ผู้สนับสนุน

ผู้จัดทำ

ที่ปรึกษา

THAILAND TAXONOMY

A Deep Dive into the Transportation Sector

June 2025

Version: 24 June 2025

What You Will Learn Today

1. Recap of the Thailand Taxonomy's overall framework and key principles.
2. Understand the Basic Principles of Thailand Taxonomy for the Transportation sector.
3. Deep dive into the Technical Screening Criteria (TSC) for Transportation activities.
4. Explore practical applications and use cases for businesses.

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INTRODUCTION
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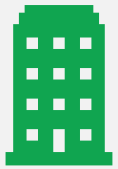
Energy

Transportation

Agriculture



Construction & Real Estate

Manufacturing

Waste Management

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The Importance of Thailand Taxonomy for a Sustainable Economy

มาตรฐานกลางแบบภาคสมัครใจ ที่ใช้อ้างอิงการจำแนกและจัดกลุ่มกิจกรรมทางเศรษฐกิจที่เป็นมิตรต่อสิ่งแวดล้อมของไทย

✓ It provides a common framework to steer the market and guide investors and stakeholders.

✓ It helps mobilise green financing, avoid greenwashing, and increase capital flows to truly green projects.

✓ It serves as a tool for the government to direct capital flows and achieve national climate objectives.

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Thailand Taxonomy identified and prioritizes 6 sectors that are both major contributors to environmental impacts for sustainable transformation, aligning with Thailand's economic structure and commitments.

Phase I

- Energy
- Transportation

Phase II

- Agriculture
- Construction & Real Estate
- Manufacturing
- Waste Management

Thailand Taxonomy is structured and designed to improve the ecological and climate credentials of the economy, and **activities within each sector are selected on the basis of the following**:

1. **Contribution to Environmental Objectives**
2. **Availability of Technologies and Best Practices**
3. **Align with National Policies & Other Green Taxonomies** (inclusion into other taxonomies)
4. **Economic Significance** certain activities is provided for information purposes, but it is not the main reason for activities selection.

*Climate-material activities are selected based on the International Standard Industrial Classification of All Economic Activities (ISIC)(Rev. 4) classification system.

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Advantages of Adopting the Thailand Taxonomy

3.Better Risk Management

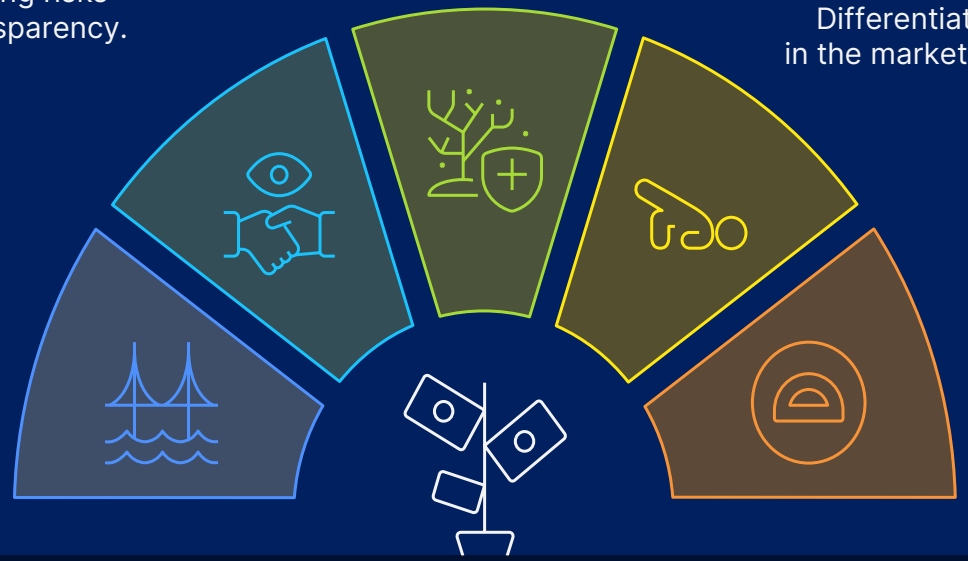
Helps identify and manage environmental risks for resilience.

2.Enhance Credibility

Builds trust and reduces greenwashing risks through transparency.

4.Competitive Advantage

Differentiates organizations in the market with sustainability.



1.Improve Access to Capital

Facilitates funding and favorable terms for green projects.

5.Future-Proofing

Aligns with future policies and avoids regulatory penalties.

- ✓ While Thailand Taxonomy is a powerful tool for promoting sustainability, it cannot be used as a one-size-fits-all solution for all environmental and economic challenges.
- ✓ Thailand Taxonomy is not a mandatory list of economic activities for investors to invest in or not invest in.
- ✓ There are other instruments that can be used to incentivize toward green investment.

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Taxonomy is:

- A system for classifying economic activities to separate sustainable activities from those that are unsustainable and harmful to the environment and climate.
- A convenient tool for use by economic agents, financial market participants and government agencies.
- A tool to categorise financial flows and increase transparency in disclosure, issuance of green financial instruments and financial decision-making.
- A tool to decarbonise those activities that have the potential to affect the climate (climate material) or environment.
- A living document

Taxonomy is NOT:

- A tax collection. The name Taxonomy contains "Tax" but it's not a tax.
- A classifier of activities into 'good' and 'bad'.
- A tool for assessing the financial or economic characteristics of an activity.
- Prohibit lending. Loans can still be issued according to the policies of financial institutions.
- Prohibit investment. Investments can still be made according to the risk appetite of each individual.

Source: Climate Bonds Initiative

Thailand Taxonomy Phase I

Thailand Taxonomy
Phase I

Draft revised 2025

Prepared by:

Climate Bonds Initiative

Supported by:

GB-TAP Green Bond Technical Assistance Program

IFC International Finance Corporation World Bank Group

Creating Markets, Creating Opportunities

IN PARTNERSHIP WITH

Thailand Taxonomy Board

BANK OF THAILAND

SEC

Department of Alternative Energy Development and Efficiency MINISTRY OF ENERGY

Energy Policy and Planning Office MINISTRY OF ENERGY

otp

TGO

FTI

FTI Renewable Energy Industry Club

GFA

*BOT and SEC are representatives of Working Group on Sustainable Finance (WG-SF)

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Basic Principles of Thailand Taxonomy for the Transportation Sector

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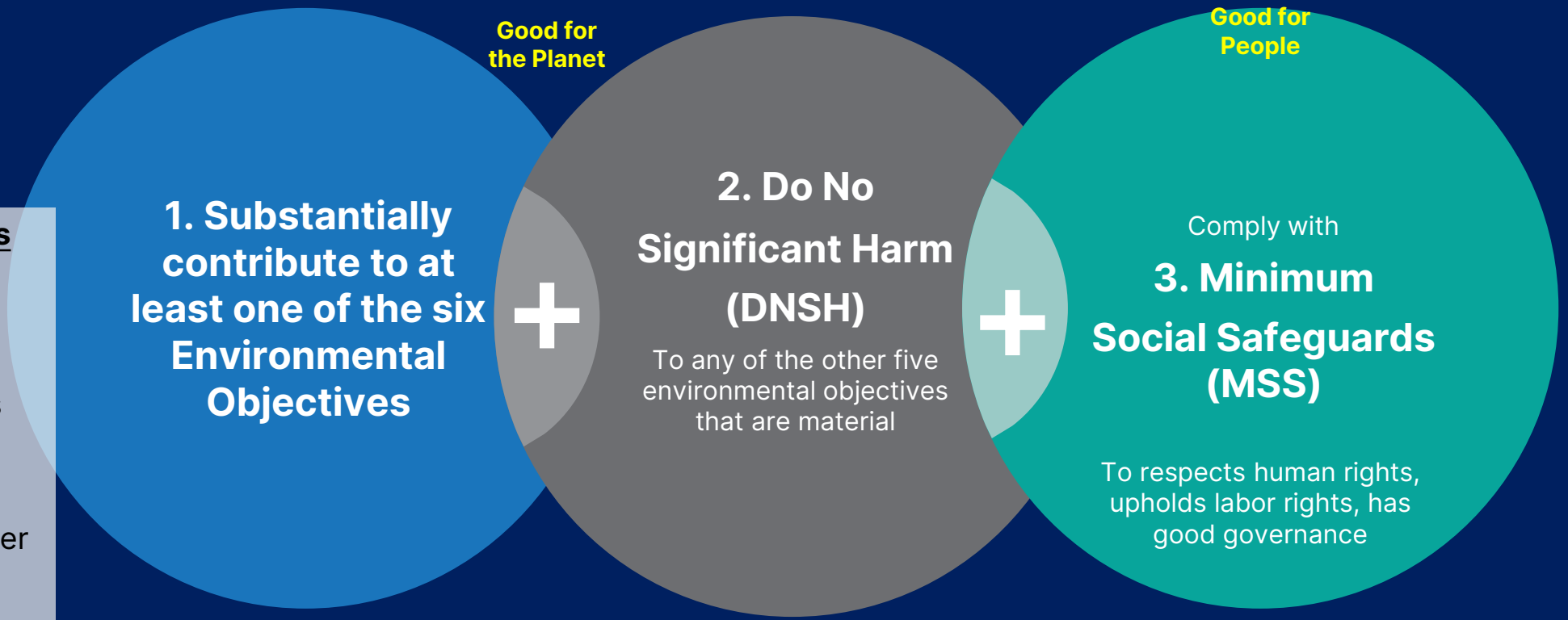
The 3 Core Pillars of Thailand Taxonomy Alignment

Key Development Principles

- ✓ Based on up-to-date climate science
- ✓ Covers a maximum of climate-material activities
- ✓ Interoperable with other green taxonomies
- ✓ Locally applicable, consider Thai Context in amber activities
- ✓ Provides paths to decarbonization for hard-to-abate sectors of the economy
- ✓ Dynamic & Living document



EO1- Climate change mitigation
EO2- Climate change adaptation
EO3- Sustainable use and protection of marine and water resources
EO4- Promotion of resource resilience and transition to a circular economy
EO5- Pollution prevention and control
EO6- Protection and restoration of biodiversity and ecosystems

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Thailand Taxonomy uses a “traffic light system" to assess if an economic activity makes a Substantial Contribution to at least one of the six Environmental Objectives

“Traffic Light System”

Green

Activities that **clearly and significantly contribute** to achieving one of the six Environmental Objectives

Amber

Activities that **can be developed to become more environmentally friendly** and potentially move into the green category in the future. They are crucial for the transition to a low-carbon & sustainable economy.

Red

Activities that **cause significant harm** to one or more Environmental Objectives and must be gradually phased out.

*All activities must comply with important principles such as the **Do No Significant Harm (DNSH)** principle and **Minimum Social Safeguards**.

