



Global Compact
Network Thailand



CFNT
Climate Finance Network Thailand

Financing NDC 3.0

Challenges and Opportunities

Toward Net-zero 2050

A UN Global Compact and CFNT Webinar

18th March 2026

10.00 AM – 11.15 AM

Agenda

- | | | |
|----|---|---------|
| 1. | Financing Gap & Allocation Crisis | 10 mins |
| 2. | Cost-Effective Opportunities | 10 mins |
| 3. | Beyond Mitigation: Adaptation & Unlocking International Climate Finance | 15 mins |
| 4. | The Path Forward: From Pledge to Performance | 15 mins |

1. Financing Gap & Allocation Crisis

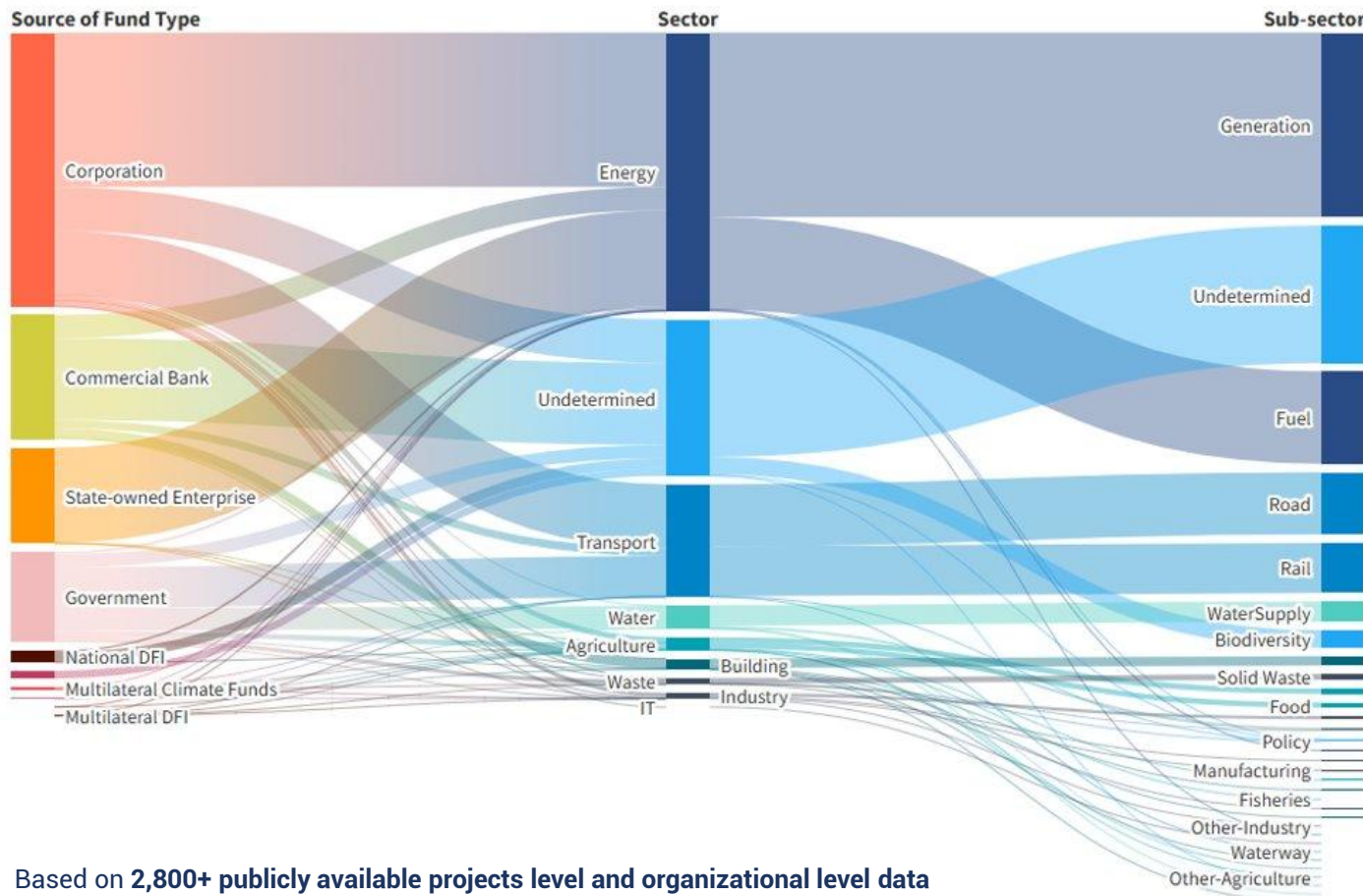


Thailand's Current Climate Finance Landscape

Climate Mitigation Finance in Thailand

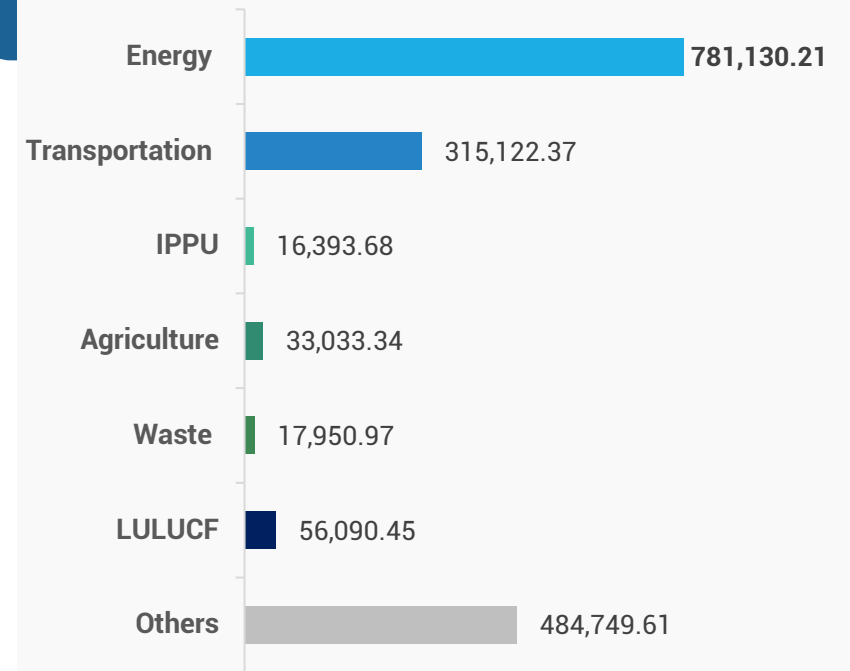
2018 – May 2025

Total Amount: THB 1,704,470.63 million



Based on 2,800+ publicly available projects level and organizational level data

Breakdown of Current Investment (NDC 3.0 aligned sectors)



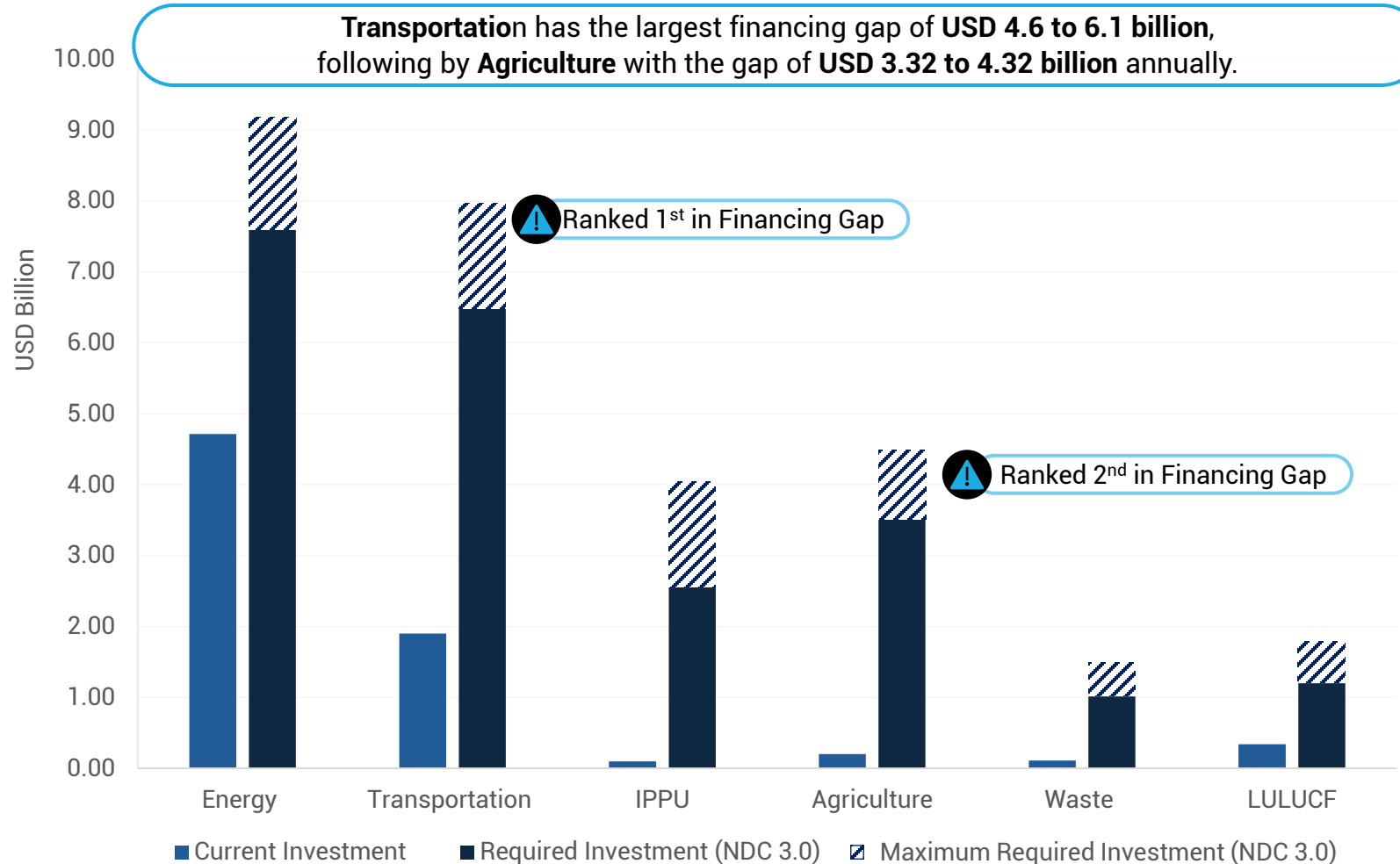
- CFNT's 2025 Climate Finance Tracker reveals that climate mitigation investment totaled THB 1,704,470.63 million (approximately USD 51.42 billion)
- Energy secured **45.83%** of the total climate finance, following by transportation at **18.49%**.

