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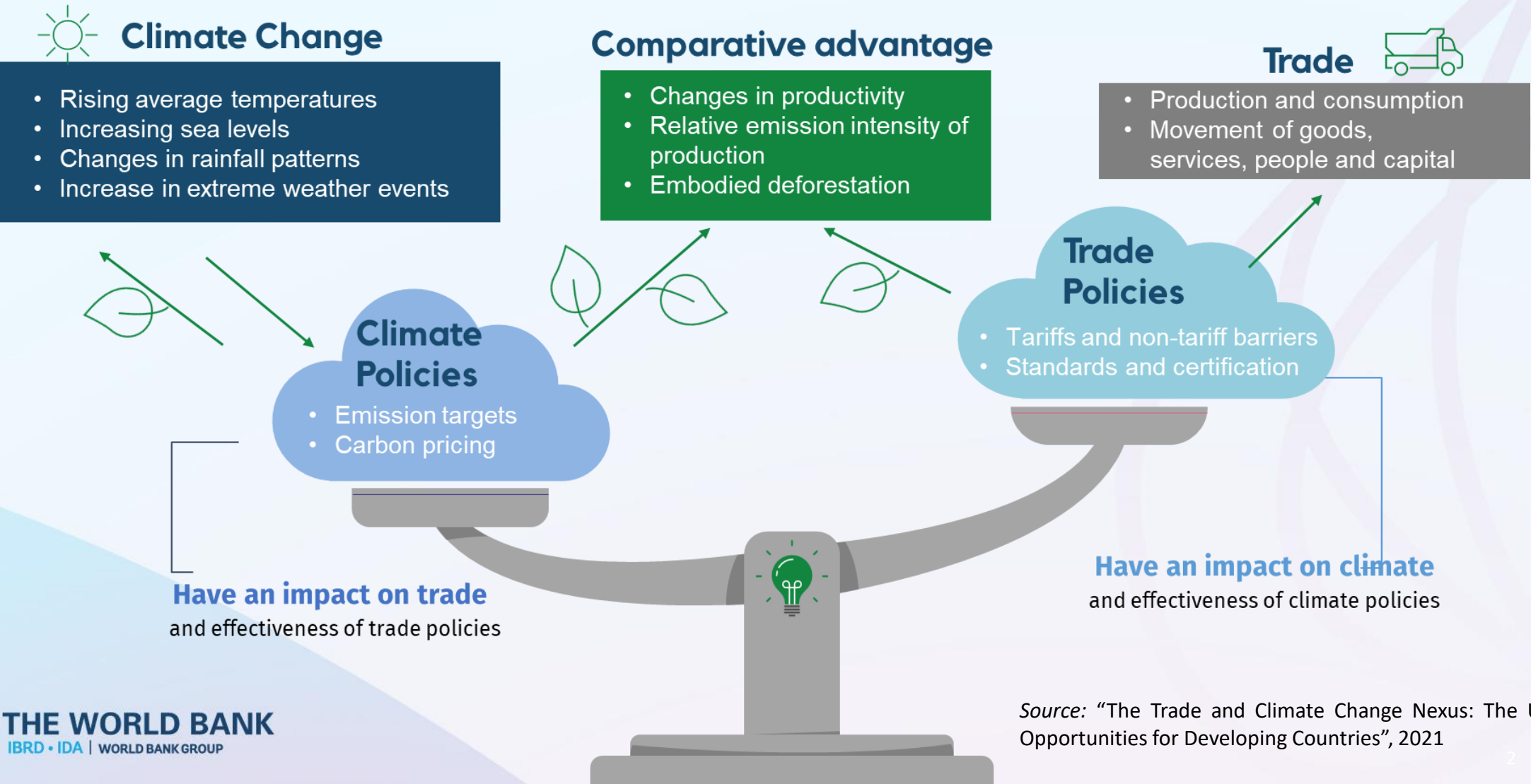
Impact of Climate Change on Economy