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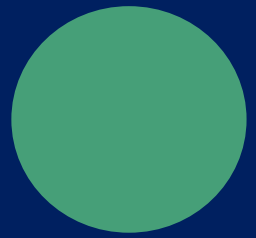
Threshold Modeling for Transportation Activities on Climate Change Mitigation

The Goal is to Create Clear Targets

The main purpose of the model is to set clear, science-based targets (thresholds) that define which business activities are truly "green" (aligned with the 1.5°C Paris Agreement goal) and which are "amber" (on a credible path to becoming green).

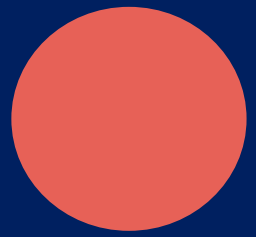


"Green" is the Ultimate, Ambitious Goal

The "green" target is set to the most ambitious international standard (1.5°C pathway) because it is scientifically necessary, attracts climate-aware international investors, and is more cost-effective in the long run than facing severe climate change.

"Amber" is the Practical Starting Point for Transition

For activities that cannot become green overnight, there is a transitional "amber" pathway. The starting point for this path is guided by Thailand's own national climate commitments (its NDC), creating a practical "grace period" for businesses to improve.



"Red" activities are those that are incompatible with the long-term net-zero goal, do not have a credible path to becoming green, and are considered harmful to climate change mitigation, meaning they should be phased out (e.g., internal combustion engine).

Flexible on Technology

The model is "technology-neutral."

It doesn't tell how to reduce its emissions. As long as the target can be met-whether by improving efficiency, using new machinery -it can be considered compliant.

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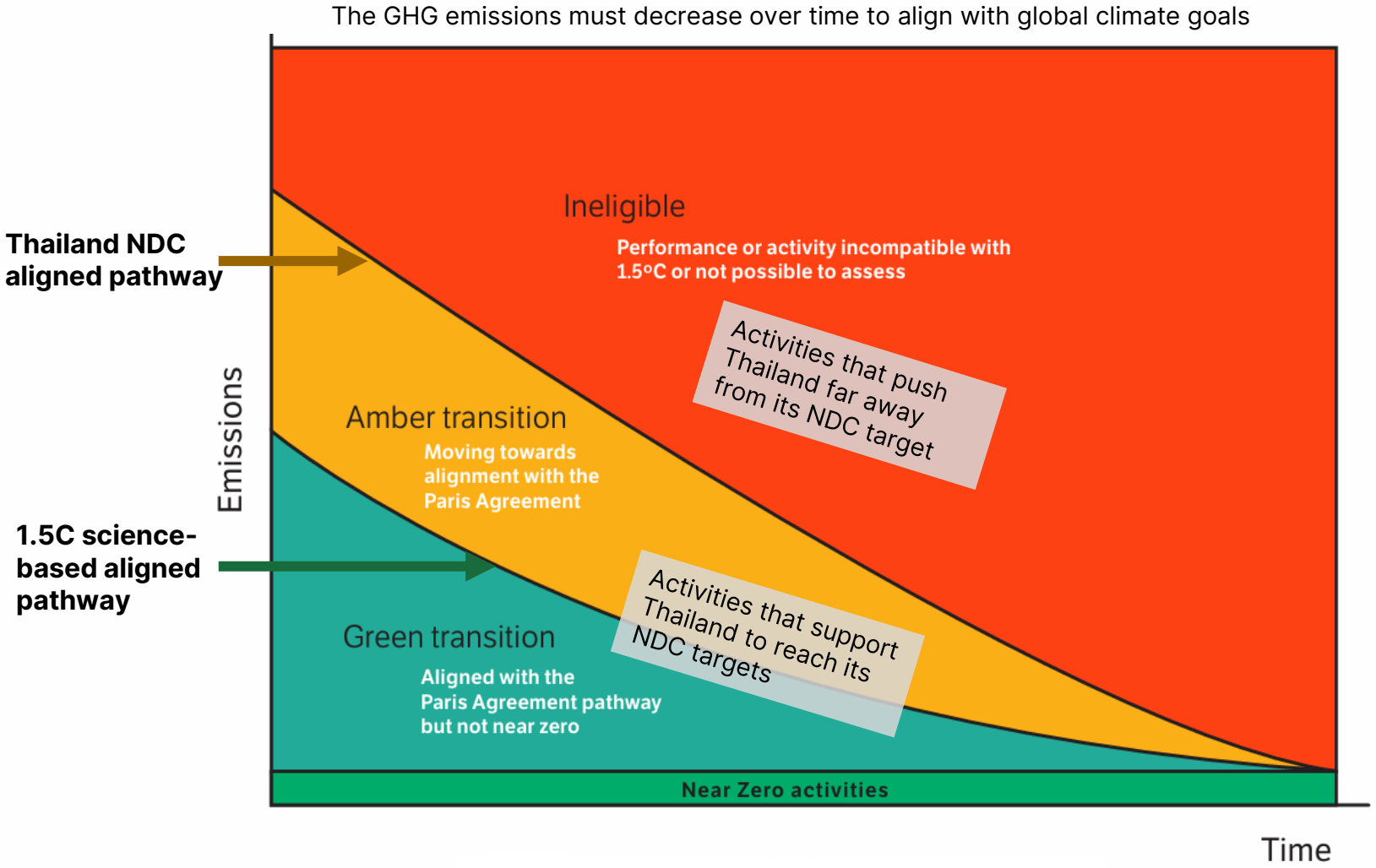
The goal for any business or economy is to move its activities downward on this chart from red to amber, from amber to green, and eventually, towards near-zero emissions.



- **New assets/ projects/ activities**: new projects must comply with green criteria.
- **Existing assets/ projects/ activities** could comply with either green or amber criteria.
- Thus, **amber criteria** are available for the transition of **Existing projects** only.
- For some activities, there will be no amber threshold.

Source: Climate Bonds Initiative, explained by Creagy

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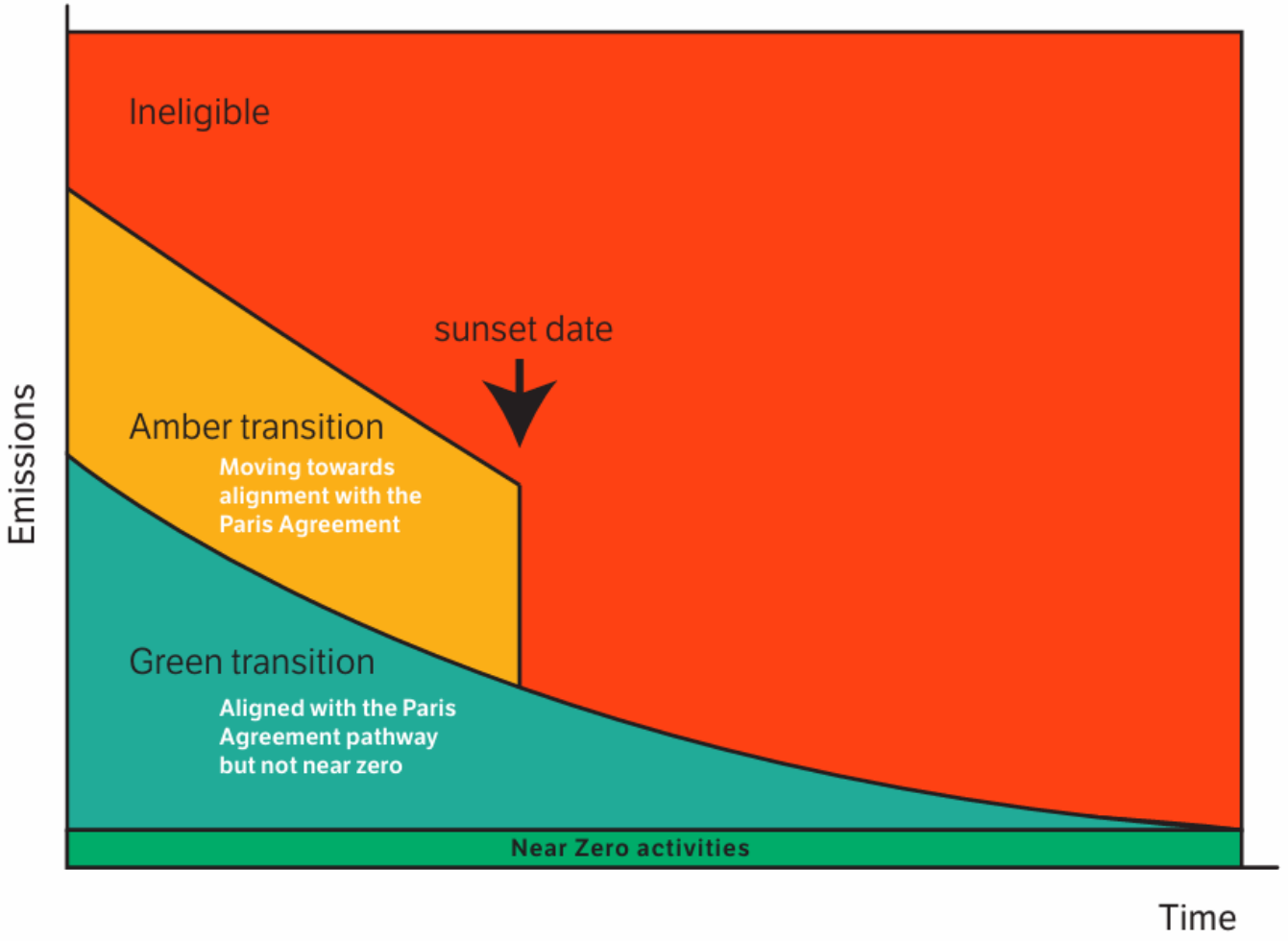
“Sunset date" acts as a deadline for the "Amber transition"

- A transition cannot last indefinitely – at some point in time, **the amber activity should be following a 1.5°C pathway to net zero.**
- The **Amber criteria have a sunset date (2040) to ensure that transition does not last forever** and that the thresholds facilitate movement towards green.
- **Before the sunset date,** activities that are not fully green but are on an approved improvement path can still be considered compliant and receive transition financing.
- **After the sunset date**, this "amber" category disappears. From that point forward, all activities must meet the much stricter "Green transition" or "Near Zero" criteria to be considered aligned with the taxonomy
- Therefore, transition requires change over time.



