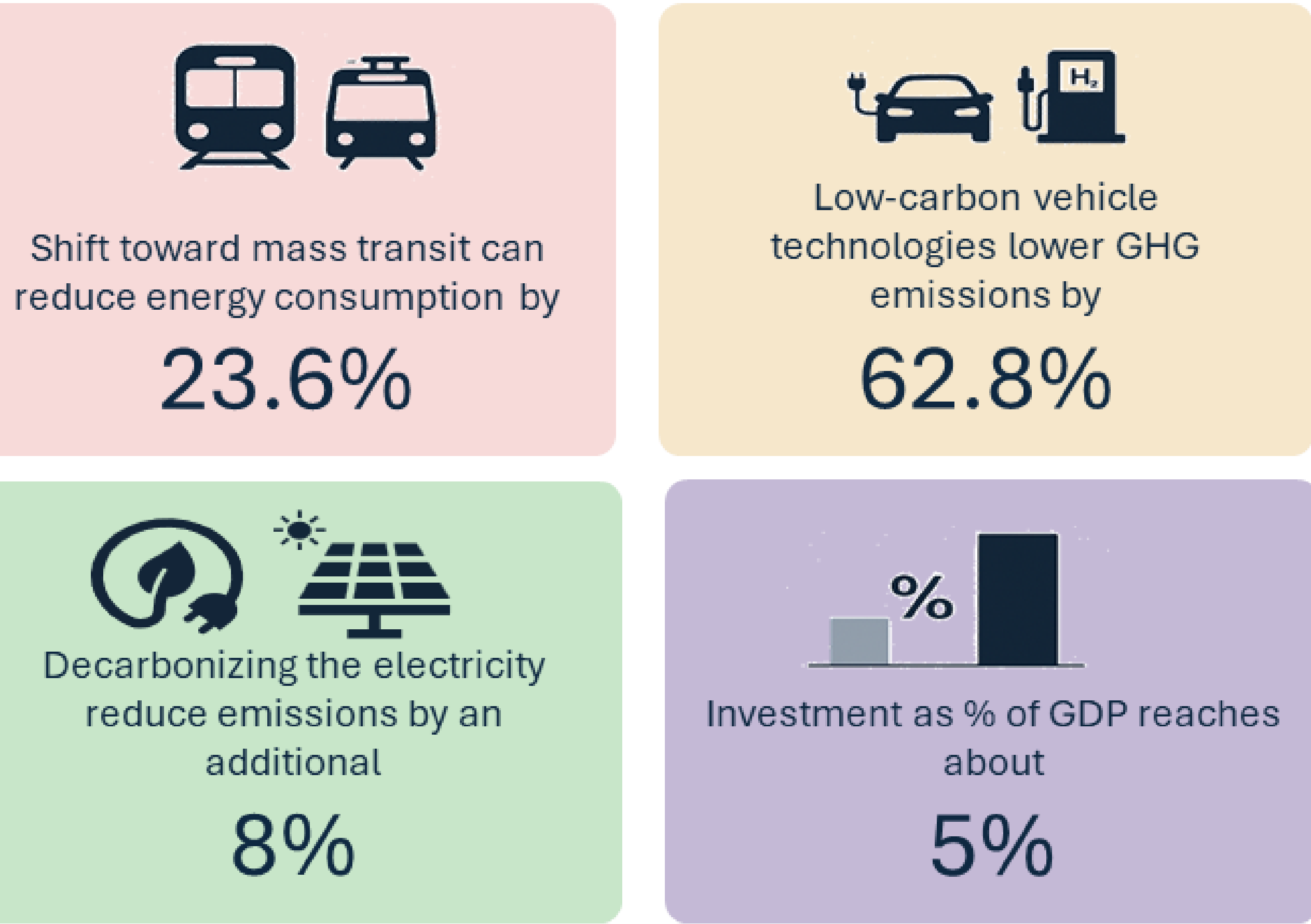
Combining aggressive modal shifts with advanced technology adoption offers the greatest reductions in emissions and air pollutants. However, successful implementation requires overcoming key financing challenges, including mobilizing investment and ensuring long-term funding support.



Conclusions & Policy Implications

A multi-pronged strategy is essential for Thailand to achieve its climate targets. Our findings support the following policy actions:

- Invest in Mass Transit:** Prioritize and accelerate investments in rail and water-based public transport to drive modal shifts. This is the most cost-effective foundation for decarbonization.
- Accelerate Technology Adoption:** Implement robust incentives (subsidies, tax credits) for EVs and FCVs, coupled with charging and hydrogen infrastructure development.
- Decarbonize the Power Grid:** Coordinate transport policy with energy policy to ensure that the electricity powering EVs is clean



References:
Chaichaloempreecha, A., Hanaoka, T., Zhang, R., & Limmeechokchai, B: Transforming Thailand's Transport Sector: Modal Shifts and Advanced Technologies toward Deep Decarbonization (under review) Department of Land Transport, "20-Years Thailand Transport System Development Strategy (2018-2037)," 2019. [Online]. Available: https://web.dlt.go.th/dlt-direction/media/attachments/2565/07/08/-20-_.62.pdf

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