

# MUFG TRANSIT

## APAC Sustainability Journey

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ESG Finance Department

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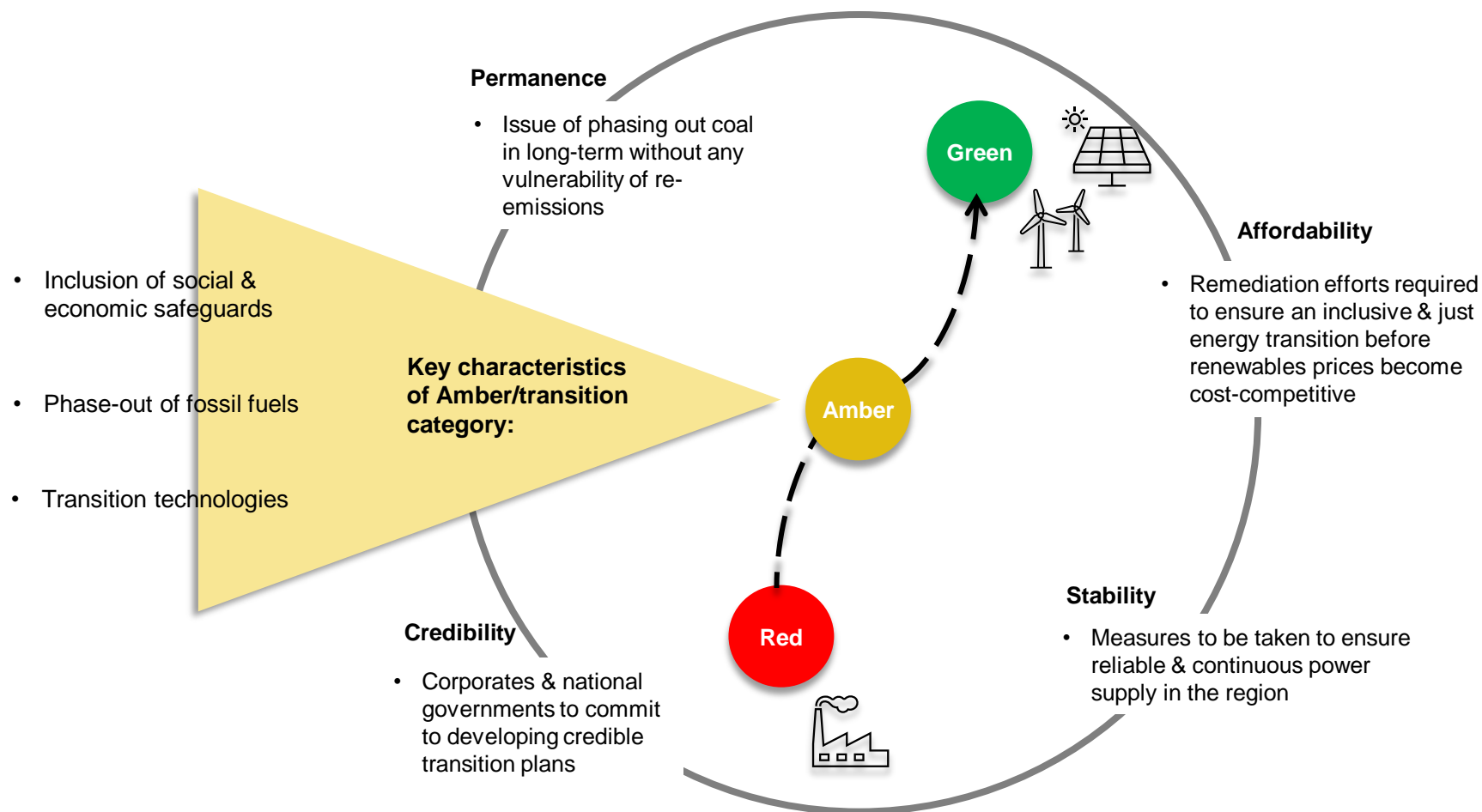


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# Section I: Rulebooks in Financing the Transition









# Introduction to Sustainable Finance Taxonomy | A journey from brown to green

APAC taxonomies focus not only expanding scope to include more sectors but also developing the transition framework to overcome challenges on the pathway to green



# Transition Taxonomies as Rulebook for Financing I Laying out decarbonization pathways

Following the launch of regional taxonomies, more APAC markets are incorporating transition elements into the national taxonomies