Source: Climate Bonds Initiative, explained by Creagy

Transportation Sector Activities

Sector	Subsector by ISIC 4 Code (UNSD)	Subsector by ISIC 4 Code (TSIC)
Transportation	H491 - Transport via railways	
	H492 - Other land transport	H492 - Transport via buses H493 - Other land transport
	H493 - Transport via pipeline	H494 - Transport via pipeline
	H501 - Sea and coastal water transport	
	H502 - Inland water transport	
	C3312 - Repair of Machinery	

ISIC Sector (TSIC)	ANDBI Sector	Activity in Thailand Taxonomy
H491 - Transport via railways	• H49101 Electrified rail and associated infrastructure • H49102 Low emission rolling stock • H49103 Improved railway efficiency measures	Transport via railways
H492 - Transport via buses H493 - Other land transport	N/A	• Other passenger land transport • Urban and suburban passenger land transport • Freight transport by road
H494 - Transport via pipeline	H49302 Gas transport (gas from renewable production)	Transmission and distribution networks for renewable and low-carbon gases
H501 - Sea and coastal water transport	• H50101 Low emission fossil powered vessels • H50102 Electric vessels • H50103 Other low-emissions vessels	Sea and coastal water transport
H502 - Inland water transport	• H50201 Low emission fossil powered vessels • H50202 Electric vessels • H50203 Other low-emissions vessels	Inland water transport
C3312 - Repair of machinery	N/A	Retrofitting of sea and coastal freight and passenger water transport
H51 – Air Transport	N/A	Passenger and freight air transport
Non-ISIC Transport Activities	H51 – Air Transport	N/A

Transportation sector activities criteria and thresholds

Thresholds and criteria for activities in the transportation sector						
	Main threshold					
	2022-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Green Activities						
Railway; Non-Railway (gCO2/t-km)	0	0	0	0	0	0
Shipping (gCO2/t-km)	Declining threshold for different ship classes according to Table Decarbonisation pathways for different ship types					
Amber Activities						
	2022-2025	2026-2030	2031-2035	2036-2040	2041-2045*	2046-2050*
Railway Non-Railway	See individual articles					
Shipping (gCO2/t-km)	8.9	7.92	7	6	N/A	N/A
Red Activities	The activities carried out with the ships, that belong to the categories from Red (exceptionally harmful) activities for the shipping sector as well as those that exceed the thresholds for amber and green are harmful to the objective of climate change mitigation.					

Note: All thresholds are subject to review every three to five years in accordance with new data and technological development.
* Post-sunset dates, amber certification is no longer available

A note on scoping

A user of the Taxonomy can use the scoping to establish compliance with it.

The user can read a detailed description of all eligible operations in the “Description” section of each activity card. Additionally, for orientation purposes, a “Scope” line has been added to the activity cards, which contains fundamentally important information about what is allowed within a given activity:

- **Construction:** this activity involves the construction of new facilities that will host Taxonomy-compatible activities (e.g. low-carbon transport infrastructure). **All cash flows directed towards the construction of these facilities (including loans taken out, bonds issued, etc.) are considered compatible with the Taxonomy.**

- **Operations:** only operations on existing objects (e.g. managing a fleet of vehicles or repairing them) are aligned with the Taxonomy. **All cash flows associated with these operations (including profits, costs and credits) are also Taxonomy compliant and can be recognised as such in the documents. The specific list of Taxonomy-compliant operations can be seen in the “Description” line of the activity card.**

- **Retrofitting:** this activity is limited to the modernisation of existing facilities to a level approaching the requirements of the Taxonomy. **The funds spent on such an activity are also Taxonomy compliant.**

Transportation Sector Technical Screening Criteria

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Activities in the Transportation Sector of Thailand Taxonomy

1.	Transport via railways
2.	Other passenger land transport
3.	Urban and suburban passenger land transport
4.	Freight transport by road
5.	Enabling infrastructure for low-emission transport
6.	Sea and coastal water transport
7.	Inland water transport
8.	Retrofitting of sea and coastal freight and passenger water transport
9.	Passenger and freight aircrafts

1. Transport via railways

Sector classification and activity		
Sector and activity	Transport via railways	
ISIC CODE	491	
Description	Purchase, financing, rental, leasing and operation of passenger transport using railway rolling stock on mainline networks, spread over an extensive geographic area, passenger transport by interurban railways and operation of sleeping cars or dining cars as an integrated operation of railway companies.	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	The activity complies with one of the following criteria: • the trains and passenger coaches/wagons have zero direct (tailpipe) CO_2 emissions; • the trains and passenger coaches/wagons have zero direct (tailpipe) CO_2 emission when operated on a track with necessary infrastructure, and use a conventional engine where such infrastructure is not available (bimodal) AND • The trains and wagons are not solely dedicated to the transport of fossil fuels
	Amber	• Passenger rolling stock is eligible if its direct emissions are below 50 gCO2e/pkm until 2027 (after this year only rolling stock with zero direct emissions will be eligible) • As for freight transport by rail, it is eligible if direct emissions are below 25 gCO2/tkm until 2027 (after this year only rolling stock with zero direct emissions will be eligible)
	Red	The activities that are not compliant with green or amber criteria are harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Land Transport Criteria Background Paper	

2. Other passenger land transport

Sector classification and activity		
Sector and activity	Other passenger land transport	
ISIC CODE	4932	
Description	This class includes purchase, financing, renting, leasing and operation of the following types of vehicles: • scheduled long-distance bus services; • charters, excursions and other occasional coach services; • taxi operation; • passenger cars; • airport shuttles. • other renting of private cars with driver; • operation of school buses and buses for transport of employees; • passenger transport by man- or animal-drawn vehicles.	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	Direct (tailpipe) CO2 emissions of the vehicle are zero
	Amber	N/A
	Red	The activities that are not compliant with green or amber criteria are harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Land Transport Criteria Background Paper	

3. Urban and suburban passenger land transport

Sector classification and activity		
Sector and activity	Urban and suburban passenger land transport	
ISIC CODE	4920, 4931	
Description	This class includes purchase, financing, renting, leasing and operation of vehicles exercising land transport of passengers by urban or suburban transport systems. This may include different modes of land transport, such as: • by motorbus, • tramway, • streetcar, • trolley bus, • underground • motorbikes and three-wheelers • elevated railways etc. The transport is carried out on scheduled routes normally following a fixed time schedule, entailing the picking up and setting down of passengers at normally fixed stops. The class also includes: • town-to-airport or town-to-station lines • operation of funicular railways, aerial cableways etc. if part of urban or suburban transit systems.	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	For scheduled passenger road transport, the activity complies with the following criteria: • the activity provides urban or suburban passenger transport, and its direct (tailpipe) CO_2 emissions are zero For scheduled passenger urban suburban rail transport, the activity complies with one of the following criteria: • the trains and passenger coaches have zero direct (tailpipe) CO_2 emissions; • the trains and passenger coaches have zero direct tailpipe CO_2 emission when operated on a track with necessary infrastructure and use a conventional engine where such infrastructure is not available (bimode).
	Amber	N/A
	Red	The activities that are not compliant with green or amber criteria are harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Land Transport Criteria Background Paper	

4. Freight transport by road

Sector classification and activity		
Sector and activity	Freight transport by road	
ISIC CODE	4933	
Description	This class includes purchase, financing, renting, leasing, retrofitting and operation of the following types of vehicles: • all freight transport operations by road • motorbikes and three-wheelers • logging haulage • stock haulage • refrigerated haulage • heavy haulage • bulk haulage, including haulage in tanker trucks • haulage of automobiles • transport of waste and waste materials, without collection or disposal This class also includes: • furniture removal • renting of trucks with driver • freight transport by man or animal-drawn vehicles Add retrofitting	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	The activity complies with the following criteria: • direct (tailpipe) CO_2 emissions of vehicles are zero AND • vehicles are not dedicated to fossil fuel transport
	Amber	Retrofitting of vehicles to be able to run on low carbon liquid fuels aligned with the Thailand Taxonomy, such as biofuels, hydrogen and hydrogen-derived fuels (ammonia and synthetic hydrocarbon fuels produced from hydrogen and CO2) etc.; OR Purchase, financing, renting, leasing and operation of the freight vehicles that have direct tailpipe emission of: • Before the end of 2029: less than 42 gCO2e/tkm; • from 2030 to 2050: less than 21 gCO2/tkm • from 2050 onwards: less than 18 gCO2/tkm
	Red	The activities that are not compliant with green or amber criteria are harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Land Transport Criteria Background Paper, European Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021	

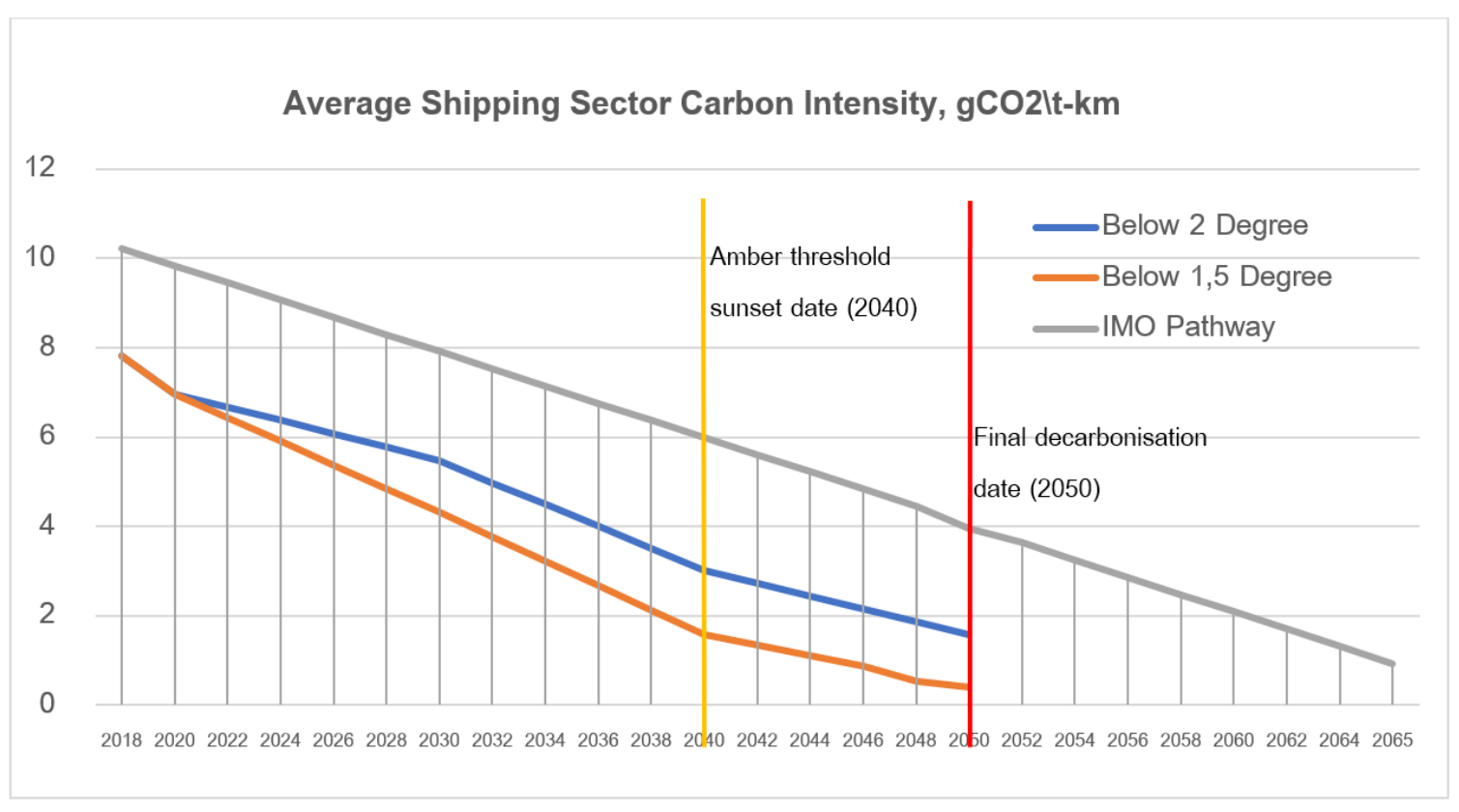
5. Enabling infrastructure for low-emission transport (1/2)