A. Identification of Financing Gaps



Current Investment versus Required Investment

Thailand need to capture at least **USD 224.05 billion** by 2035 achieve its NDC 3.0 target



Where is Thailand in Financing NDC 3.0?

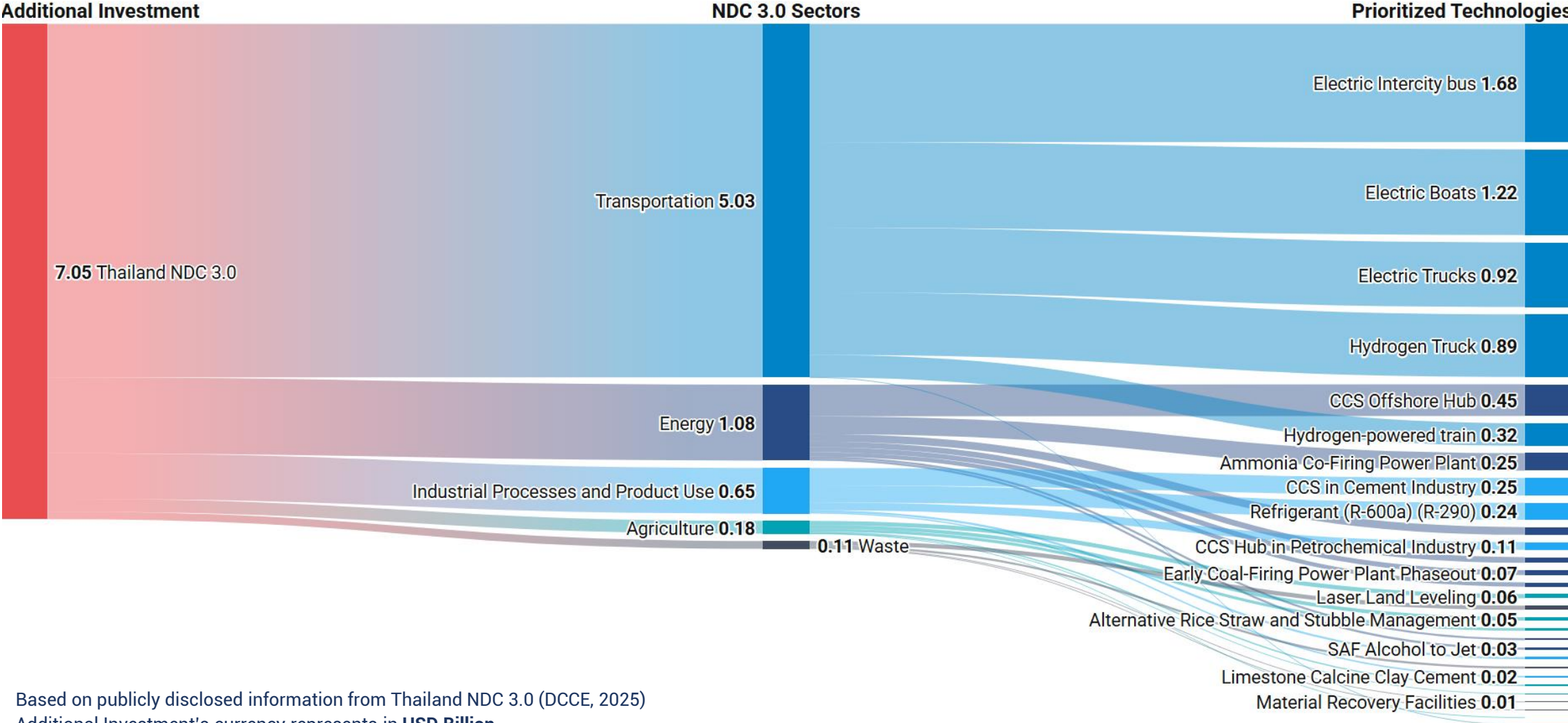
- Thailand NDC 3.0 declared to require an **additional USD 7.05 billion** by 2035.
- Our analysis found Thailand will need to secure at least **USD 22.4 billion annually** to be in line with the NDC 3.0 targets.
- The annual investment gap widens, ranging from **USD 15.05 to 21.15 billion**, for every sectors in NDC 3.0

B. Sectoral Financing



Breakdown of Thailand NDC 3.0 Sectoral Financial Flows

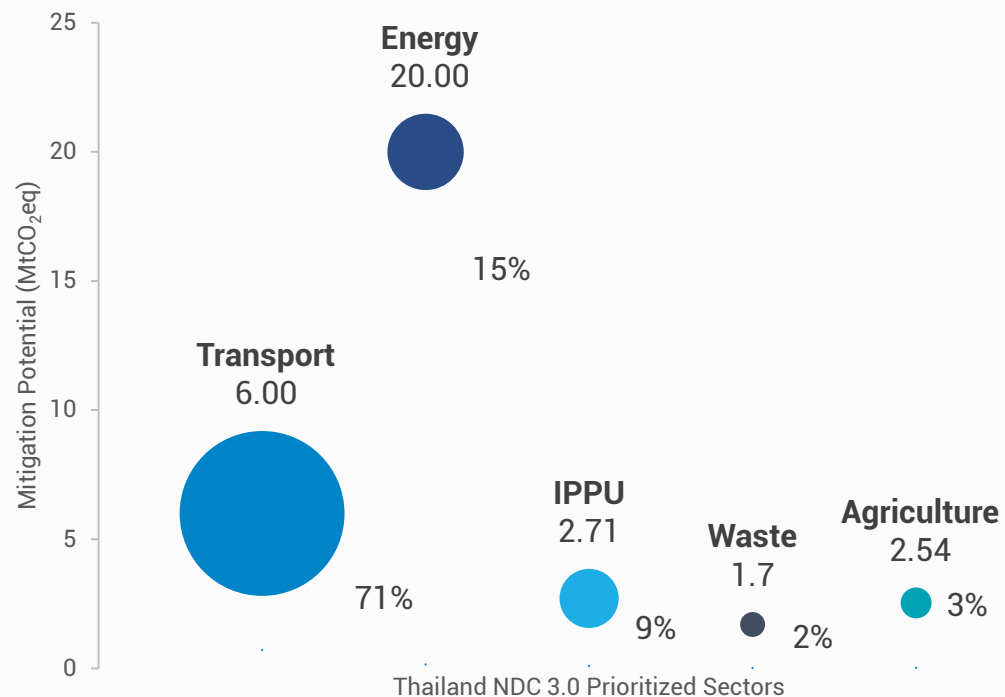
Total Additional Investment Required by 2035
Total Amount: USD 7.05 billion



Based on publicly disclosed information from Thailand NDC 3.0 (DCCE, 2025)
Additional Investment's currency represents in **USD Billion**

Overview: Thailand NDC 3.0's Sectoral Financing

NDC 3.0's Required Investment and Mitigation Potential



- Transportation is projected to receive **USD 5.03 billion**, approximately **71%** of the total additional investment by 2035, with mitigation potential of 6 MtCO₂eq.
- Energy is projected to receive **USD 1.08 billion**, approximately 15% of the total additional investment by 2035, with mitigation potential of 20 MtCO₂eq.

Thailand's plan to achieve GHG emission reduction targets in NDC 3.0

NDC Sector	Total Additional Investment by 2035	Mitigation Potential	Targeted GHG Reduction by 2035
	USD billion	Million tCO ₂ eq	Million tCO ₂ eq
Energy	1.08	20.00	117.1
Transport	5.03	6.00	54.2
IPPU	0.65	2.71	33.8
Agriculture	0.18	2.54	52.9
Waste	0.11	1.60	12
Total	7.05	32.85	270
LULUCF	N/A	N/A	-118
Net Emission			152

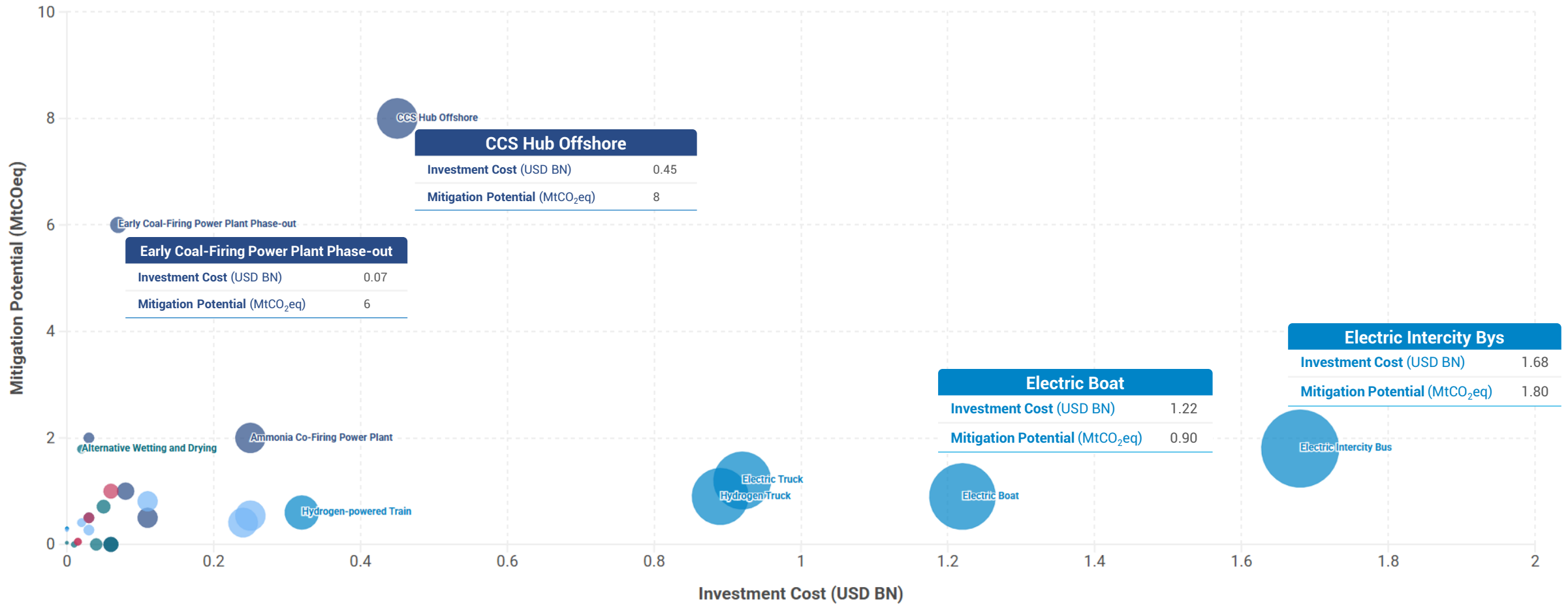


NDC 3.0 projected the need to secure an additional investment of USD 7.05 billion in technologies whose combined **mitigation potential represents only 12%** of the national GHG emission reduction target for 2035.