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26 February 2025

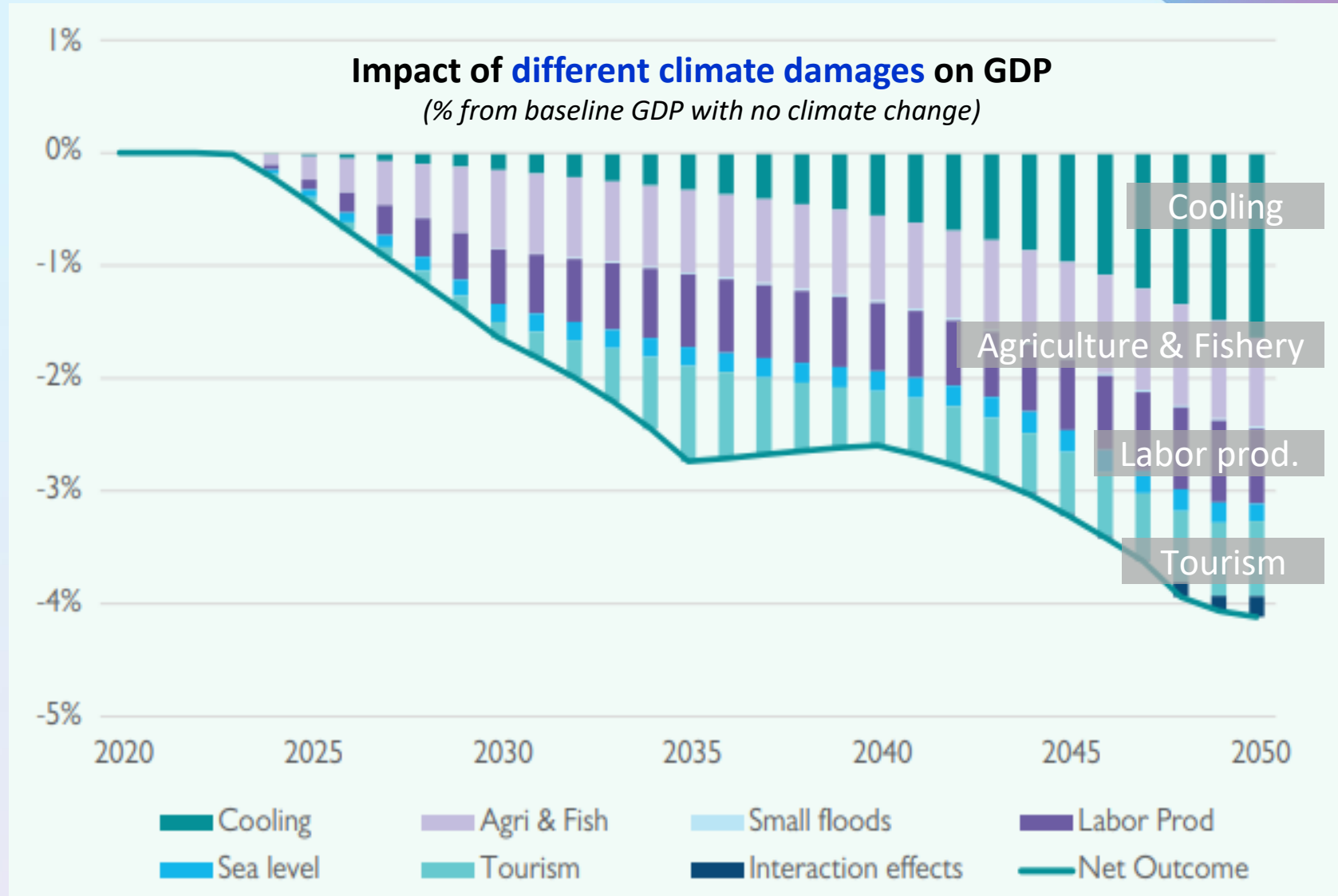


Climate, trade and related policies are interconnected



Climate change is impacting comparative advantages

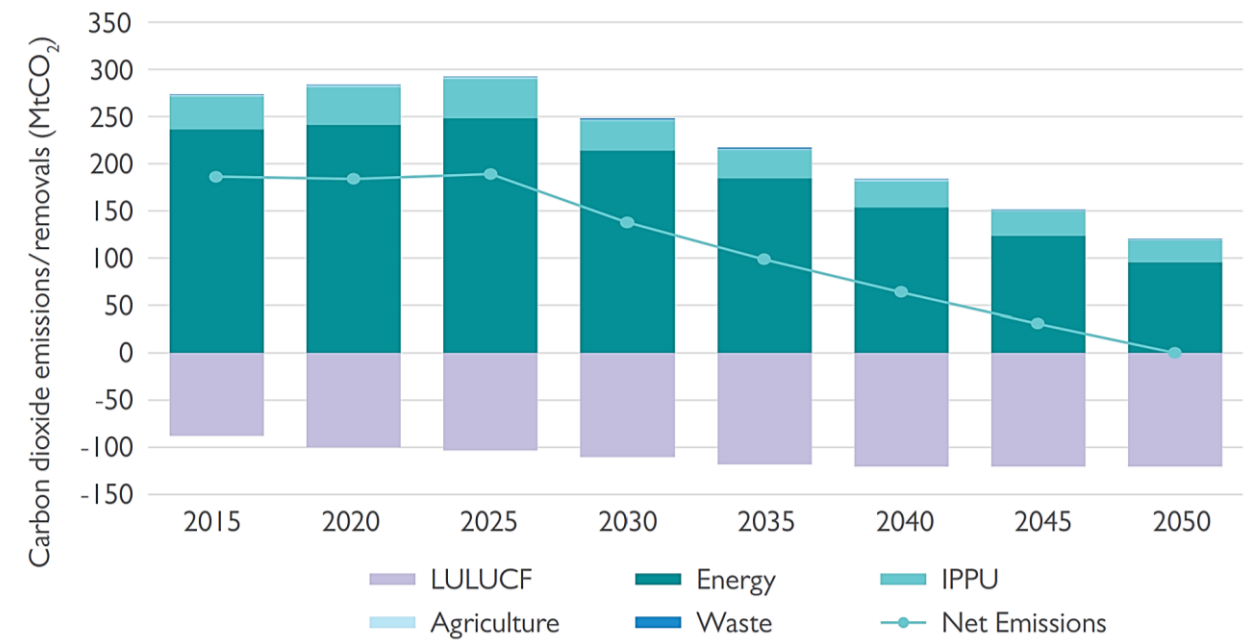
 Human health and development	Labor productivity
	Tourism