Sector classification and activity		
Sector and activity	Enabling infrastructure for low-emission transport	
ISIC CODE	No specific code available	
Description	Construction, modernisation, maintenance and operation of infrastructure that is required for zero tailpipe CO2 operation of zero-emissions road, rail, air or water transport, as well as infrastructure dedicated to transhipment, and infrastructure required for operating taxonomy-aligned urban transport.	
Scope	Construction and operations	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	• Personal mobility or cycle logistics: pavements, bike lanes and pedestrian zones, electrical charging and hydrogen refuelling installations for personal mobility devices. Rail transport: • for electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems. • for new and existing trackside infrastructure and associated subsystems where there is a plan for electrification as regards line tracks, and, to the extent necessary for electric train operations, as regards sidings, or where the infrastructure will be fit for use by zero tailpipe CO_2 emission trains within 10 years from the beginning of the activity: infrastructure, energy, onboard control-command and signalling, and trackside control command and signalling subsystems. • the infrastructure and installations that are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods. • infrastructure and installations that are dedicated to the transfer of passengers from rail to rail or from other modes to rail. Road transport: • electric charging points, electricity grid connection upgrades, hydrogen fuelling stations or electric road systems (ERS). • the infrastructure and installations are dedicated to transhipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transhipment of goods. • the infrastructure and installations are dedicated to urban and suburban public passenger transport, including associated signalling systems for metro, tram and rail systems. Water transport: • electricity charging, hydrogen-based refueling • the infrastructure is dedicated to the provision of shore-side electrical power to vessels at berth. • the infrastructure is dedicated to the performance of the port's own operations with zero direct (tailpipe) CO_2 emissions. • the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods. Airports: • electricity charging and hydrogen refueling. • the infrastructure is dedicated to the provision of fixed electrical ground power and preconditioned air to stationary aircrafts. • the infrastructure is dedicated to the zero direct emissions performance of the airport's own operations: electric charging points, electricity grid connection upgrades, hydrogen refueling stations • Infrastructure facilitating the use of sustainable aviation fuels (SAF)

5. Enabling infrastructure for low-emission transport (2/2)

Sector classification and activity		
Sector and activity	Enabling infrastructure for low-emission transport	
ISIC CODE	No specific code available	
Description	Construction, modernisation, maintenance and operation of infrastructure that is required for zero tailpipe CO_2 operation of zero-emissions road, rail, air or water transport, as well as infrastructure dedicated to transhipment, and infrastructure required for operating taxonomy-aligned urban transport.	
Scope	Construction and operations	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Amber**	N/A
	Red	Infrastructure dedicated solely to the support of internal combustion engines vehicles as well as transport or storage of fossil fuels, including parking facilities and fossil fuel filling stations, is harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Land Transport Criteria Background Paper, European Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021	

Background: Shipping sector decarbonisation pathways



- To qualify as green, ship operations must meet emissions thresholds applicable during the relevant period (e.g. bond/loan duration, data collection period).
- Non-zero-emission ships must have a Managed Reduction Plan (MRP) that ensures emissions remain below the threshold throughout the ship's operational life.
- For the amber category, the International Maritime Organisation (IMO) decarbonisation pathway is used, which allows more flexibility—suitable for retrofitting older ships.
- The IMO targets:
  - 40% emission reduction by 2030, aiming for 70% by 2050, compared to 2008 levels.
- In 2008, Thailand's average ship emissions were 13.2 gCO_2/t-km.
  - By 2030: Target is 7.92 gCO_2/t-km.
  - By 2050: Target is 3.96 gCO_2/t-km.

Note: all the thresholds after 2030 are indicative and will be subject to change due to the development of science and technology.

Source: TPI; Thailand Ministry of Transportation

Green criteria thresholds : Decarbonization Pathways for different ship types

No.	Type	Size	Target AER 2020-2029	Target AER 2030-2039	Target AER 2040-2049	Target AER 2050
1	Bulk carrier	0-9999 DWT	24.6	16.4	8.2	0
2	Bulk carrier	10000-39999 DWT	6.6	4.4	2.2	0
3	Bulk carrier	35000-59999 DWT	4.6	3.1	1.5	0
4	Bulk carrier	60000-99999 DWT	3.6	1.4	1.2	0
5	Bulk carrier	100000-199999 DWT	2.4	1.6	0.8	0
6	Bulk carrier	200000+ DWT	2.3	1.5	0.8	0
7	Chemical tanker	0-4999 DWT	35.4	23.6	11.8	0
8	Chemical tanker	5000-9999 DWT	19	12.7	6.3	0
9	Chemical tanker	10000-19999 DWT	11.9	7.9	4	0
10	Chemical tanker	20000+ DWT	6.5	4.3	2.2	0
11	Container	0-999 TEU	16.9	11.3	5.6	0
12	Container	1000-1999 TEU	14.8	9.9	4.9	0
13	Container	2000-2999 TEU	10	6.7	3.3	0
14	Container	3000-4999 TEU	8.3	5.5	2.8	0
15	Container	5000-7999 TEU	7.8	5.2	2.6	0
16	Container	8000-11999 TEU	6.7	4.5	2.2	0
17	Container	12000-14500 TEU	4.6	3.1	1.5	0
18	Container	14500+ TEU	4.6	3.1	1.5	0
19	General cargo	0-4999 DWT	24.2	16.1	8.1	0
20	General cargo	5000-9999 DWT	16.7	11.1	5.6	0
21	General cargo	10000+ DWT	13.1	8.8	4.4	0
22	Other liquid tanker	0+ DWT	97.6	65.1	32.5	0
23	Refrigerated bulk	0-1999 DWT	48.7	32.5	16.2	0
24	Ro-Ro	0-4999 GT	212.4	141.6	70.8	0
25	Ro-Ro	5000+ GT	45.9	30.6	15.3	0
26	Vehicle	0-3999 vehicles	46	30.7	15.3	0
27	Vehicle	4000+ vehicles	13.8	9.2	4.6	0
28	Criuse	60000-99999 GT	1738613.6	1159075.7	579537.9	0
29	Criuse	100000+ GT	1337274.9	891516.6	445758.3	0
30	Ferry-RoPax	0-1999 GT	822123.9	548082.6	274041.3	0
31	Ferry-RoPax	2000+ GT	1137003.8	758002.5	379001.3	0
32	Ferry-pax only	0-1999 GT	1272135.8	848090.5	424045.3	0
33	Ferry-pax only	2000+ GT	1740606.6	1160404.4	580202.2	0
34	Criuse	0-1999 GT	2044403.4	1362935.6	681467.8	0
35	Criuse	2000-9999 GT	1286641.3	857760.8	428880.4	0
36	Criuse	10000-59999 GT	1495064.7	996709.8	498354.9	0

Source:CBI Green Shipping Criteria

6. Sea and coastal water transport

Sector classification and activity		
Sector and activity	Sea and coastal water transport	
ISIC CODE	501	
Description	This class includes purchase, financing, renting, leasing and operation of the following types of vehicles dedicated to the transportation of passengers or freight overseas and coastal waters, whether scheduled or not: • operation of excursion, cruise or sightseeing boats; • operation of ferries, water taxis etc.; • transport of freight overseas and coastal waters, whether scheduled or not; • transport by towing or pushing of barges, oil rigs etc. This class also includes: • rental of pleasure boats with crew for sea and coastal water transport.	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	The activity complies with the green thresholds established for the specific kinds of ships as well as additional criteria in the Models for activities assessment of Shipping Sector Section.
	Amber	The activity must follow an individual decarbonisation path defined against the emission baseline of particular ship class in 2008. The activity must demonstrate 40% reduction of emissions against the baseline by 2030 and 70% of reduction against the baseline by 2050. AND Vessels are not dedicated to fossil fuel transport
	Red	The activity does not meet green or amber criteria or is one of the activities mentioned in “Red (exceptionally harmful) activities for the shipping sector Table” is harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Shipping Criteria Background Paper, European Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021	