Breakdown of NDC 3.0's Additional Investment Cost and Mitigation Potential

Thailand NDC 3.0 Prioritized Technologies

Total Additional Investment Required by 2035: USD 7.05 billion
 Total Mitigation Potential from prioritized technologies: 32.85 MtCO₂eq



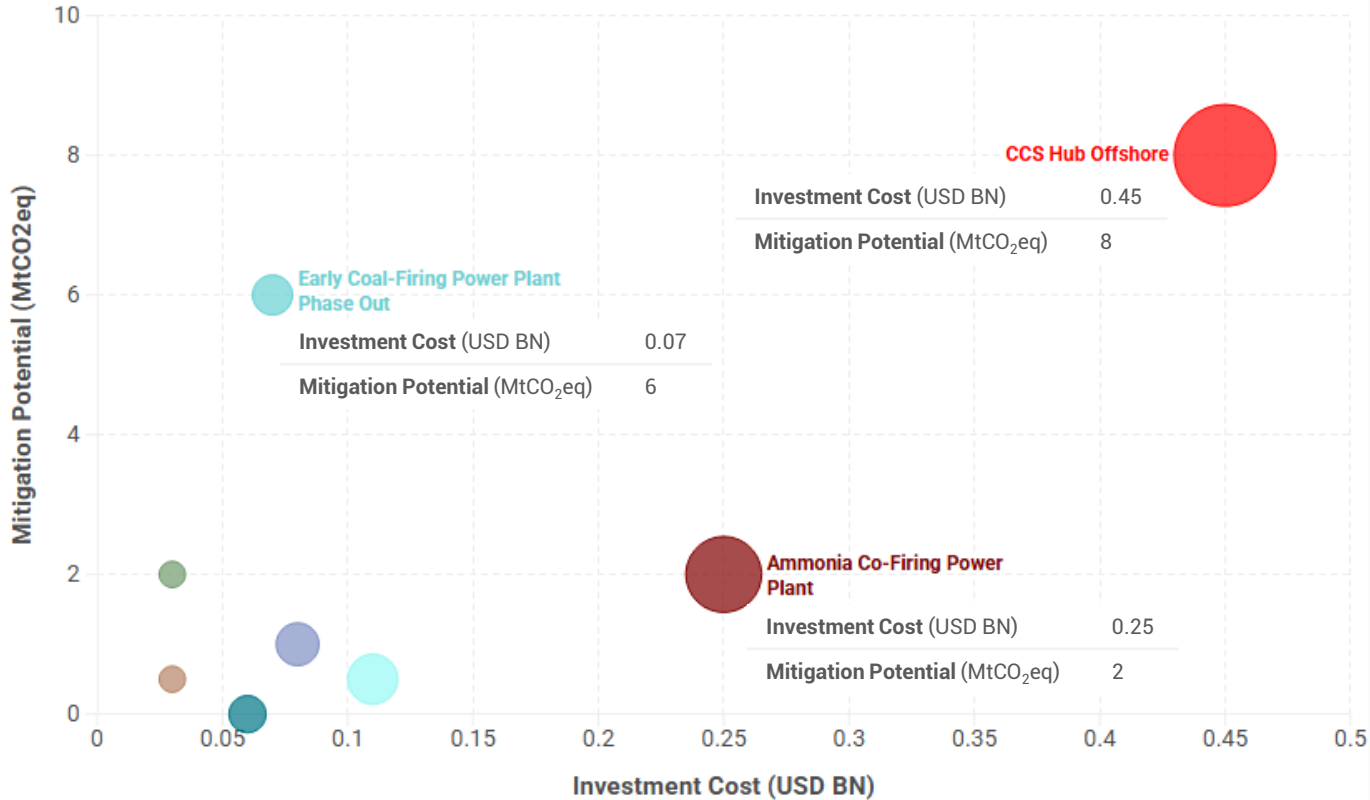
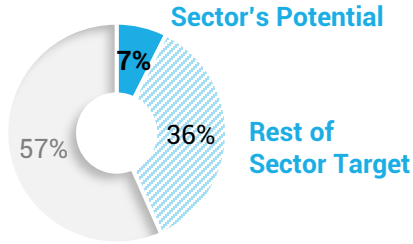
Sector ● Transportation ● Energy ● Agriculture ● IPPU ● Waste

Energy

- Total Mitigation Potential (2035)
- Sectoral GHG Emission Reduction Target (2035)

20 MtCO₂eq

117.1 MtCO₂eq



Technology ● Ammonia Co-Firing Power Plant ● Battery Energy Storage System ● CCS Hub Offshore ● Early Coal-Firing Power Plant Phase Out
 ● Hydrogen Co-Firing Power Plant ● SAF Alcohol to Jet ● SAF by Fischer-Tropsch ● Small Modular Reactors

MtCO₂eq: Million Tonnes of Carbon Dioxide Equivalent
 Source: DCCE, UNFCCC (2025). [Thailand NDC 3.0](#), CFNT Analysis

CFNT's Key Analysis

● Cost Optimized Option:

Early Coal-Firing Power Plant Phase Out
 11.07 USD/ tCO₂eq

● High Investment, Low-Impact Option:

Carbon Capture Storage (Offshore)
 56.84 USD/ tCO₂eq

Ammonia Co-Firing Power Plant
 125 USD/ tCO₂eq

Key Challenges:

Thailand's energy market structure and contractual lock-in: Thailand still uses Enhanced Single Buyer system, which government-owned EGAT is the primary purchaser of electricity, with guaranteed "take or pay" clause in Power Purchase Agreement.

Subsequently, investors perceived divestment of financially reliable coal-firing power plants is economically irrational.

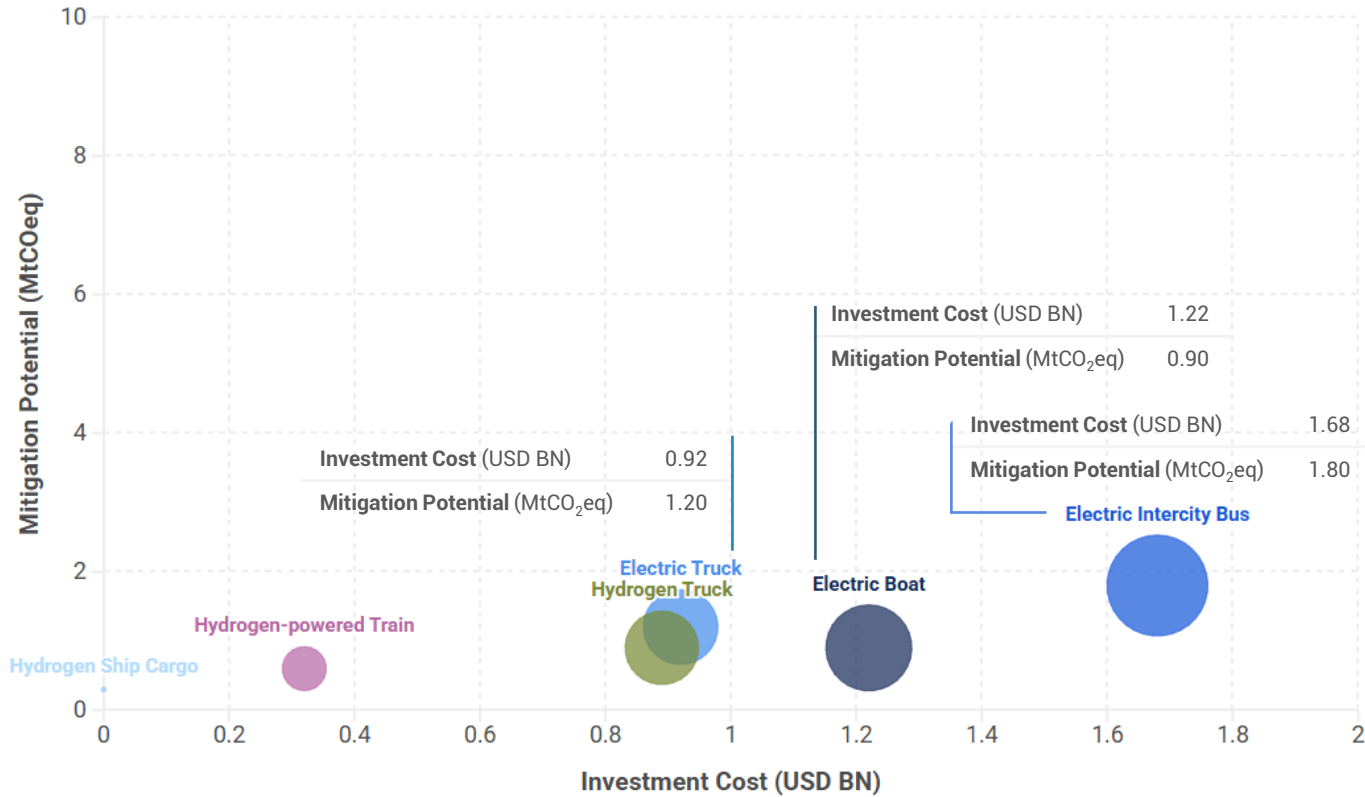
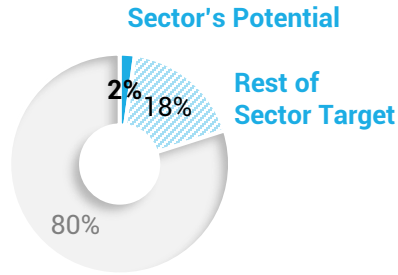
Transportation