 Agriculture, water, and land use	Crop production
	Livestock production
	Irrigated crops
	Water availability
	Fisheries production
 Infrastructure	Inland flooding
	Urban flooding



Source: World Bank Staff estimates based on E3-Thailand model

Decarbonization pathway

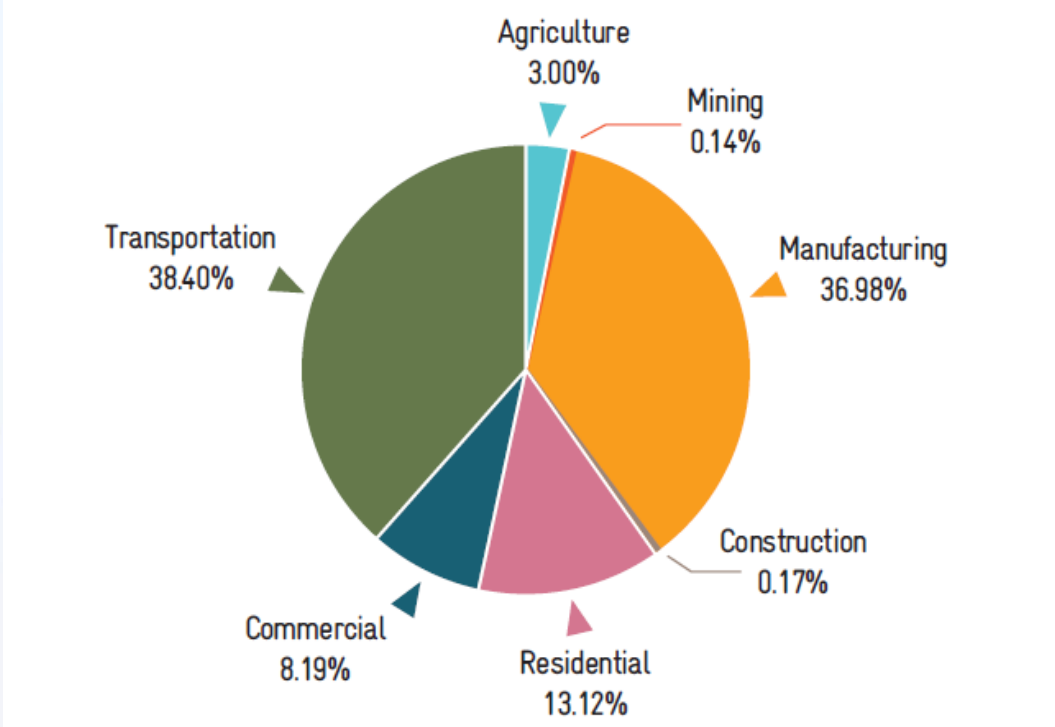
Thailand's 2050 Carbon Neutrality pathway, MtCO₂eq