7. Inland water transport

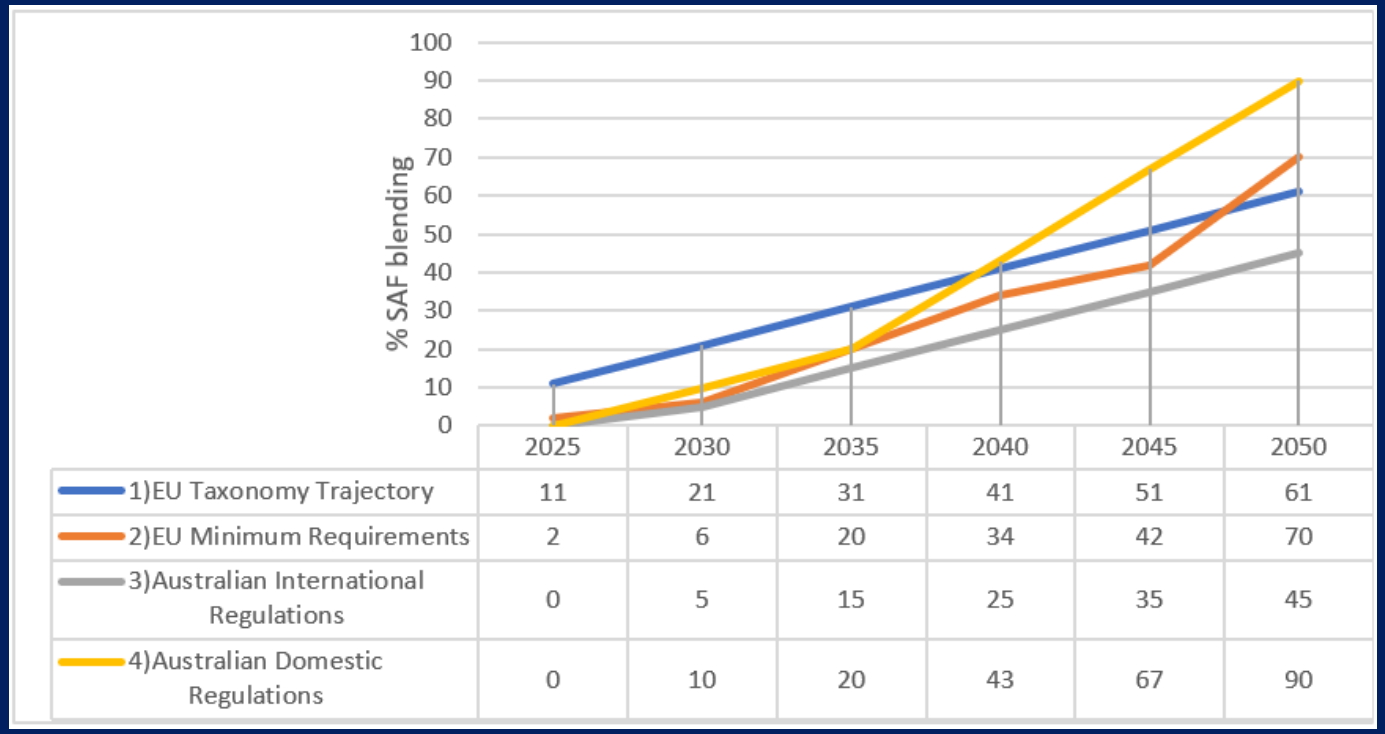
Sector classification and activity		
Sector and activity	Inland water transport	
ISIC CODE	502	
Description	The activity complies with the following criteria: vessels have zero direct (tailpipe) CO_2 emissions For passenger inland water transport, the activity complies with the following criteria: • until 31 December 2027, hybrid and dual fuel vessels derive at least 50% of their energy from zero direct (tailpipe) CO_2 emission fuels or plug-in power for their normal operation	
Scope	Operations only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	The activity complies with the following criteria: vessels have zero direct (tailpipe) CO_2 emissions For passenger inland water transport, the activity complies with the following criteria: • until 31 December 2027, hybrid and dual fuel vessels derive at least 50% of their energy from zero direct (tailpipe) CO_2 emission fuels or plug-in power for their normal operation
	Amber	The activity complies with the amber threshold established for the Shipping Sector with a prescribed sunset date AND Vessels are not dedicated to fossil fuel transport.
	Red	The activity does not meet green or amber criteria is harmful to the objective of climate change mitigation
Criteria reference	Climate Bonds Initiative Shipping Criteria Background Paper European Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021	

8. Retrofitting of sea and coastal freight and passenger water transport

Sector classification and activity		
Sector and activity	Retrofitting of sea and coastal freight and passenger water transport	
ISIC CODE	3312	
Description	Retrofitting of vessels that leads to their compliance with green and amber threshold of the Thailand Taxonomy	
Scope	Retrofitting only	
The activity makes significant contribution to climate change mitigation		
Metrics and thresholds	**Green**	Retrofitting of vessels that leads to their compliance with the green threshold for the Shipping Sector or green category of the inland water transport activity card.
	Amber	Retrofitting of vessels that leads to their compliance with amber threshold for the Shipping Sector with a prescribed sunset date
	Red	Retrofitting of fossil fuels carrying vessels is harmful to the objective of climate change mitigation
Criteria reference	Various sources of references	

Background:
SAF blending requirements in the EU Taxonomy and Australian national regulations

- Thailand's national SAF blending targets:
  - 2027–2029: 2% SAF blend
  - 2030–2032: 3% SAF blend
  - 2032–2037: 5–8% SAF blend
- These targets aim to stimulate the local market by setting a robust minimum requirement.
- For the Thailand Taxonomy benchmark, it is recommended to adopt the EU's Minimum Requirements pathway for:
  - Balanced ambition and economic feasibility
  - Alignment with Thailand's SAF production and distribution plans
- While SAFs lower CO_2 emissions, their environmental impact varies based on feedstock type and processing methods
- Hydrogen combustion at high altitudes can cause contrail formation, contributing to non-CO_2 climate impacts.
- Thailand Taxonomy includes an additional requirement:
  - SAFs must obtain a recognised sustainability certification (e.g. CORSIA schemes).
  - In the future, Thai-specific certification labels may also be developed and accepted.



	2025	2030	2035	2040	2045	2050
1)EU Taxonomy Trajectory	11	21	31	41	51	61
2)EU Minimum Requirements	2	6	20	34	42	70
3)Australian International Regulations	0	5	15	25	35	45
4)Australian Domestic Regulations	0	10	20	43	67	90

Source:
- EU Parliament and the European Council. Commission Delegated Regulation (EU) 2023/2485 of 27 June 2023 amending Delegated Regulation (EU) 2021/2139 establishing additional technical screening criteria for determining the conditions under which certain economic activities qualify as contributing substantially to climate change mitigation or climate change adaptation and for determining whether those activities cause no significant harm to any of the other environmental objectives. Article_6.19. Passenger and freight air transport
- EU Parliament and the European Council. Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on ensuring a level playing field for sustainable air transport (ReFuelEU Aviation). Annex I. Shares of SAF referred to in the Article 4
- Australian Government. Aviation White Paper. Towards 2050. (2024) All parts of the aviation sector need to play their role in reducing emissions

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9. Passenger and freight aircrafts

<table>
<tr><th colspan="3">Sector classification and activity</th></tr>
<tr><td>Sector and activity</td><td colspan="2">Passenger and freight aircrafts</td></tr>
<tr><td>ISIC CODE</td><td colspan="2">5110/5120</td></tr>
<tr><td>Description</td><td colspan="2">Purchase, financing, renting, leasing and operation of the new and existing low-emission aircrafts or aircrafts using blended SAF</td></tr>
<tr><td>Scope</td><td colspan="2">New and existing aircrafts (operations and retrofitting only)</td></tr>
<tr><th colspan="3">The activity makes significant contribution to climate change mitigation</th></tr>
<tr><td rowspan="3">Metrics and thresholds</td><td>Green</td><td>
• Zero direct (tailpipe) emissions aircrafts
OR
• Aircrafts using SAF must meet the %SAF in total fuel blending trajectory:
<table>
<tr><th></th><th>2025</th><th>2030</th><th>2035</th><th>2040</th><th>2045</th><th>2050</th></tr>
<tr><td rowspan="2">%SAF*</td><td>>2%</td><td>>6%</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td colspan="2">the EU Minimum Requirements pathway</td><td>>20%</td><td>>34%</td><td>>42%</td><td>>70%</td></tr>
</table>
OR
aircraft using SAF must meet the percentage of SAF required by the 1.5°C-aligned pathway developed by ICAO, once it is announced.
AND
• SAF must possess one of the internationally recognised certificates (CORSIA Sustainability Certification Schemes.)
AND
• Aircrafts are not dedicated to fossil fuel transport
</td></tr>
<tr><td>Amber</td><td>
• Retrofitting of aircrafts to be able to blend fuel in line with the trajectory for the green category
AND
• SAF must possess one of the internationally recognised certificates (CORSIA Sustainability Certification Schemes.)
</td></tr>
<tr><td>Red</td><td>N/A</td></tr>
<tr><td>Criteria reference</td><td colspan="2">Delegated Regulation (EU) 2023/2485 of 27 June 2023 amending the Climate Delegated Act</td></tr>
</table>

*Note: Given the current limitations in data availability and the ongoing development of mapping frameworks related to fuel consumption—including Sustainable Aviation Fuel (SAF)—Thailand will determine appropriate SAF utilisation targets for the period 2035 to 2050 in alignment with the 1.5°C Paris Agreement once sufficient data has been compiled. In the interim, it is recommended that stakeholders could reference the benchmarks established by the EU Minimum Requirements pathway as provisional guidelines.

Red list of activities

Activities that are clearly inconsistent with goals of the present taxonomy are outlined in the table below with their corresponding ISIC codes. Only activities that are outlined in the table are considered non-compliant, not the whole code (if it's not stated explicitly). The activities that are neither green, nor amber, no red **are not considered non-compliant**. They are considered **out of the scope** of the present taxonomy. The taxonomy does not define of cover them.

ISIC Code	Activity
All codes	Activities that fall into a red category in each specific activity card are considered non-compliant
491 - Transport via railways (all subcodes included)	• Railway vehicles or rolling stock designated as using biofuels, even partially, qualify as non-compliant • Infrastructure and rolling stock for railway lines that are built with the over-riding objective of transporting fossil fuels qualify as non-compliant. They are considered built with this objective if: o The primary purpose of the line is clearly described as fossil fuel freight by authoritative government sources; or, in the absence of this: o More than 25% of the freight in t-km transported by the line, on average, is comprised of fossil fuels; or alternatively: o More than 25% of the rolling stock is dedicated to the transport of fossil fuels
492 - Transport via buses **493 - Other land transport (including 4931, 4932, 4933)**	• For road freight vehicle and component manufacturers, purchasers and operators, any proportion of a vehicle or fleets cargo being made up of fossil fuels makes that vehicle or fleet non-compliant (except for those complying with amber criteria for the activity card - Freight transport by road) • Road vehicles or rolling stock designated as using biofuels, even partially, are considered non-compliant
4940 - Transport via pipeline	• Transmission and distribution of gases whose emission exceeds green category threshold in the Table Thresholds for certain energy sector activities • Retrofitting of gas networks for the transmission of gases whose emission when used to generate electricity is above the green category threshold from the Table Thresholds for certain energy sector activities
No code – infrastructure for low-carbon transport	Infrastructure dedicated solely to the support of internal combustion engines vehicles as well as transport or storage of fossil fuels, including parking facilities and fossil fuel filling stations, is considered non-compliant.
501 Sea and coastal water transport (all subcodes included) **502 Inland water transport (all subcodes included)**	Ships that are solely dedicated to the transport of fossil fuel and/or otherwise support the fossil fuel sector (by shipping staff to the oil rigs, transporting fossil fuel extraction equipment etc.) are considered non-compliant. However, ships that technically may carry non-fossil fuels goods alongside with fossil fuel goods are NOT excluded and may be compliant if comply with the relevant criteria. For this reason, product and chemical tankers are not excluded.