Total Mitigation Potential (2035)

6 MtCO₂eq

Sectoral GHG Emission Reduction Target (2035)

54.2 MtCO₂eq



Technologies ● Electric Boat ● Electric Intercity Bus ● Electric Truck ● Hydrogen Ferry and Cruise Passenger ● Hydrogen Ship Cargo ● Hydrogen Truck ● Hydrogen-powered Train

CFNT's Key Analysis

High Investment, Low-Impact Option:



Electric Intercity Bus
933.29 USD/ tCO₂eq

USD 340,000 per bus
Intended Implementation: 5000 buses



Electric Boat
1,353.91 USD/ tCO₂eq

USD 610,000 per boat
Intended Implementation: 2000 boats



Electric Trucks
769.96 USD/ tCO₂eq

USD 10,000 per truck
Intended Implementation: 80,000 trucks

Key Challenges:

Thailand NDC 3.0 is heading toward financing intensive-capital technological solutions **without foundational investment in urban transportation infrastructure and logistics management.**

2. Cost-Effective Opportunities



Agriculture



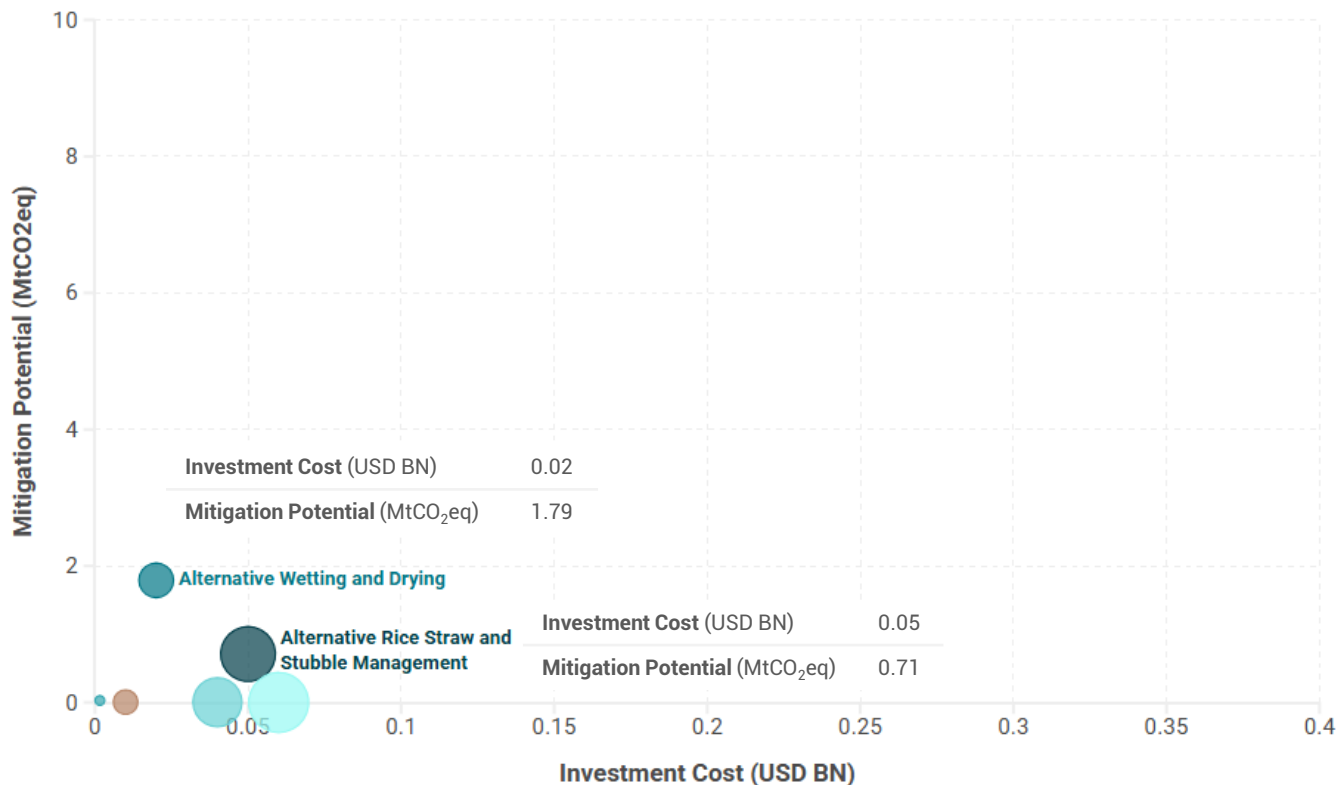
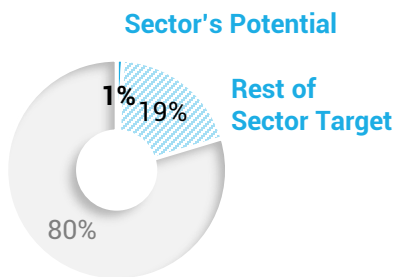
Total Mitigation Potential (2035)

2.54 MtCO₂eq



Sectoral GHG Emission Reduction Target (2035)

52.9 MtCO₂eq



Technology ● Alternative Rice Straw and Stubble Management ● Alternative Wetting and Drying ● Biochar ● Improvement of Livestock Feed
 ● Laser Land Leveling ● Site-specific Nutrient Management

MtCO₂eq: Million Tonnes of Carbon Dioxide Equivalent
 Source: DCCE, UNFCCC (2025). [Thailand NDC 3.0](#), CFNT Analysis

CFNT's Key Analysis

● Cost Optimized Option:



Alternative Wetting and Drying
 5.81 USD/ tCO₂eq



Alternative Rice Straw & Stubble Management
 34.31 USD/ tCO₂eq



Biochar
 27.95 USD/ tCO₂eq

● High Investment, Low-Impact Option:



Animal Feed Improvement
 502.8 USD/ tCO₂eq

Key Challenges:

Thailand NDC 3.0 is currently a lack of clear implementation plan and climate risk assessments, even though agricultural industries are on the frontier of physical climate risks.

Without integrating adaptation strategies into climate-smart agriculture, Thailand risks losing the financing needed to secure a climate-resilient future for 12 million people.

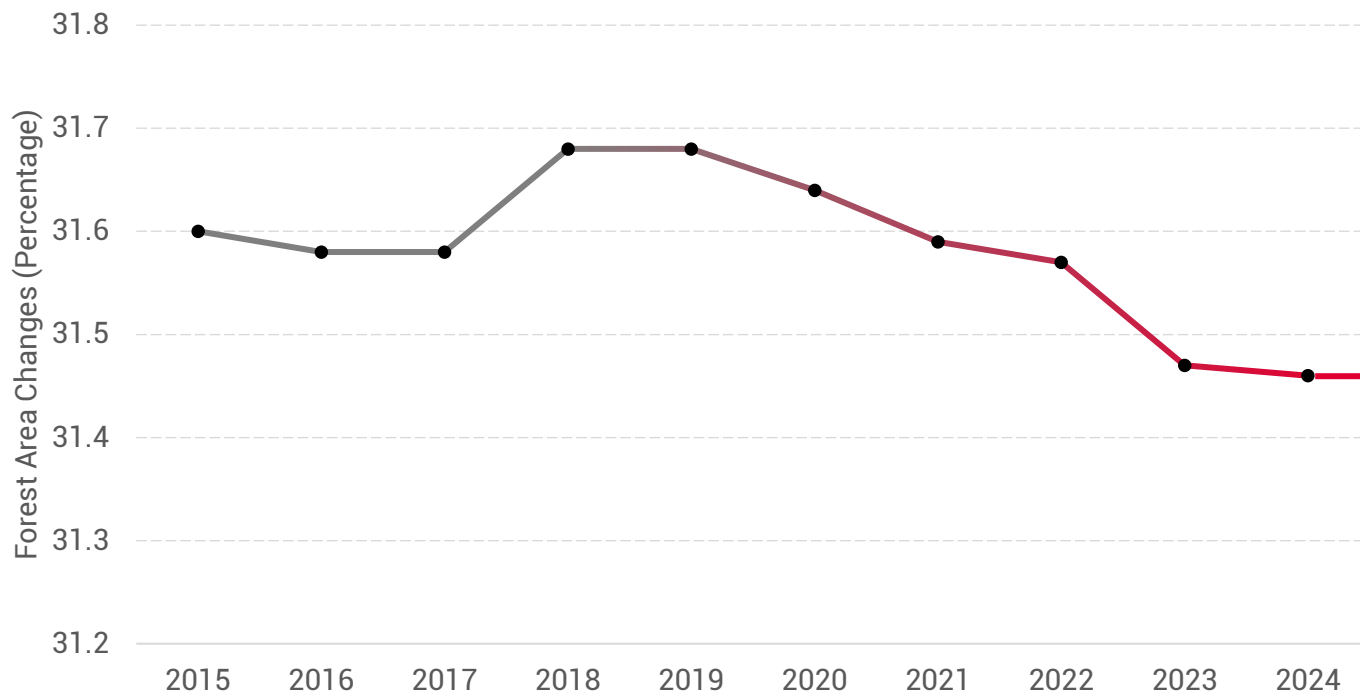
Land use, Land-use Change, Forestry (LULUCF)

 Total Mitigation Potential (2035) | **N/A**

 Sectoral GHG Emission Reduction Target (2035) | **-118 MtCO₂eq**

Thailand Forest Area Changes (2024)

Seub Nakhasathien Foundation reported forest area changes resulted from three causes: Land-use Change, Wildfires, and State-owned development projects



Thailand's Forest Situation 2024

Total Forestry Area accounted approx. **31.46%**, Approximately **101,785,271.58 Rai** of Total Country Area