Markets	Rulebook	Status	Approach	Transition Element
<b>Regional</b>				
ASEAN 	ASEAN Taxonomy	Published V2 in 2023	Traffic Light	<ul style="list-style-type: none"> <li>World-first to include coal phase-out as supported activity</li> <li>Technical Screening Criteria (TSC) for transition activities as “Amber” category</li> <li>Imposes Do No Significant Harm (DNSH), social aspects &amp; “Remedial Measures to Transition”</li> </ul>
EU 	EU Taxonomy	Published in 2020	Binary	<ul style="list-style-type: none"> <li>Natural gas recently included under new transitional activity category</li> <li>Expanded taxonomy glossary to define harmful &amp; intermediate activities</li> </ul>
<b>National</b>				
Australia 	Australian Sustainable Finance Institute Taxonomy	In progress – public consultation from Jul 2023 till 2024	NA	<ul style="list-style-type: none"> <li>Research paper identifying 12 key considerations for transition methodology published, scoping out hard-to-abate sectors</li> </ul>
Indonesia 	OJK Taxonomy	Published in 2022	Traffic Light	<ul style="list-style-type: none"> <li>DNSH under “Yellow” category</li> <li>Currently reviewing classification of coal-fired plants scheduled for early retirement</li> </ul>
Malaysia 	Climate Change & Principle-based Taxonomy	Published in 2021	5 levels of classification (C1-5)	<ul style="list-style-type: none"> <li>Activities not meeting “Climate Supporting” green criteria could be classified as “Transitioning” if remedial efforts to mitigate harm taken</li> </ul>
Philippines 	NA	Under consideration - Draft Consultation till Oct 2023	NA	<ul style="list-style-type: none"> <li>Considering coal phase-out provision to replicate ASEAN Taxonomy</li> </ul>
Singapore 	Singapore-Asia Taxonomy	In progress - 4 <sup>th</sup> public consultation held Jun 2023	Traffic Light	<ul style="list-style-type: none"> <li>Coal phase-out considered at both <u>facility &amp; entity level</u></li> </ul>
South Korea 	K-taxonomy	Published in 2021	Activity classification	<ul style="list-style-type: none"> <li>“Transition sector” includes 7 economic activities such as LNG &amp; blue H<sub>2</sub></li> </ul>

# Accelerating Coal Phase-out I Increasingly recognised as a crucial transition method in the region

Managed phaseout (MPO) of coal fired power plants (CFPPs) is gaining attention in APAC as coal nearly accounts for 60% of power generation, a third of the region's GHG emissions

GFANZ's definition of MPO\*:

- Early retirement of high-emitting physical assets such as CFPPs
- In certain circumstances, retrofitting to allow for flexible operations of a CFPP e.g. carbon capture/co-firing with low-carbon fuels

**>2000**

Coal plants in APAC as of 2023

**\$17.1 tn**

Total financing amount required to phase out coal completely in APAC

Indonesia Philippines Vietnam



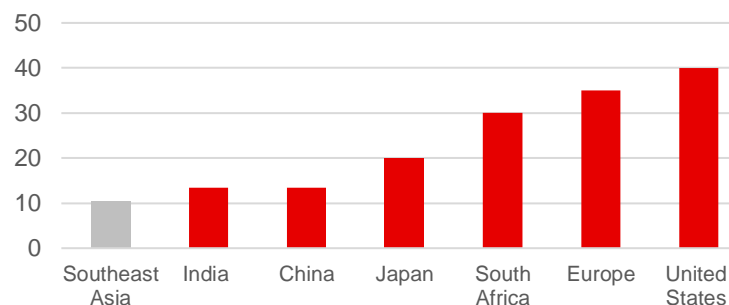
ASEAN – 3 with highest coal dependency in energy mix

Fact

To achieve Net Zero by 2050:

**>2** coal plants in this region must be retired every week from now till 2040

Average age of coal plants (years)



Source: METI

Age of CFPPs



Renewables landscape



Coal landscape



Southeast Asia

- Youngest

- Varied potential across region, fragmented grid infrastructure

- Over 40% of energy mix dominated by young CFPPs

Japan

- Relatively young

- Scarcity of suited land & lack of grid infrastructure & pipeline connectivity with other regions

- Promoting managed phase-out of CFPPs

Europe & the US

- Oldest

- Low cost & wide availability for solar, wind & natural gas led to large-scale deployment
- Economically & politically driven climate agenda