Do No Significant Harm (DNSH)

Generic DNSH Requirements	
Objective	**Description**
Climate change mitigation	For an activity to demonstrate that it will do no significant harm with respect to factors related to climate change mitigation, the following must be implemented: • The manager should calculate Scope 1 and Scope 2 emissions related to the activity as well as Scope 3 emissions if material to the sector in question. Estimation of emissions referring to credible international or national proxies such as Intergovernmental Panel on Climate Change (IPCC) and Thailand Greenhouse Gas Management Organization (TGO) may be used.; • The manager should identify potential risk to other people or assets to directly increase their GHG emissions as the result of the activity's implementation.; • The manager should take actions to minimise GHG emissions associated with the implementation of the activity, including, but not limited to installation of monitoring and leak prevention measures (if applicable).
Climate change adaptation	• Any activity seeking to demonstrate its compliance with DNSH related to climate change adaptation must conduct a Climate Risk and Vulnerability Assessment (CRVA) in accordance with the guidance provided in Annex III: Climate Risk and Vulnerability Assessment (CRVA). • The manager of the activity should strive to minimise adaptation risks revealed throughout the CRVA. Adaptation solutions should support system adaptation that takes into consideration regional and national adaptation strategies and plans.
Sustainable use and protection of marine and water resources	• Risks associated with water consumption and water quality must be identified, assessed and mitigated to the biggest possible extent. Water risk analysis tools must be used for this purpose (e.g. risk assessments by national environmental authorities, water footprint, WWF Water Risk Filter, WRI Aqueduct or comparable). • If assets or activities are located in water-stressed areas, may be affected by floods or water quality issues, ensure that water use and conservation management plans, developed in consultation with relevant stakeholders, have been implemented. • Ensure that water use/conservation management plans (including monitoring, reporting and verification methodology), developed in consultation with relevant stakeholders, have been developed and implemented as per international standards and guidelines. (e.g., UNEP Framework for Freshwater Ecosystem Management; ISO 13.060: Water Quality or comparable).

Specific DNSH Requirements	
Objective	**Description**
Sustainable use and protection of marine and water resources	Sea and coastal water transport: Releases of ballast water containing non-indigenous species must be prevented in line with the International Convention for the Control and Management of Ships' Ballast Water and Sediments.

Do No Significant Harm (DNSH)

Generic DNSH Requirements	
Objective	**Description**
Promotion of resource resilience and transition to a circular economy	• In order to assess whether the activity in question is doing significant harm to this objective, a lifecycle assessment inline with ISO 14040 and ISO 14044 (or any comparable international methodology) should be conducted on the products, material, process, or other measurable activities. • The activity manager should implement concrete demonstrable measures to maximise the efficient use, reduction, repair, recycling and reuse of materials during the activity operational life cycle (e.g. through contractual agreements with recycling companies and integration of the cost of recycling), proper treatment and waste disposal (e.g. proper end-of-life management of batteries) and compliance, as a producer, with Extended Producer Responsibility standards must be demonstrated. • New installations must be designed and manufactured for high durability, easy to dismantle, refurbishment and recycling to the extent possible. Potential of repair of facilities and equipment, and the accessibility and interchangeability of the activity's equipment components must be ensured. • The activity shall apply relevant national regulations and international guidelines associated with retirement and dismantlement plans for plants and infrastructure related to the activity.

Specific DNSH Requirements	
Objective	**Description**
Promotion of resource resilience and transition to a circular economy	Ensure proper waste management both at the use phase (maintenance) and the end-of-life for the rolling stock, e.g. reuse and recycle of parts like batteries, in compliance with international and national legislation on hazardous waste generation, management and treatment, e.g., KAPSARC Guide to circular economy, French standard, XP X30-901, Circular economy – Circular economy project management system or comparable. Measures must be in place to manage waste in accordance with the waste hierarchy, in particular during maintenance.

Do No Significant Harm (DNSH)

Generic DNSH Requirements	
Objective	**Description**
Pollution prevention and control	• A recognised environmental management system (ISO 14001, EMAS, or comparable) should be adopted for the enterprise where the activity takes place. • Ensure the activity undergoes screening to assess whether it leads to the manufacture, placing on the market, or use of dangerous substances (as defined by relevant Thailand laws and regulations), whether on their own, in mixtures, or in articles, and causes significant harm to the environment. • Integrated Environmental Assessment in line with the UN Environment Programme's Guidelines for Conducting Integrated Environmental Assessments5 must be conducted for the activity to specifically identify and manage environmental detrimental risks related to the emission of pollutants, heat, light or noise to the environment. • It must be demonstrated that neither the construction nor operation of the activity is emitting dangerous substances, noise, light or heat in excess of those allowed by relevant national or international regulations. Furthermore, the achievement of applicable air, water and soil quality targets should not be hampered due to the activity. • In the case that the construction and/or operation of the activity is known to cause significant harm to the environment, the activity must identify risk-based measures to prevent the pollution, and safely remediate any contamination caused by the activity. • Based on the EIA, ensure that management plans are developed for every pollutant causing significant harm. Management plans are to be drafted in consultation with relevant stakeholders. Furthermore, Monitoring, Reporting and Verification strategies are to be implemented to monitor the compliance and effectiveness of the mitigation measures.

Specific DNSH Requirements	
Objective	**Description**
Pollution prevention and control	**All road vehicles:** vehicles must comply with regulations on the sound level of motor vehicles and of replacement silencing systems, e.g. IFC EHS Guidelines: Air emissions and ambient air quality; ISO 13.040.50: Transport Exhaust emissions; ISO 362 Measurement of noise emitted by accelerating road vehicles; ISO 28580:2018 - Passenger car, truck and bus tyre rolling resistance measurement method — Single point test and correlation of measurement results or comparable.

Do No Significant Harm (DNSH)

Generic DNSH Requirements	
Objective	**Description**
Protection and restoration of biodiversity and ecosystems	• The determination of whether a biodiversity related environmental impact assessment (EIA) is required for a particular activity or not is made through a case-by-case examination of the activity6. If applicable, an Integrated Environmental Assessment (EIA) in line with the UN Environment Programme's Guidelines for Conducting Integrated Environmental Assessments must be conducted for the activity. • The activity manager must mitigate all potential risks for biodiversity and ecosystems associated with activity implementation that were identified throughout the EIA. • Ensure the Biodiversity and Ecosystem Management Plans are developed in consultation with relevant stakeholders. Furthermore, ensure that the Monitoring, Reporting and Verification strategies are implemented to monitor the compliance and effectiveness of the mitigation measures. • New financed facilities and infrastructure should not be located in ecosystems that are strategic for food security, rich in biodiversity, or that serve as habitat for endangered species (flora and fauna) that are in the Thailand lists of nationally protected areas or on the IUCN Red List. Museums or technical facilities (specifically electronic communications network equipment and facilities used to originate, process, transfer, transmit or receive electronic communications calls and information signals) necessary for their functioning are exempt from this requirement. • For sites and operations located in or near biodiversity sensitive areas (defined as areas included into, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment must be carried out in line with the criteria set by IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources9. For these sites, a long-term biodiversity monitoring and assessment programme must be adopted.

Specific DNSH Requirements	
Objective	**Description**
Protection and restoration of biodiversity and ecosystems	• **Sea and coastal water transport:** o the measures must be in place to prevent the introduction of non-indigenous species by biofouling the hull and niche areas of ships, taking into account the IMO Biofouling Guidelines. Noise and vibrations are limited by using noise-reducing propellers, hull design, or onboard machinery in line with the guidance given in the IMO Guidelines for the Reduction of Underwater Noise. o the measures to minimise toxicity of anti-fouling paint and biocides must be introduced.

Application of DNSH criteria to Thailand taxonomy activities

No.	Activity	Climate change mitigation	Climate change adaptation	Sustainable use and protection of marine and water resources	Promotion of resource resilience and transition to a circular economy	Pollution prevention and control	Protection and restoration of biodiversity and ecosystems
1.	Transport via railways	Generic	Generic	Generic	Generic + Specific	Generic + Specific	Generic
2.	Other passenger land transport	Generic	Generic	Generic	Generic + Specific	Generic + Specific	Generic
3.	Urban and suburban passenger land transport	Generic	Generic	Generic	Generic + Specific	Generic + Specific	Generic
4.	Freight transport by road	Generic	Generic	Generic	Generic + Specific	Generic + Specific	Generic
5.	Enabling infrastructure for low-emission transport	Generic	Generic	Generic	Generic + Specific	Generic	Generic
6.	Sea and coastal water transport	Generic	Generic	Generic + Specific	Generic + Specific	Generic	Generic + Specific
7.	Inland water transport	Generic	Generic	Generic	Generic + Specific	Generic	Generic
8.	Retrofitting of sea and coastal freight and passenger water transport	Generic	Generic	Generic	Generic + Specific	Generic	Generic
9.	Passenger and freight transport by air	Generic	Generic	Generic	Generic + Specific	Generic + Specific	Generic

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Minimum Social Safeguards (MSS)

The eligible asset or activity must ensure that it does not generate a negative social impact and observe minimum social safeguards (MSS). For this, the owner of the activity must adhere to the relevant local regulatory framework and policies, relevant internationally recognised principles and conventions, and have a social management system in place. The minimum number of laws, standards and regulations that should be observed by the owner includes (including, but not limited to):

- United Nations Guiding Principles on Business and Human Rights (2011)

International Labour Organisation core conventions:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98)
- Forced Labour Convention, 1930 (No. 29) (and its 2014 Protocol)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Minimum Age Convention, 1973 (No. 138)
- Worst Forms of Child Labour Convention, 1999 (No. 182)
- Equal Remuneration Convention, 1951 (No. 100)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

International Bill of Human Rights conventions:

- Universal Declaration of Human Rights (1948)
- International Covenant on Civil and Political Rights (1966)
- International Covenant on Economic, Social and Cultural Rights (1966)

The practices of activity owner must also be in line with the following IFC Performance Standards, where applicable:

1. Performance Standard 1: Assessment and management of environmental and social risks and impacts.
2. Performance Standard 2: Labour and working conditions
3. Performance Standard 3: Resource efficiency and pollution prevention
   (in parts where it does not contradict to the DNSH requirements of the present Taxonomy)
4. Performance Standard 4: Community Health and Safety
5. Performance Standard 5: Land Acquisition and Involuntary Resettlement
6. Performance Standard 6: Biodiversity Conservation
7. Performance Standard 7: Indigenous Peoples
8. Performance Standard 8: Cultural Heritage

Example of User Application

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Examples of a wide range of Thailand Taxonomy applications

Corporate Reporting & Strategy

- **Sustainability Reporting:** Companies can report the percentage of their economic activities (e.g. CapEx, revenue) that meet the taxonomy criteria.
- **Strategic Planning:** Identifying areas for green investment and transition within the company to improve taxonomy alignment over time.
- **Supply Chain Management:** Encouraging suppliers to adopt more sustainable practices that align with taxonomy criteria.