-0.03%
(-32,884.18 Rai)
Annually

Total Deforestation Area of **830,000 Rai** between 2015 and 2025

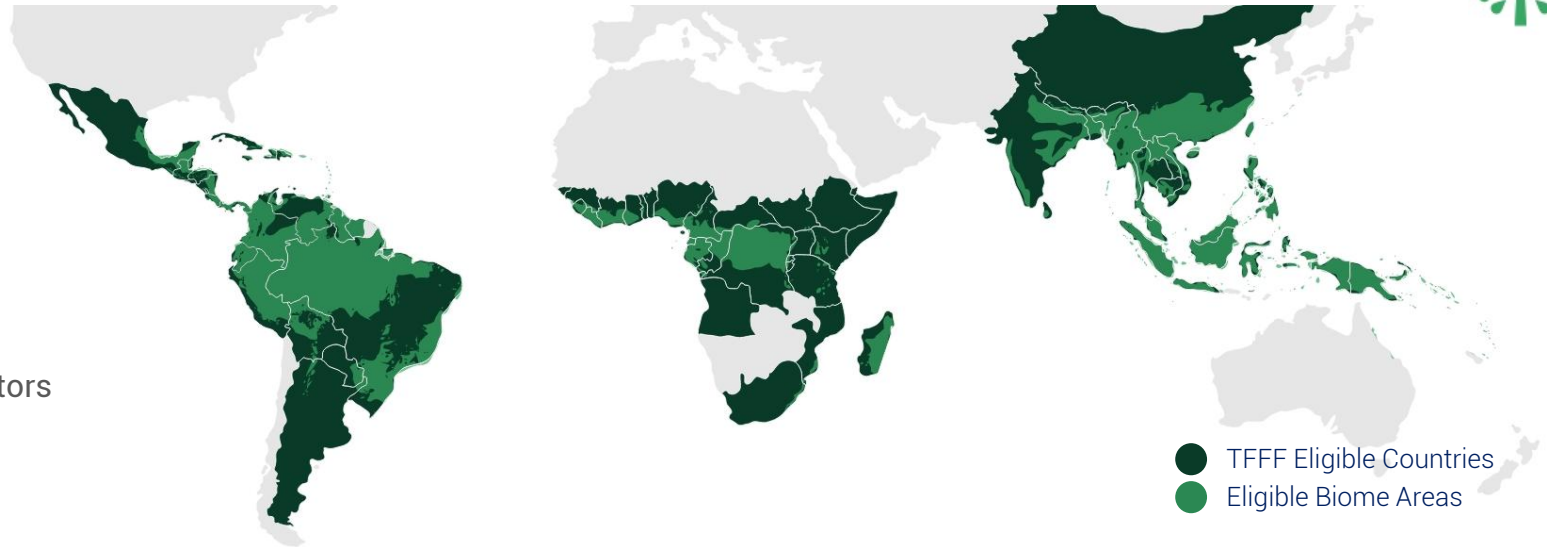
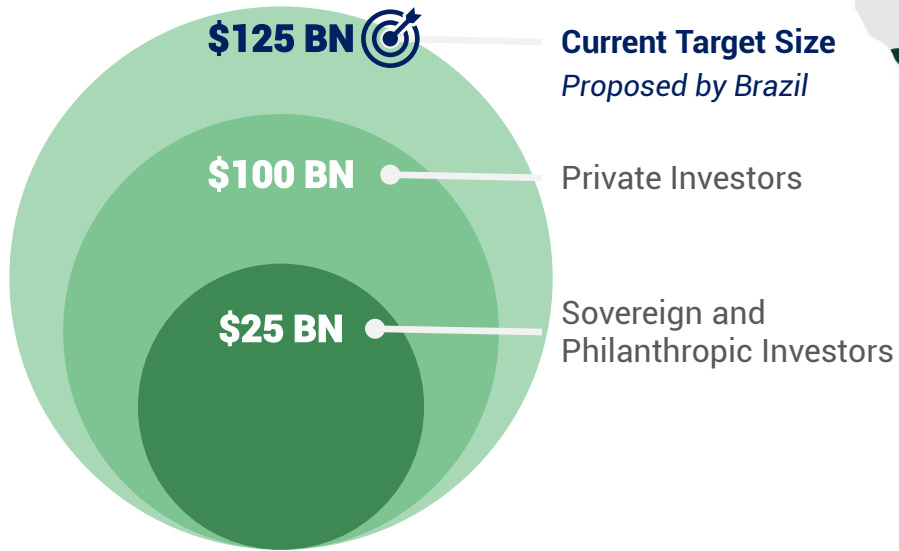


Image Source: Seub Nakhasathien Foundation

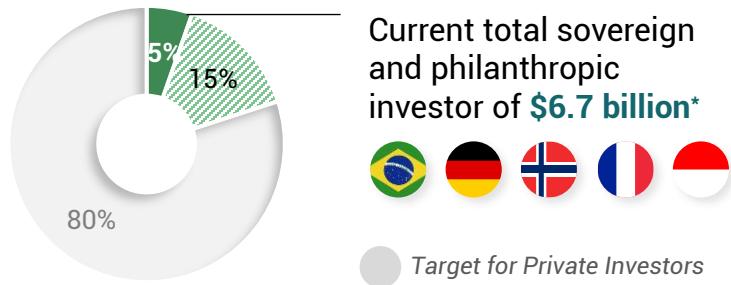
Land use, Land-use Change, Forestry (LULUCF)



Tropical Forest Forever Facility (TFFF)



Current Financial Pledge



List of Eligibility Criteria

- ① Deforestation rate based on rolling average of the previous 3 years must be **below 0.5%**
- ② A. Annual deforestation cannot increase above the rate at entry of TFFF
- ② Reliable, Auditable, and Transparent Monitoring Systems of Tropical Forest
- ③ Fair resources allocation of funds to Indigenous People and Local Communities
- ④ Compliance with transparency and accountability standards for TFFF Payment; **Such as the demonstration of National Public Financial Management**

*Data as of November 2025 from [WRI](#)

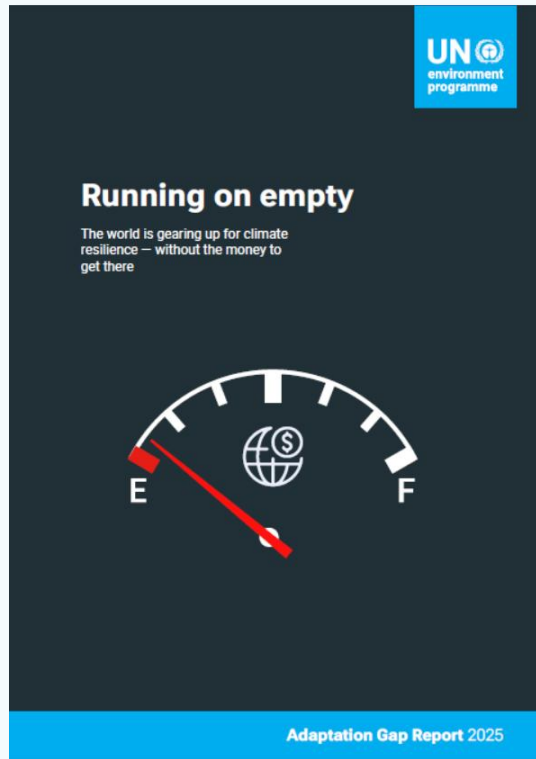
Remark: Full criteria of TFFF's eligibility can be refer to TFFF's [Operation Manual](#)

3. Beyond Mitigation: Adaptation & Unlocking International Climate Finance

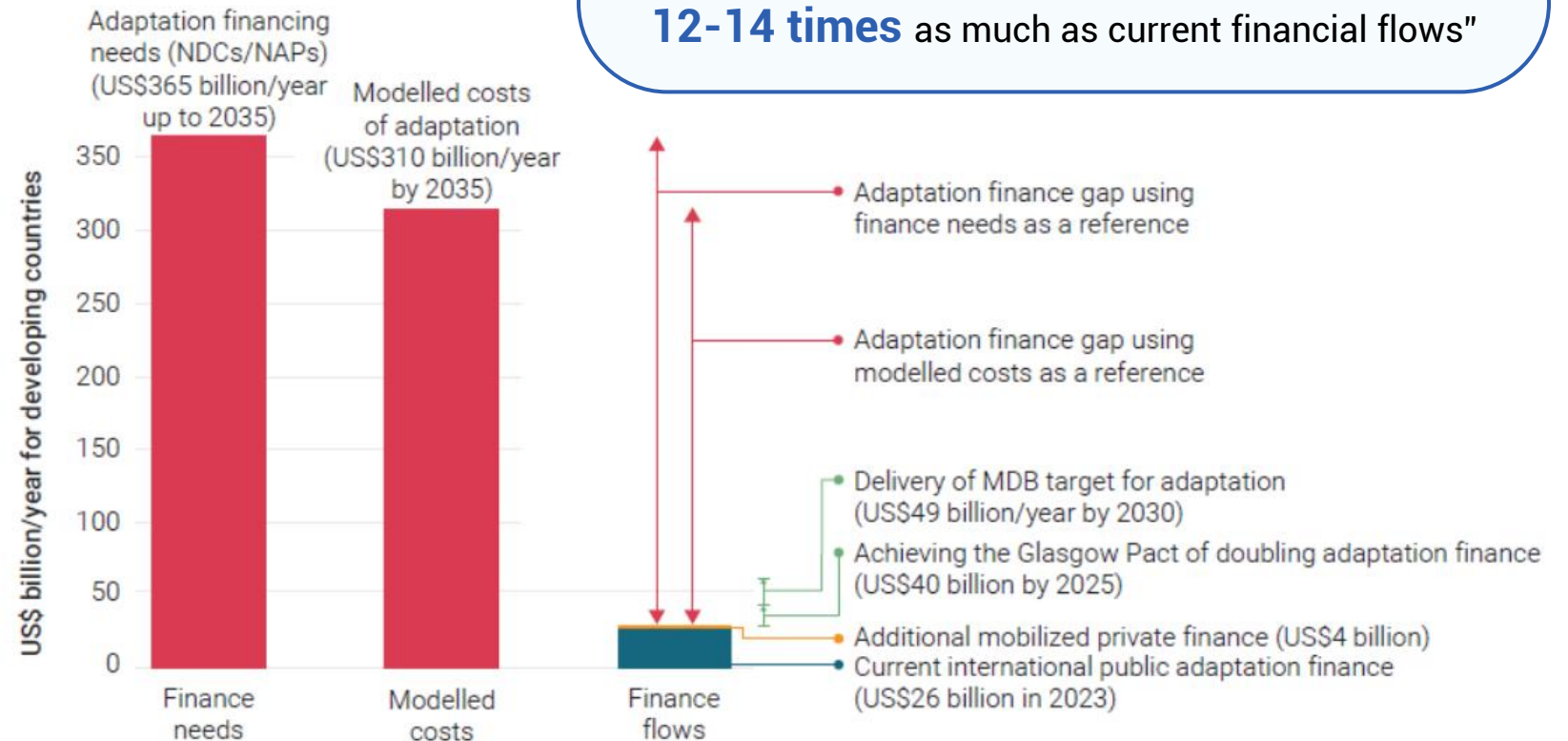


Global Progress: Adaptation Gap Report 2025

Adaptation Gap Report



“Adaptation financing needs in developing countries is **12-14 times** as much as current financial flows”



Note: In constant 2023 prices. Domestic and private finance flows are excluded.