- With coal assets nearing end of life, decommissioning of existing coal fleet already well in progress

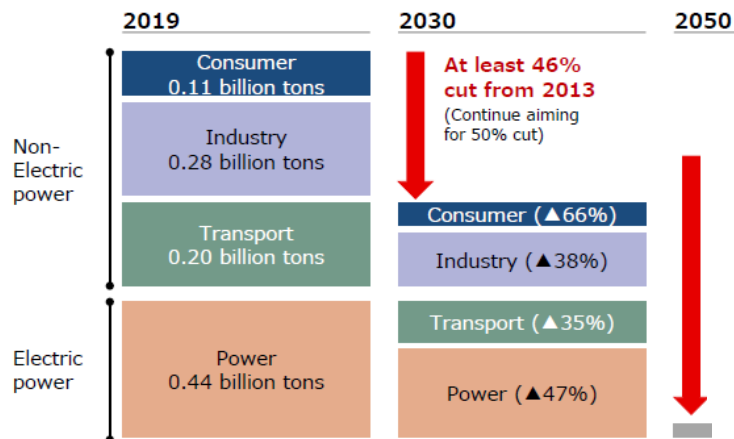
\* Glasgow Financial Alliance for Net Zero (GFANZ) Public Consultation for Financing the Managed Phaseout of Coal-Fired Power Plants in Asia Pacific (2023)

Source: MUFG compiled from BNEF, GFANZ, IMF, Statista, S&P Global and various public sources

# Managed Phaseout I Case study of Japan's approach as blueprint for APAC region

Japan Power Sector's Pathway: Managed phaseout of inefficient coal plants along with retrofitting sit at the heart of Japan's GHG reduction strategy

● Japan's overall decarbonization strategy: Striving for energy resilience with solid technology base



Source: MUFG Transition Whitepaper (2022)

- Power sector is identified as the largest CO<sub>2</sub> emitting sector in Japan
- Japan is committed to reducing greenhouse gas emissions by 46% (from 2013 levels) by 2030 and to achieve carbon neutrality by 2050

## Japan's targeted plan in its pathway to achieve carbon neutrality for power sector:

### Nuclear



### Increase clean energy

Increase nuclear power capacity & enhance its sophistication

### Solar



Expansion of renewable energy

### Wind



### Coal phase-out



### Reduce emissions

Promote managed phase-out of thermal power & realize zero emission thermal power

### Short-term plan (~2030)



- Retire inefficient coal-fired power plants
- Retrofit & replace coal/LNG thermal power plants with co-firing of ammonia (target 20%) & hydrogen (target 30%)

### Mid-to-long term plan (~2050)



- Realize 100% combustion/mono-firing of ammonia/hydrogen as full replacement of thermal power



# Regional Taxonomies I Rulebooks to direct transition finance for managed phaseout

## ASEAN Taxonomy signals the acceptance of financing coal phase-out activities within the region

Published

Status : Published March 2023

- Spells out clear conditions upon which coal phase-out could obtain transition financing under **traffic light system**, stipulating asset retirement in a timely manner
- Focus on credibility & science-based while being inclusive & catering to varied member states
- Recognized projects include ADB's Energy Transition Mechanism(ETM) & Just Energy Transition Partnership(JETP)

	Phase-out timeline	Operation duration cap from commercial operation date	Alignment with 1.5°C Outcome	Technology
<b>Tier 1 (Green)</b>	By 2040	35 years  (plants built after 31 Dec 2022 will not qualify)	Must be consistent with IEA Net Zero Emissions Pathway for power sector to achieve net zero emissions by 2050	Best-in-class, provided affordable, accessible, reliable & can be implemented within a reasonable timeframe
<b>Tier 2 (Amber T2)</b>	By 2050	35 years  (only plants built from 1 Jan 2023 - 31 Dec 2027 will qualify)	Required to derive from regional/country-level pathways consistent with science-based pathways	
<b>Tier 3 (Amber T3)</b>	NA	35 years	NA	

## Singapore-Asia Taxonomy extended to include a separate framework dedicated to coal phase-out

Status : Public consultation June 2023

- With Singapore's status as a sound financial centre, Monetary Authority of Singapore's (MAS) proposed criteria for early coal phase-out sets out to boost investor confidence to participate in phase-out transactions driven out of this region
- Proposed facility & entity level criteria to be revised after 2025