Note: IPPU = Industrial Processes and Product used, LULUCF= Land Use, Land-Use Change and Forestry

Source: : Mani, M. & Pollitt, H. (2024) "[Towards a Green and Resilient Thailand](#)", World Bank

Thailand's share of final energy consumption by economic sector, 2020



Source: : Energy Balance of Thailand 2020, Department of Alternative Energy Development and Efficiency

Example of “Climate x Trade” policy: CBAM

Carbon Border Adjustment Mechanism (CBAM)



**SECTORS
(PRODUCTS)
COVERED**

- Iron & Steel
- Cement
- Electricity, hydrogen
- Fertilizer
- Aluminum

EMISSIONS COVERED Scope 1* for iron & steel and aluminum, Scope 1 & 2 for other products

* Scope 1= direct emissions from own or controlled sources;
Scope 2=indirect emissions from energy generation

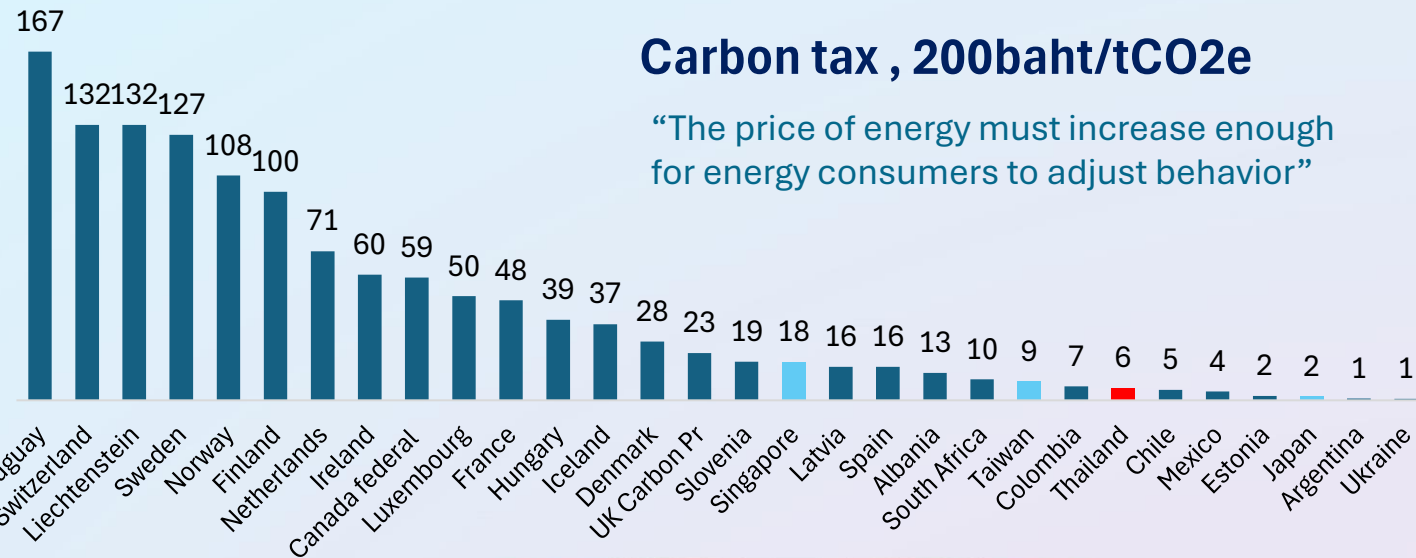
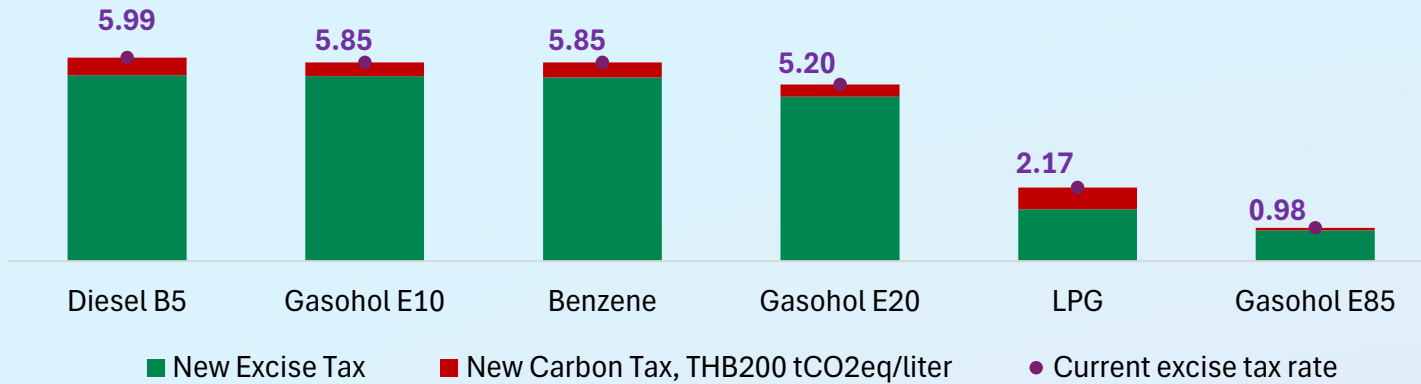
Exposure to EU CBAM for Major Asian exporters