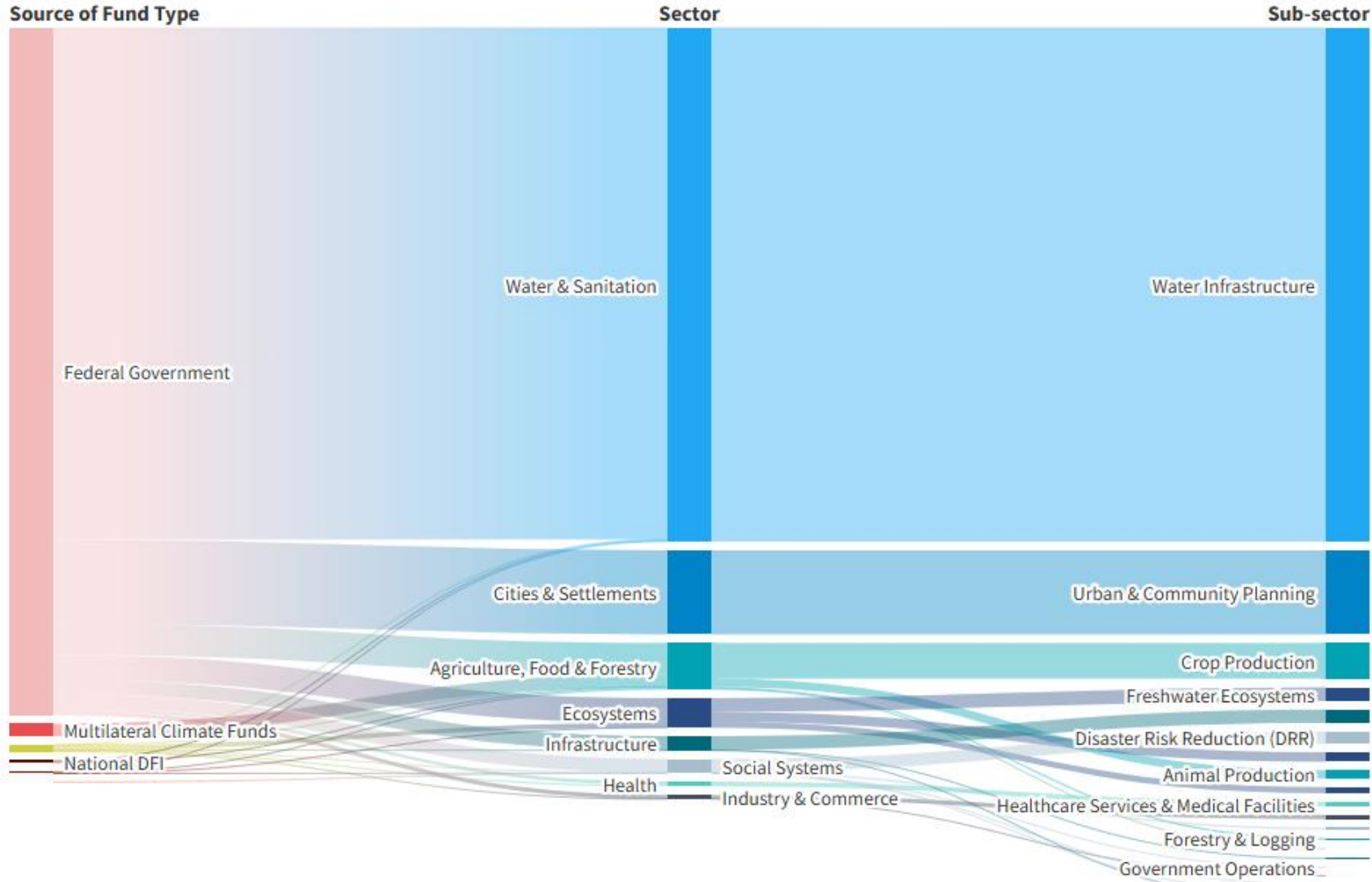
Remark: NDCs: Nationally Determined Contributions, NAPs: National Adaptation Plans

Climate Adaptation Finance in Thailand

2020 – 2024

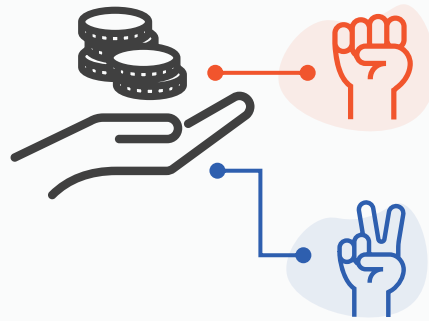
Total Amount: THB 148,096.20 million

In collaboration with the Puey Ungphakorn Institute for Economic Research (PIER), we draw data from over 670 publicly available project- and organization-level sources.



Where Thailand stands in reporting adaptation components in NDC 3.0

NDC 3.0 Synthesis Report Insights on Climate Finance



Mitigation

92% of Parties prioritizes technologies related to energy, transport and AFLOU

Adaptation

≥ 50% of Parties prioritize climate monitoring and observations technologies apart from Agrifood system and water infrastructure.

Total of 73% of Parties included adaptation components in NDC 3.0

"Parties reported the costed needs are focused on Adaptation: (i) reflecting greater ambition, (ii) broader sectoral coverage, and (iii) stronger integration of climate finance into national budgeting and policy frameworks."



Thailand was among 27% of signatory countries that **have not reported** adaptation and loss and damage components in its NDC 3.0

4TH

out of 191 countries

Highest exposure to riverine flooding in the world



Source: 2025 Inform Risk Index

30TH

out of 174 countries

Most affected country by extreme weather events in last two decades.



2025 Germanwatch Climate Risk Index

37TH

out of 191 countries

Highest exposure to drought in the world



Source: 2025 Inform Risk Index

SECTOR SPECIFIC GOALS

THAILAND'S NATIONAL ADAPTATION PLAN (NAP)



Water



Agriculture



Tourism



Health



Natural resources

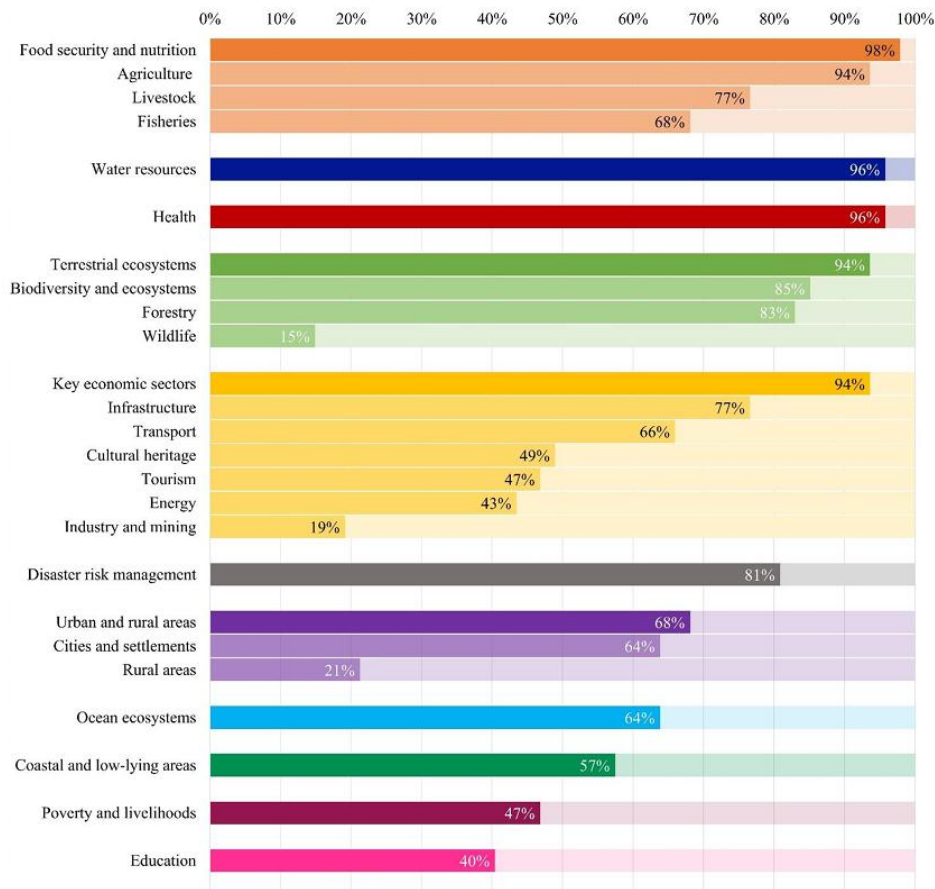


Human settlement

What are the next steps for Thailand?