### Facility level

*Ascertain level of ambition of phase-out project*

- Phase-out by **2040**, total operating duration must not **>25 years**
- Economic viability: Have positive fair economic value remaining & demonstrate verifiable emissions savings
- Prevention of emissions leakage: must replace by clean energy capacity  $\geq$  phased-out electricity capacity

### Entity & system level

*Provide further safeguards to facilitate quality phase-out projects*

- Owner must commit to no new development of coal-fired power plants
- Transition plan to reach full alignment to 1.5°C by 2030

# Rulebooks for Financial Institutions I Sounding out of guidelines

**GFANZ have released the ambitious yet practical guidelines to serve as rulebook for financiers on early coal phase-out in the region**

**Status :** Public consultation Jun 2023

- Attempt to establish a level of comfort/ credibility to FIs while extending financing to managed phase-out projects with 10 recommendations across a 3-step process

## 1 Credible plans for coal phase-out at government, company & project level

- GFANZ's inclusion of **government/country level** reflects an important consideration that other taxonomies do not cover – accounting for **national commitments** that influence coal-fired power plants part of the energy sector transition

## 2 Optimize meaningful outcomes across different aspects

Climate impact

Financial viability

Socio-economic considerations

## 3 Accountability & transparency across coal phase-out plans

- Reference to key benchmarks recommended in coal phase-out plans:
  - IEA Net-zero pathway
  - Taxonomies e.g. ASEAN, Singapore-Asia
  - Country-specific targets to phase-out coal

**Monetary Authority of Singapore (MAS) recently released transition planning guidelines to streamline regulatory expectations for financial institutions to adopt a sound transition planning process**

**Status :** Public consultation October 2023



- *Engagement* over divestment to steward clients & investors towards an orderly transition



- Multi-year approach to assess climate-related risks for *longer-term*

## Encourage progression

- **12 month transition period** for FIs to assess how appropriate to implement guidelines
- Emphasis on **long-term alignment of** investments/loans with long-term improvement in client climate risk profiles



- Holistic treatment of risks by *integrating climate mitigation & adaptation* measures



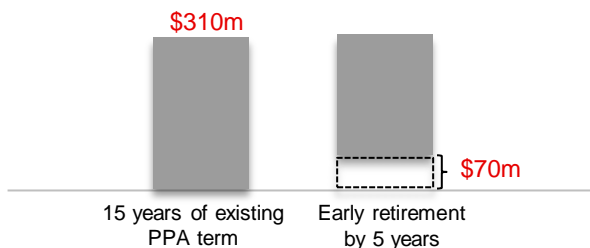
- Consider environmental risks *beyond climate* e.g. nature & biodiversity



- Adopt transparency to support accountability & credibility

# Innovative Financing Mechanisms I Creating additional source of funds for managed phaseout

Sample cashflow model of a 15 year-remaining CFPP in Indonesia



Source: MAS-McKinsey Working Paper (Sep 2023)

**US\$70m/GW**



Economic gap of early CFPP retirement 5 years ahead of existing Power Purchase Agreement(PPA)

**US\$310m/GW**



Upfront financing needed to buyout a single CFPP

Source: MUFG compiled from MAS-McKinsey Working Paper and various public sources

1

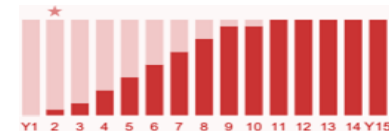
## Transition credits for managed phase-out of coal projects

MAS & McKinsey proposed a **new differentiated asset class** of high-integrity carbon credits called “**transition credits**” in jointly published working paper to finance early retirement of CFPPs

Model 1: Early retirement



Model 2: Early retirement + gradual ramp-down



Source: MAS-McKinsey Working Paper (Sep 2023)

Key concepts

Carbon credits generated out of **emission reduction** from early CFPP retirement serve as **complementary revenue stream** to **compensate for loss** of cashflow.

- Model 1 would minimize the economic gap while Model 2 allows for earlier issuance of carbon credits & doubled emission reduction.