	CBAM products exports to the EU (% of total CBAM products exports to world)	CBAM products exports to the EU (% of GDP)	Most exposed CBAM products
Taiwan	12.2	0.22	Iron and steel
Korea, Rep.	10.1	0.18	Iron and steel
China	8.6	0.05	Cement
Indonesia	6.2	0.04	Iron and steel
Vietnam	5.5	0.11	Iron and steel
Malaysia	5.5	0.11	Cement
Thailand	3.9	0.03	Iron and steel
Philippines	1.6	0.00	Cement
Singapore	1.0	0.00	Iron and steel

Overall, the impact for the Thai economy is likely to be relatively small, as exports to the EU in the iron and steel and aluminum sector account for only 5.2 percent and 4.4 percent of the sectors’ total exports, respectively, and less than 0.03 percent of GDP.

Effective carbon pricing require integration with other climate policies

Excise tax and carbon tax on fuel (THB/liter)



Carbon tax , 200baht/tCO2e

“The price of energy must increase enough for energy consumers to adjust behavior”

Constraints of carbon pricing



Construction

Limited technological options for reducing emissions in carbon-intensive industry, (e.g., cement)



Electrification of transport

The availability of charging infrastructure and the vehicle purchase costs, which limit behavior to shift.



Energy efficiency in buildings

Lack of knowledge and price awareness

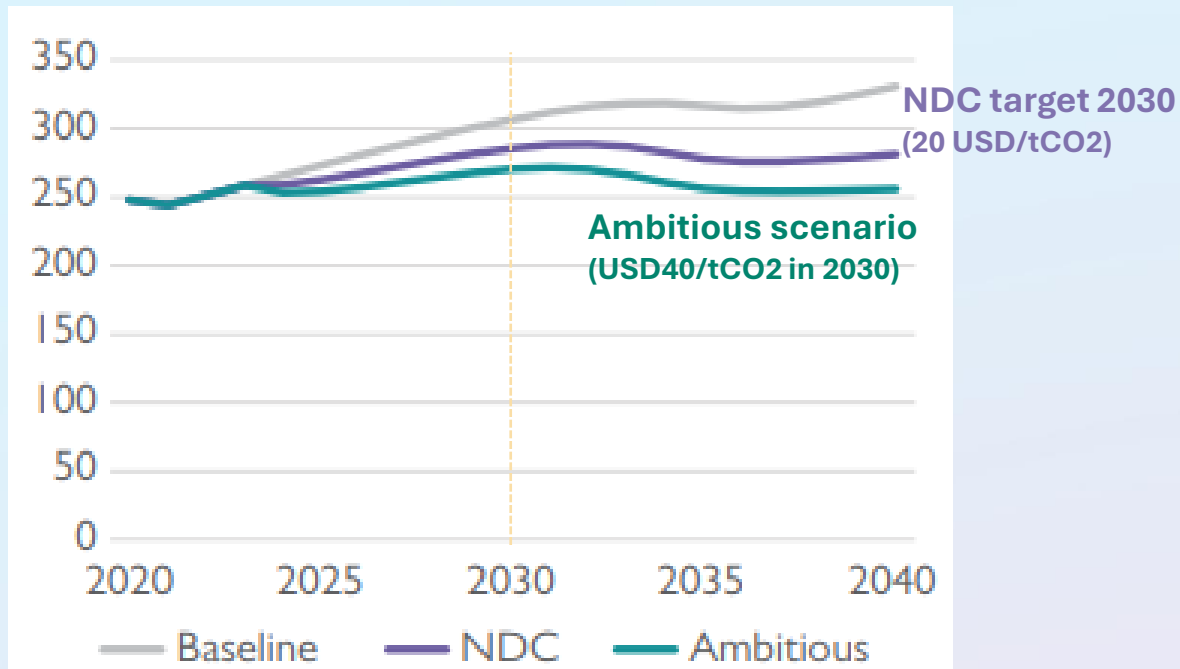


Power sector

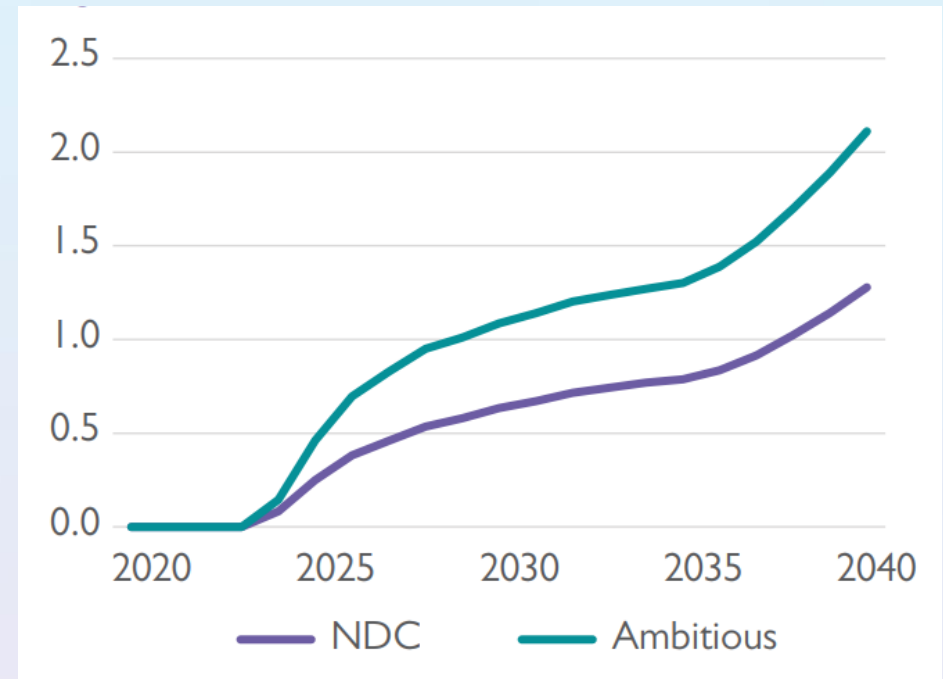
Regulations that prevent markets from working (e.g., electricity subsidy), reducing the effectiveness of a pricing mechanism

Implementing carbon pricing mechanisms could stabilize emission levels in Thailand and promote economic growth

Impact of carbon tax on CO₂ emission
(MtCO₂)



Impact of carbon tax on GDP
(percentage points from baseline)