NDC 3.0 Synthesis Report: Overall Adaptation Components



REPORTING ON ADAPTATION

Thailand may consider Parties' core components in increasing ambitions based on:



Detailed information on the **institutional and legal framework** for adaptation



Elaborating the National Adaptation Plan progresses



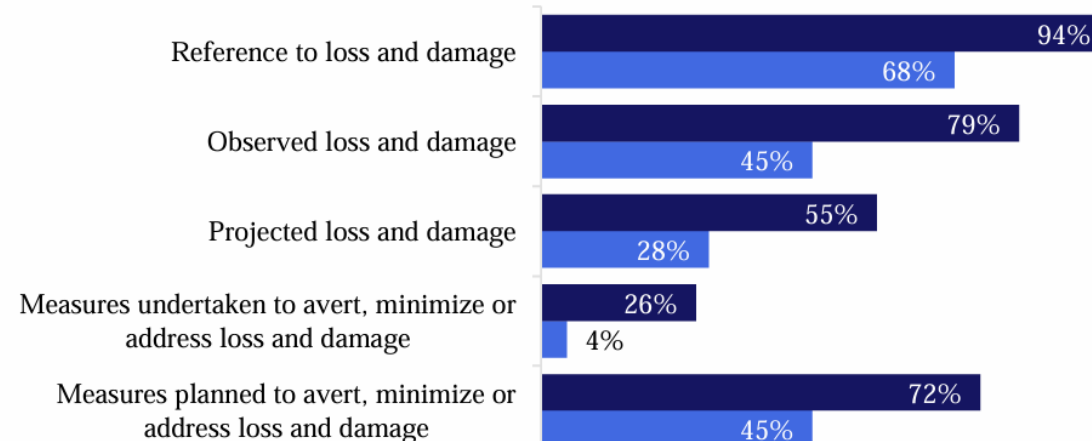
Developing **quantified targets** for M&E of adaptation measures and indicators



Identifying the interdependency of **climate co-benefits** actions

LOSS AND DAMAGE

Thailand may consider UNFCCC's disclosure on how Parties are increasingly reporting based on following Loss and Damage components:



● New NDCs ● Previous NDCs

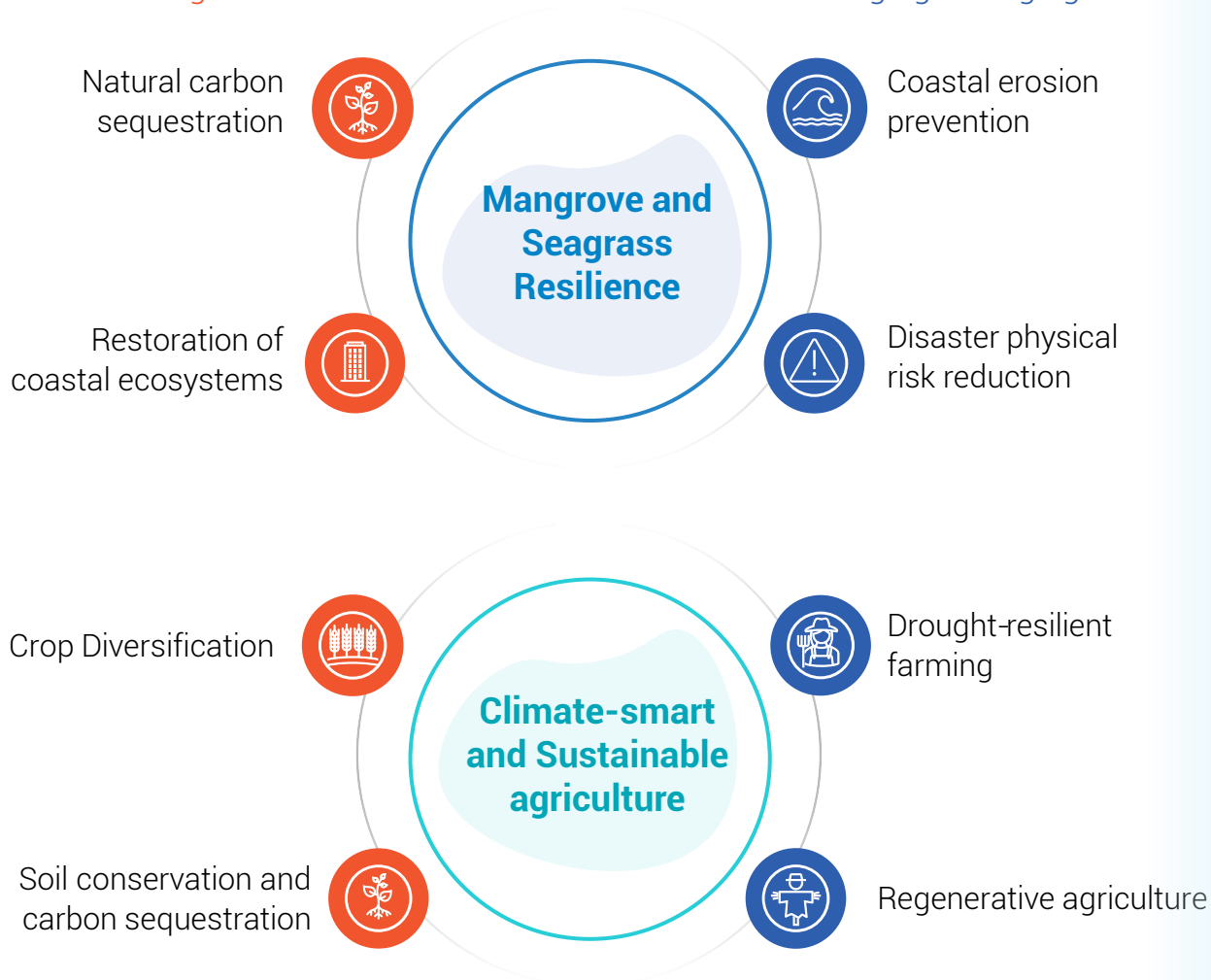
Opportunities: Financing Climate Co-benefits

Climate Mitigation

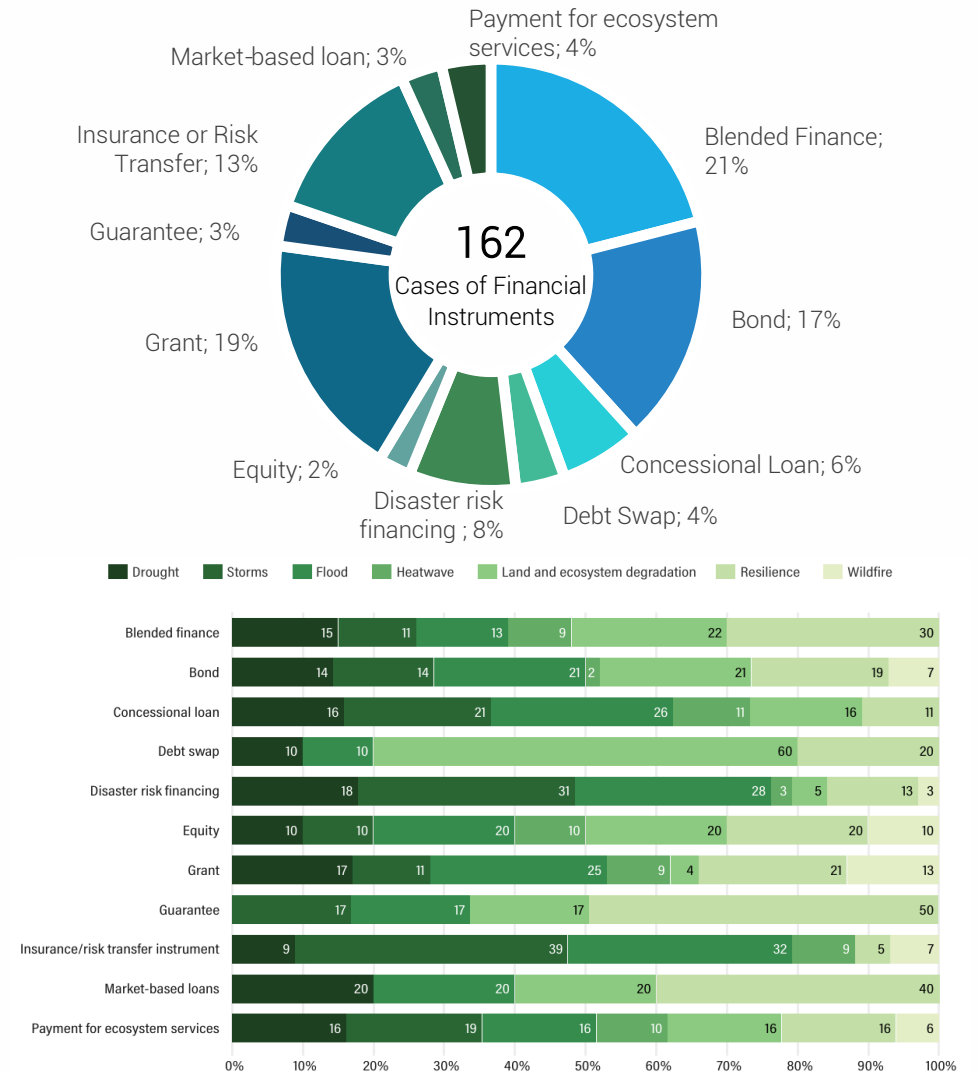
"Preventing Climate Crisis"

Climate Adaptation

"Managing Emerging Risks"



World Resources Institute's: diverse range of financial instrument for climate adaptation and resilience (2015-2025)