Financial Products

- **Structuring Green Bonds/Loans:** Defining eligible projects and activities for which proceeds can be used.
- **Creating Sustainable Investment Funds:** Setting criteria for portfolio selection.
- **Benchmarking:** Comparing the sustainability level of different financial products.

Investment Decisions

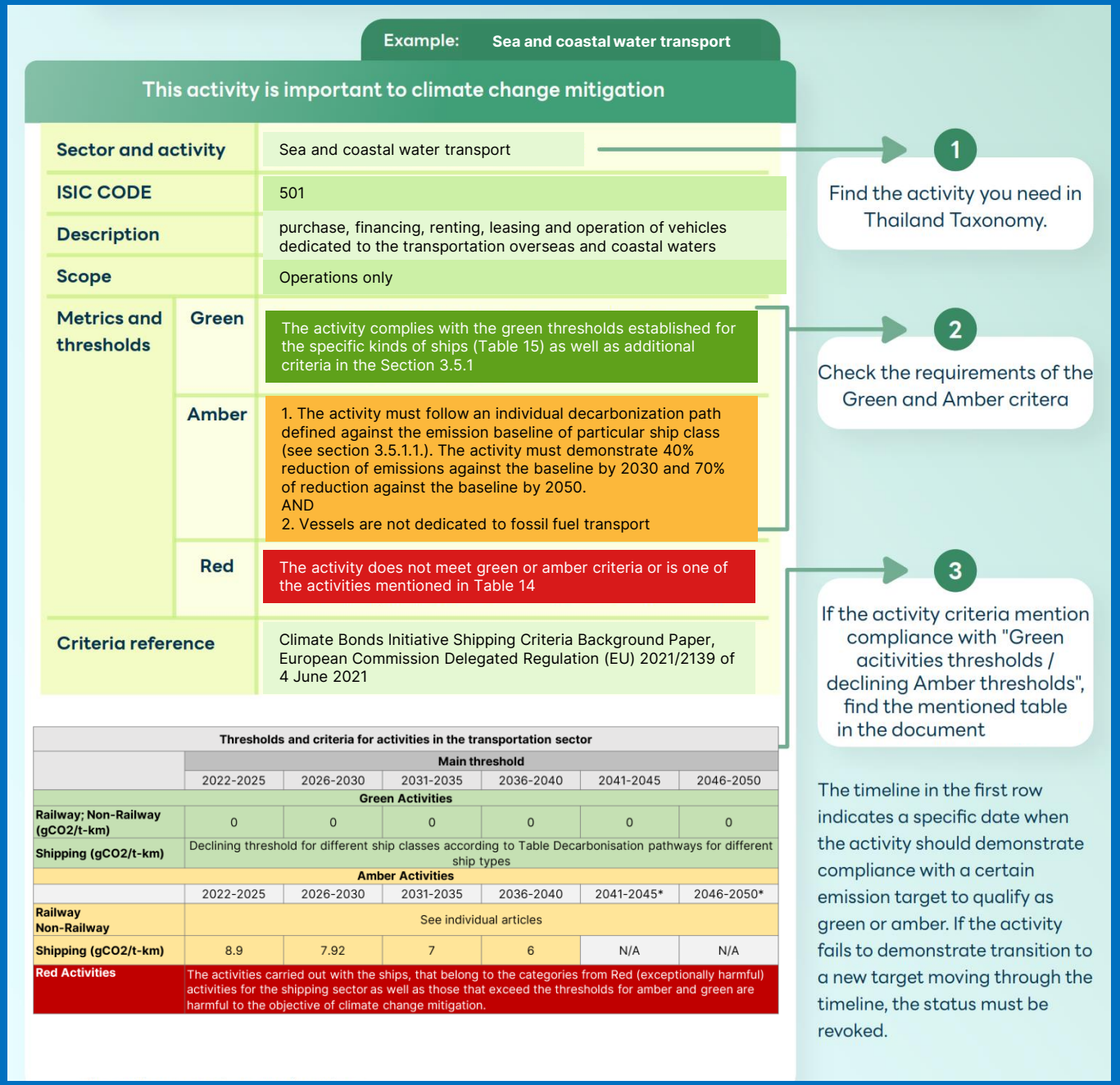
- **Screening:** Identifying investments that meet specific environmental criteria.
- **Due Diligence:** Assessing the environmental performance and risks of potential investments or loans.
- **Portfolio Allocation:** Shifting capital towards taxonomy-aligned assets.

Policymaking

- **Developing Green Standards and Incentives:** Using the taxonomy as a basis for official green labels for financial products or services.
- **Informing Public Spending:** Guiding government investments and public procurement towards sustainable options.
- **Monitoring National Progress:** Tracking the growth of the green economy.

THAILAND TAXONOMY

How to read and use traffic lights criteria and thresholds



Example: Sea and coastal water transport

This activity is important to climate change mitigation

Sector and activity		Sea and coastal water transport
ISIC CODE		501
Description		purchase, financing, renting, leasing and operation of vehicles dedicated to the transportation overseas and coastal waters
Scope		Operations only
Metrics and thresholds	Green	The activity complies with the green thresholds established for the specific kinds of ships (Table 15) as well as additional criteria in the Section 3.5.1
	Amber	1. The activity must follow an individual decarbonization path defined against the emission baseline of particular ship class (see section 3.5.1.1.). The activity must demonstrate 40% reduction of emissions against the baseline by 2030 and 70% of reduction against the baseline by 2050. AND 2. Vessels are not dedicated to fossil fuel transport
	Red	The activity does not meet green or amber criteria or is one of the activities mentioned in Table 14
Criteria reference		Climate Bonds Initiative Shipping Criteria Background Paper, European Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021

1 Find the activity you need in Thailand Taxonomy.

2 Check the requirements of the Green and Amber critera

3 If the activity criteria mention compliance with "Green acitivities thresholds / declining Amber thresholds", find the mentioned table in the document

The timeline in the first row indicates a specific date when the activity should demonstrate compliance with a certain emission target to qualify as green or amber. If the activity fails to demonstrate transition to a new target moving through the timeline, the status must be revoked.

Thresholds and criteria for activities in the transportation sector

	Main threshold					
	2022-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Green Activities						
Railway; Non-Railway (gCO2/t-km)	0	0	0	0	0	0
Shipping (gCO2/t-km)	Declining threshold for different ship classes according to Table Decarbonisation pathways for different ship types					
Amber Activities						
	2022-2025	2026-2030	2031-2035	2036-2040	2041-2045*	2046-2050*
Railway Non-Railway	See individual articles					
Shipping (gCO2/t-km)	8.9	7.92	7	6	N/A	N/A
Red Activities	The activities carried out with the ships, that belong to the categories from Red (exceptionally harmful) activities for the shipping sector as well as those that exceed the thresholds for amber and green are harmful to the objective of climate change mitigation.					

Action Steps:

1. Find the activity you need in Thailand Taxonomy. If there is no such activity, that activity is out of scope of the Thailand Taxonomy.

2. Check the requirements of the activity to be aligned with green or amber thresholds and criteria.

3. If the activity criteria mention compliance with "sectoral criteria and thresholds", find the mentioned table to reference for the activities in energy sector.

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5 Steps to Use Thailand Taxonomy

Example: A power plant that generates electicity using different sources.

1. List your activities Break the entity/project into activities.	**Purchase electric bus**	**Construction of fossil fuel filling stations**	**Retrofitting 10-wheel trucks to run on hydrogen**	**Consulting services**
2. Check the coverage Define activities from the breakdown, use the Section 4 of the Thailand Taxonomy.	**Covered** under section 4.2.3	**Covered** in Red List Under section 4.2.5	**Covered** under section 4.2.4	**Not Covered**
3. Color your activities Categorize the activities, see if they are in line with green / amber criteria defined in the Taxonomy.		 Fossil fuel-based activities		
4. 'Do no harm' to others? Define whether activities that meet green or amber criteria also meet DNSH and MSS requirements.	**Meet both DNSH and MSS requirements**		**Does not meet DNSH/MSS requirements.** *Adopt a plan to remediate in 3 years*	
5. Conclude the evaluation Prepare a final conclusion and Supplementary reports.	 **Eligible as Green**	 **Eligible as Red**	 **Eligible as Amber** Harm should be remediated within the timeframe in the plan. If not, the status will be revoked.	 Out of scope Thailand Taxonomy
Example of adopting in the financial tool	can apply for Green loan or bond according to the criteria set by financial regulators	cannot apply for sustainable finance instrument	can apply for transition loan or bond according to the criteria set by financial regulators	

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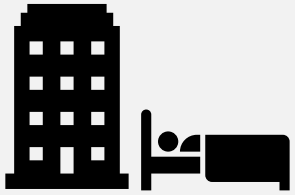
Case Study: Hotel Business

Business profile	**Core Business:** Hotel A is an upscale resort offering accommodation, food and beverage services, spa facilities, recreational activities, and event hosting. **Capacity:** 250 rooms (two buildings) and villas. **Mission:** To provide exceptional guest experiences while championing environmental stewardship and contributing positively to the local community and ecosystem. **Current Sustainability Initiatives:** Water-saving fixtures in some rooms, basic recycling program, "towel and linen reuse" program, some local sourcing for food & beverage.
GHG emissions hotspots	Scope 1: On-site fuel combustion (i.e., boilers for hot water, gas stoves in kitchens, back-up generators) Scope 2: Purchased electricity (i.e., air conditioning, lighting, lifts, chillers) Scope 3: Upstream/downstream activities (i.e., food supply, laundry, guest travel, waste, products)

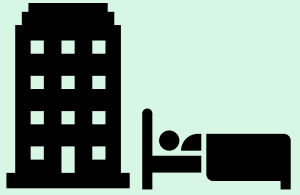


Existing Operations of hotel business

- Operation of hotel rooms to service the customers
- Operation of carpark to service the customers
- Operations of wastewater treatment plant

Planned Activities

1. Shift the shuttle bus and limousine fleet composition from 100% ICE to a diversified mix: 50% EV, 40% hybrid, and 10% ICE.
2. Installation of infrastructure for charging electric vehicle at the hotel buildings and car parks.