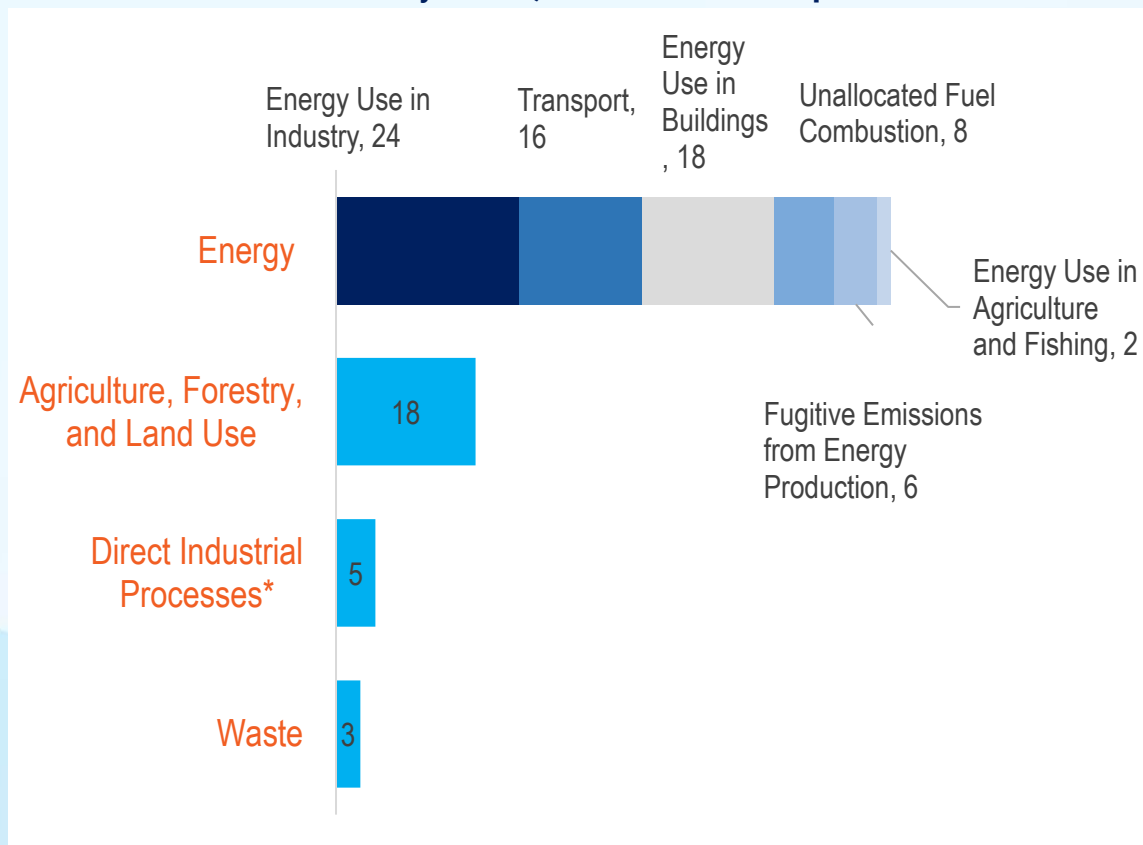


Source : Mani, M. & Pollitt, H. (2024) "Towards a Green and Resilient Thailand", World Bank

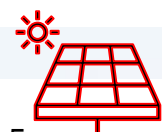
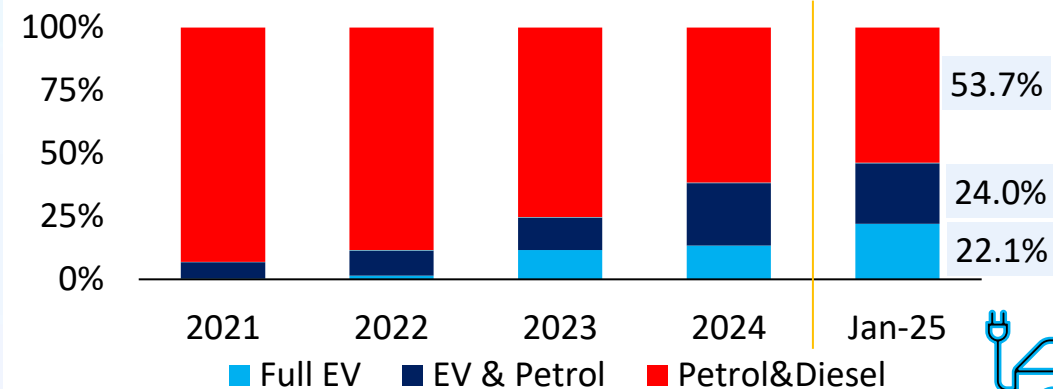
Supply Chain & Green opportunity