4. The Path Forward: From Pledge to Performance



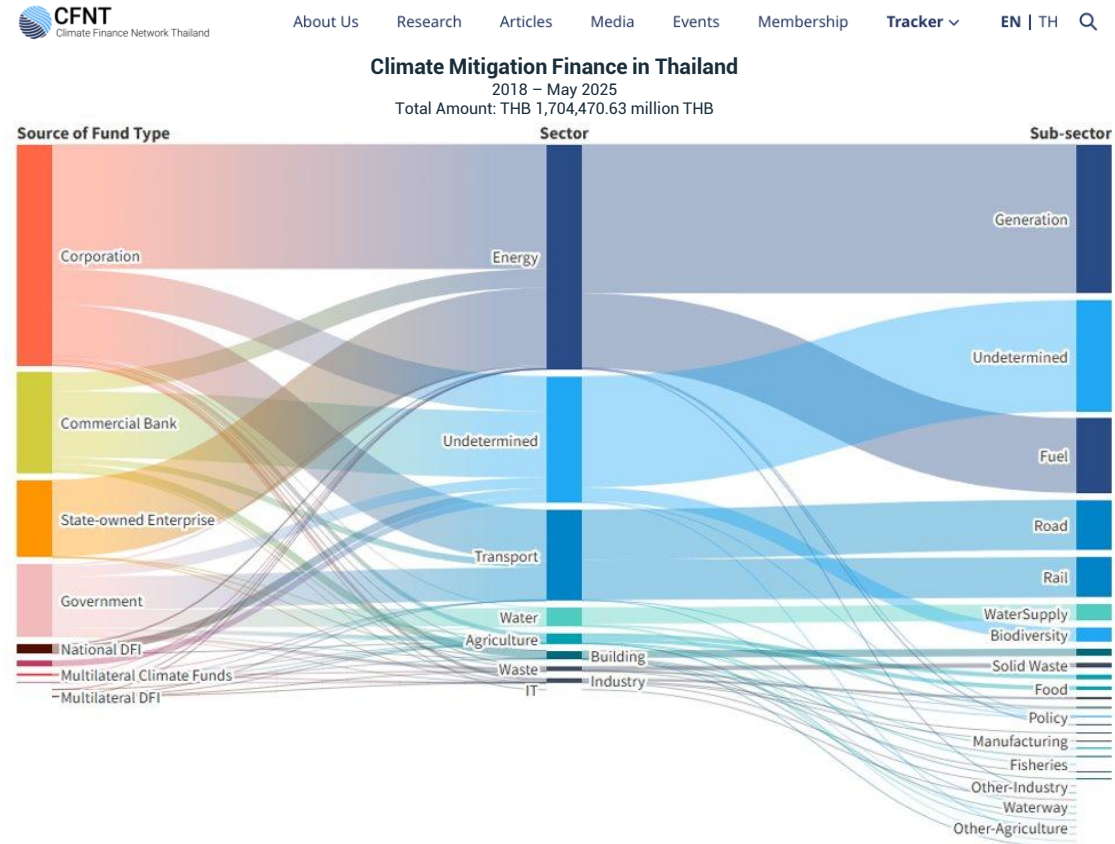
Three strategic pathways to decoding Thailand's financing gap:

1. Data transparency is key.

01

Data Transparency & Detailed Action Plan

- Supplement NDC with status report on existing climate finance flows
- Develop granular, data-driven action plan with sector-specific milestones
- Build bankable project pipeline to attract international investors
- Leverage CFNT's 2025 Climate Finance Tracker as baseline mapping tool



What the Tracker Enables:

Maps capital sources to specific climate actions in Thailand

Covers multiple funding sources and sectors in one view

Enables the implementing agency to track current investment needs

Creates an enabling environment for long-term climate investment

Narrows the gap toward net-zero targets with actionable data

Three strategic pathways to decoding Thailand's financing gap:

2. Leveraging on public finance as de-risking mechanism.

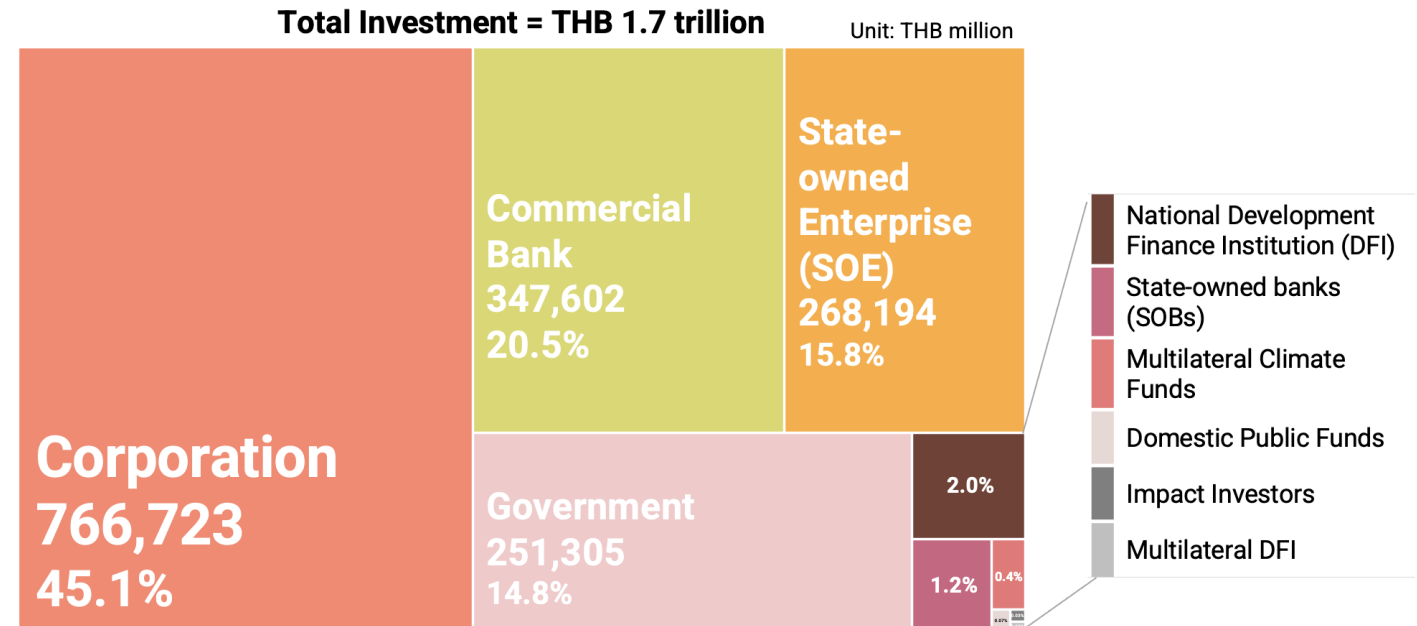
02

Leverage Public Finance as De-risking Mechanism

- Operationalize Climate Change Act & Climate Change Fund
- Prioritize vulnerable sectors and SMEs with limited climate finance access
- Adopt blended finance mechanisms (partial credit guarantees, concessional loans)
- Align NDC 3.0 with PDP, NAP, and Thailand Taxonomy for policy consistency

Total climate investment in Thailand by source of fund

Private sector takes a leading role in financing climate actions, approximately two-third of total climate investment in 2025. Public sector can be leveraged as de-risking mechanism through several initiatives.



Source: CFNT (2025) Thailand Climate Finance Tracker 2025

Three strategic pathways to decoding Thailand's financing gap:

3. Thailand could benefit from foreign/multilateral climate facilities.

03

Tap Foreign/Multilateral Climate Facilities

- Engage with Just Energy Transition Partnership (JETP) – peers Indonesia & Vietnam already benefit
- Enhance access to multilateral climate fund e.g. Green Climate Fund (GCF) Green Climate Fund, Adaptation Fund and Climate Investment Fund (CIF)
- Prepare LULUCF compliance to participate in TFFF



JETP

~\$20B

committed to Vietnam alone

Just Energy Transition Partnership

G7-led blended finance deal to accelerate coal phase-out & renewables in emerging economies. JETP Indonesia receives 20 Billion USD for energy transition.



GCF & CIF

\$34B+

combined available capital

Green Climate Fund, Global Environment Facility, Adaptation Fund and Climate Investment Fund

Dedicated funds for climate adaptation & mitigation projects in developing nations. In 2025, they funded USD 34 billion in approved financing and USD 176.2 billion in co-financing.



TFFF

\$125B

available for LULUCF-ready countries

Tropical Forest Forever Facility (TFFF)

Results-based payments for countries with verified land-use & forestry accounting.



3. Key Takeaways



Key Takeaways

1

Elevated Ambition, Unfunded Gap

NDC 3.0 shifts to absolute GHG reductions (153 MtCO₂eq by 2050, 15 years earlier) but requires an additional USD 7.05 billion by 2035 with no investment action plan.

2

Adaptation Chronically Underfunded

Despite being among the world's most climate-vulnerable nations, adaptation received just USD 4.46 (2020–2024), under 1% of total climate finance, while 73% of UNFCCC signatories are advancing adaptation commitments.

3

LULUCF: Potential Untapped

NDC 3.0 mentions forest carbon sequestration but lacks financing detail. Engaging with the Tropical Forest Forever Facility (TFFF) at COP30 is a missed opportunity; no financing requirement is specified.

4

Resource Misallocation Risk

High-cost, low-impact technologies are favored over competitive solutions in priority sectors. Government should play a key role to develop transparent, investment-ready project pipelines to bridge funding gaps.

5

Transparency is the Unlock

Data transparency, policy consistency, and clear/strong political will are prerequisites for unlocking innovative climate financing and mobilizing domestic and multilateral support.

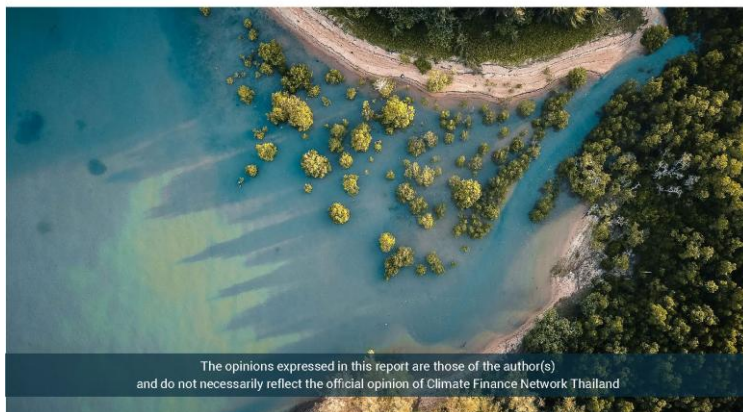


Financing NDC 3.0: Challenges and Opportunities Toward Net Zero 2050

February 2026

by

Thanida Lawseriwanich
Satida Adsavakulchai



Financing NDC 3.0: Challenges and Opportunities Toward Net Zero 2050



Join us!

 <https://climatefinancethai.com/>

“Climate Finance Network Thailand”



Facebook



LinkedIn



Instagram



YouTube