Future Operations of hotel business

- Operation of hotel rooms to service the customers
- Greener Operation of carpark to service the customers
- Operations of wastewater treatment plant

Case Study: Hotel Business

Defining taxonomy alignment	
1. Shift the shuttle bus and limousine fleet composition from 100% ICE to a diversified mix: 50% EV, 40% hybrid, and 10% ICE.	**Relevant Sector under Thailand Taxonomy:** Transportation
	Relevant Activity under Thailand Taxonomy: Other passenger land transport
	Relevant Environmental Objective under Thailand Taxonomy: • EO1: Climate Change Mitigation
	Taxonomy-aligned assessment: ✓ This activity can be classified as **"Green" if the direct (tailpipe) CO2 emissions of the vehicles are zero**. ✓ Therefore, **only the purchase of EV can be classified as green activity.** For this activity to be considered aligned with the Taxonomy, it must also comply with Do No Significant Harm (DNSH) criteria and Minimum Social Safeguards (MSS). x **The purchase of the hybrid vehicles and ICE vehicles are not aligned with Taxonomy**.
2. Installation of infrastructure for charging electric vehicle at the hotel buildings and car parks.	**Relevant Sector under Thailand Taxonomy:** Construction and Real Estate
	Relevant Activity under Thailand Taxonomy: : Installation, maintenance, and repair of special-purpose building equipment
	Relevant Environmental Objective under Thailand Taxonomy: • EO1: Climate Change Mitigation
	Taxonomy-aligned assessment: ✓ This activity can be classified as "Green" because it complies under Installation of infrastructure for charging electric cars. For this activity to be considered aligned with the Taxonomy, it must also comply with Do No Significant Harm (DNSH) criteria and Minimum Social Safeguards (MSS).

Case Study: Hotel Business

Reporting:	
Capital Expenditure (CapEx) Capex is the money spent on acquiring, maintaining, or improving fixed assets.	❑ The hotel's investment in the EV chargers falls under CapEx and classified as green activity. ✓ Therefore, all of CapEx for the investment in the EV chargers can be reported as Taxonomy-aligned. ❑ The purchase of EV, hybrid vehicles, ICEs falls under the "Other Passenger Land Transport" activity. ✓ Only vehicles with zero direct (tailpipe) CO_2 emissions (the EVs) are classified as Green. ✓ The purchase of EVs is aligned as green activity x However, the purchase of Hybrid vehicles and ICEs are not aligned with the Taxonomy. ✓ Therefore, only the purchase of EV can be reported as Taxonomy-aligned.
Operating Expenses (OpEx) OpEx includes shorter-term costs for ongoing operations, maintenance, etc.	❑ OpEx can be reported as Taxonomy-aligned OpEx if the OpEx is associated with Taxonomy-aligned activities or the CapEx plan for these activities. ✓ Therefore, in this case only OpEx covers the costs of operating and maintaining of EV chargers and EVs can be reported as taxonomy-aligned OpEx. x The operating and maintaining costs of Hybrid vehicles and ICEs are not taxonomy-aligned OpEx.
Revenue Revenue is the income from the sale of products or services.	❑ For hotels, the revenue includes accommodation, F&B, and other services. ❑ To assess Taxonomy-aligned revenue, the relevant activity is “Acquisition or ownership of buildings” under the Construction and Real Estate sector. This activity can be classified as Green or Amber based on technical screening criteria (TSC), such as energy/emissions thresholds or certified green buildings (e.g., TREES Gold, LEED Gold). x In this case, the hotel building doesn't meet the criteria despite green investments, none of the revenue can be reported as taxonomy-aligned.

Q&A

Please submit your question using the Q&A feature.

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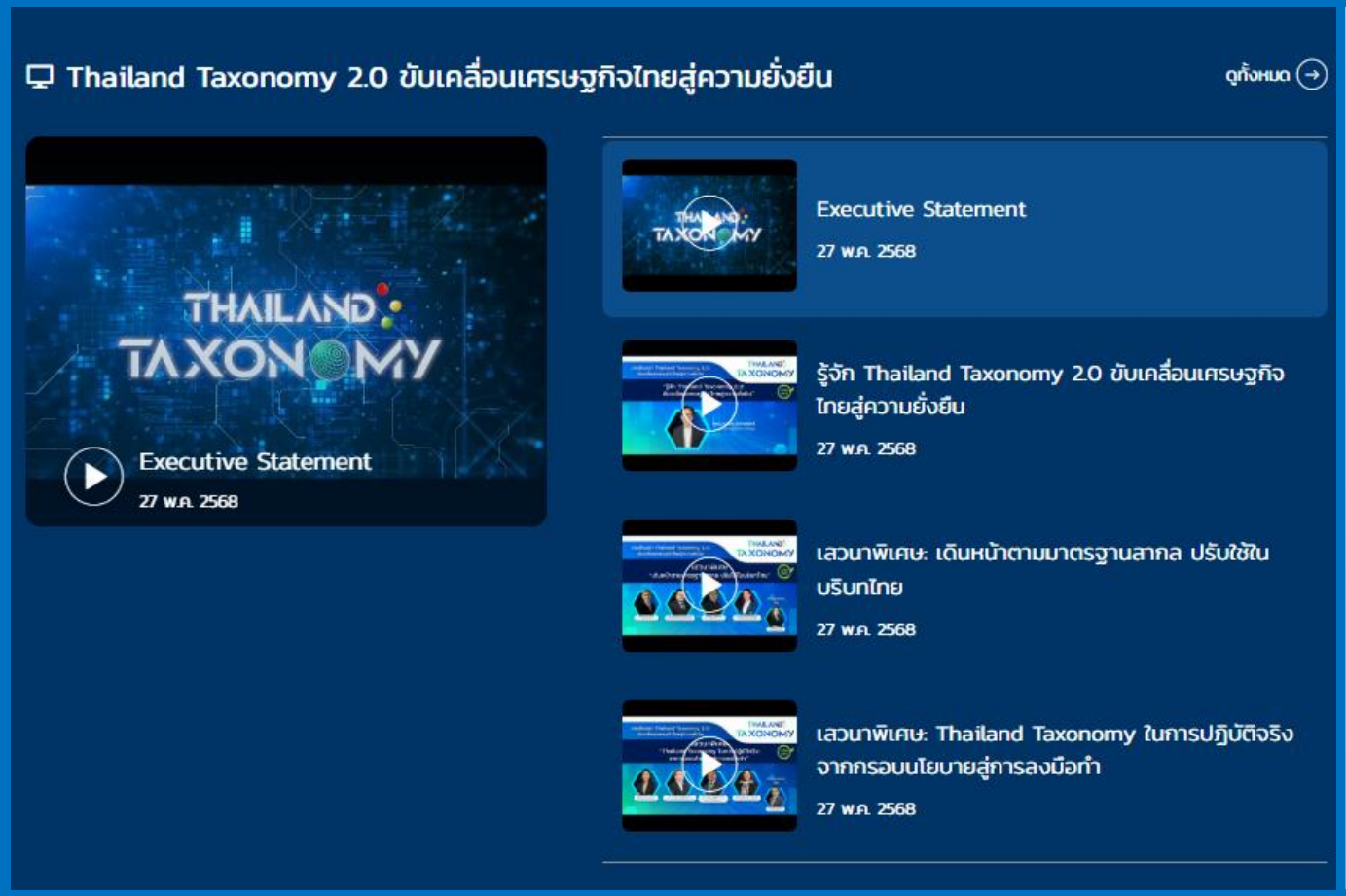
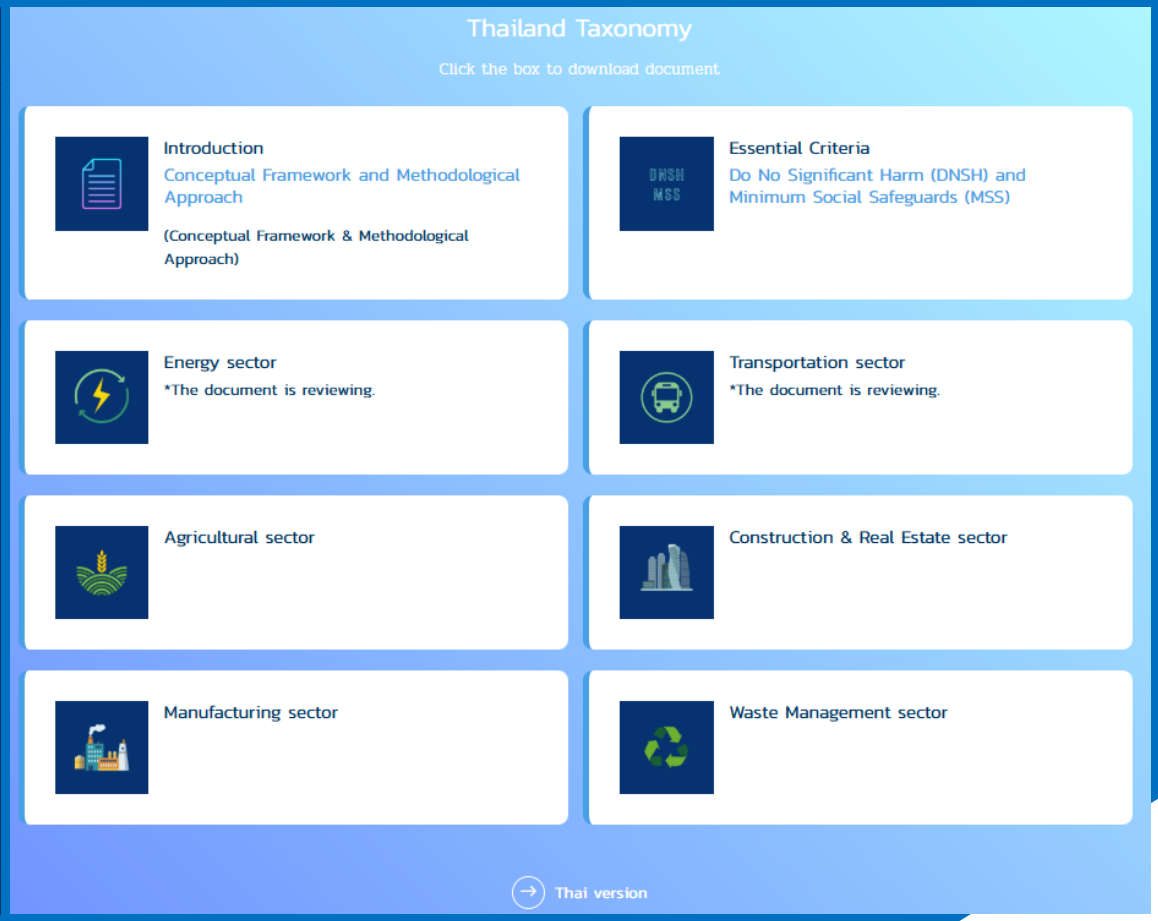
For more resources, please visit the official websites of the organisations under the Thailand Taxonomy Working Group.





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Coming up...

Online Webinar		
26 June 2025	13:30-15:00 ICT	Manufacturing
27 June 2025	10:30-12:00 ICT	Agriculture
	13:30-15:00 ICT	Waste management
30 June 2025	13:30-16:00 ICT	Construction and Real Estate

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