Use of greener materials and low-carbon logistics and adopt Green innovative GVC to boost competitiveness

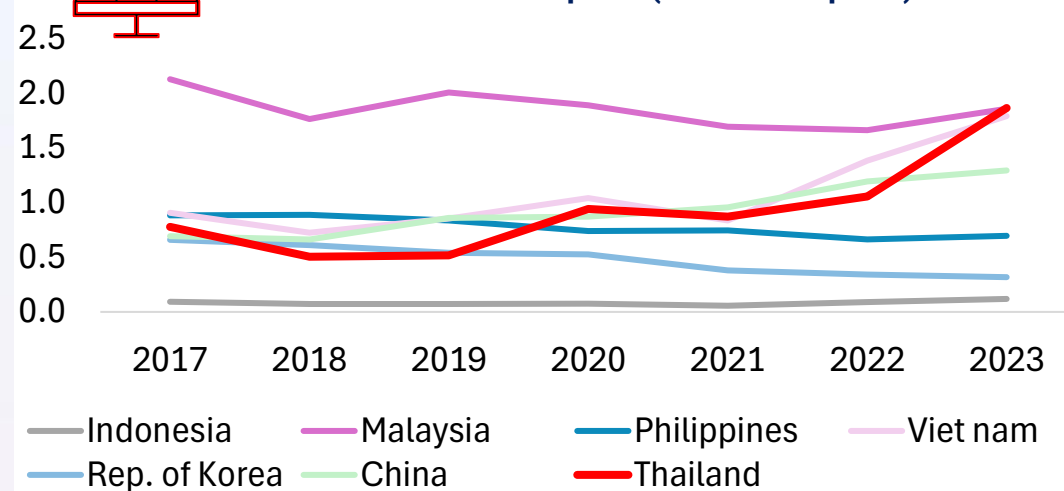
Global GHG by sector, 49.4 billion tCo2eq2016



Share of Motor Vehicle registration (Sedan, %of total)



Share of Solar PV in exports (%of total exports)



What is a CCDR?

Objective

The objective of CCDRs is to capture the **interplay** between each **country's development goals** and **climate change**.

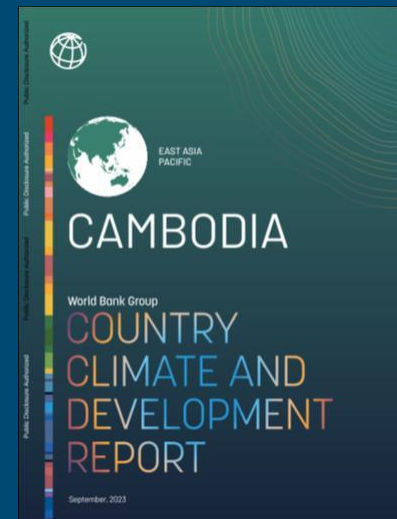
CCDRs aim to inform policy and institutional reforms, as well as public and private investments, that support high-impact climate action.

Target Stakeholders

As public documents, CCDRs can **inform platforms for governments, their citizens, the private sector, and partners to engage on the development and climate agenda**, supported by better coordination at the country level.

Key Elements

- Assess how climate change could impact development
- Analyze how the country's development goals can be achieved in the context of mitigating and adapting to climate change
- Consider and reflect the country's commitments as embedded in Nationally Determined Contributions (NDC)
- Identify ways to support implementation of NDC and other country commitments





Thank you

CCDR reports:

<https://www.worldbank.org/en/publication/country-climate-development-reports>

Thailand Economic Monitor: Thailand's Path to Carbon Neutrality

<https://www.worldbank.org/en/country/thailand/publication/thailand-economic-monitor-reports>