2

## Blended finance

Blended finance as financing mechanism mobilizing concessionary capital to de-risk & attract private capital towards coal phase-out projects

### Just Energy Transition Partnership (JETP)



- Vietnam's JETP Resource Mobilization Plan (JETP-RMP) in progress & targeted to release in Nov 2023 – to enable implementation of JETP funding & strategy



- Development of Comprehensive Investment & Policy Plan (CIPP) on how Indonesia plans to spend \$20 billion JETP fund postponed till end-2023

### Asian Development Bank (ADB's) Energy Transition Mechanism (ETM)




- 1<sup>st</sup> deal in Indonesia to receive financing support from early retirement of coal
  - Project: 660MW Cirebon 1 power plant in West Java
  - US\$250m refinanced to pay for plant's retirement 10-15 years before end of useful life

## Section II: Disclosure Updates

# Harmonization of Disclosure I streamlined under ISSB with inclusion of transition planning & relief criteria

Current: Complex reporting landscape facing disclosure fatigue from alphabet soup of reporting frameworks



**TCFD** - **CDP**

Governance  
Strategy  
Risk management  
Metrics & targets

Scoring system for environmental leadership & carbon inventory

**Climate-related disclosures**  
*Task Force on Climate-related Financial Disclosures(TCFD), Climate Disclosure Project(CDP) etc.*



**IFRS** **SASB**

**VALUE REPORTING FOUNDATION**

**Financial materiality focused disclosures**  
*International Financial Reporting Standards(IFRS), Sustainable Accounting Standards Board(SASB) etc.*

**Separate market/region-specific regulations**  
E.g. EU Sustainable Finance Disclosure Regulation

New: ISSB standards established as standardized global baseline for sustainability-related financial disclosures



**International Sustainability Standards Board**  
**IFRS S1: Sustainability-related financial disclosure**  
**IFRS S2: Climate-related disclosures**

June 2023

- Speed up the shift in capital flows channelled towards greener assets as new standards seek to hasten pricing-in of both risks & opportunities
- Forward-looking ambitions as opposed to backward tracking of benchmarking against past performance in existing standards
- Rapid adoption & ongoing movement compared to other international climate forums: ISSB formed in Nov 2021 at COP26 & fostered widespread support within G7 & G20 in <2 years
- Interoperability: expansion of scope of national/regional frameworks as a consolidated solution

## Key highlights:

**Requirement to report Scope 3 emissions** in addition to Scope 1 & 2

**Transition relief** offered to reporting entities to prioritise climate-related over sustainability-related issues & only start Scope 3 reporting in 2<sup>nd</sup> year of adoption

**Quantify exposures** to physical & transition climate risks e.g. GHG protocol, science-based targets

Justify how **transition plans** fit within a company's overall strategy

Provide colour on planned **use of carbon credits** e.g. credit type, reduction/removal, certification body

# Enhancing the Integrity of Sustainability Actions | A shift from voluntary to mandatory reporting

APAC is gradually advancing into mandatory climate disclosure under ISSB standards, following the movements in America & UK
















## USA

- Oct 2023: California introduced **US' 1<sup>st</sup> mandatory climate disclosure rules** with passing of 2 bills including those aligned with ISSB
- Applicable to “companies doing in business in California” with revenues >\$500m
- Non-compliance penalties** of up to \$50,000 per reporting year



## UK

- One of the 1<sup>st</sup> major economies to make climate disclosures mandatory for listed companies
- UK-specific version of ISSB to be ready by Jul 2024

Market	Status	Details
<b>Australia</b> 	✓	Jun 2023: Consultation paper stating intention for Australian requirements to align with ISSB standards as soon as FY2024-2025 for large corporations, with smaller entities phased in over subsequent 3-year period.
<b>China</b> 	•	Jul 2023: Shanghai & Shenzhen Stock Exchanges formulating guidelines for disclosure in light of ISSB
<b>Hong Kong</b> 	✓	Apr 2023: HK bourse published consultation paper which mandates all listed companies to provide climate-related disclosures aligned with ISSB from 2024. HKEX to become <u>1<sup>st</sup> stock exchange in Asia to mandate ISSB reporting</u>
<b>India</b> 	◦	-
<b>Indonesia</b> 	◦	-
<b>Malaysia</b> 	•	Discussions on ISSB standards currently underway between Securities Commission, Bank Negara Malaysia, Bursa Malaysia & Malaysian Accounting Standards Board
<b>New Zealand</b> 	•	Climate-related reporting in alignment with TCFD recommendations already mandatory for certain large entities. External Reporting Board adjusting to account for new ISSB standards
<b>Philippines</b> 	◦	-
<b>Singapore</b> 	✓	Jul 2023: public consultation launched, requiring companies to provide climate-related disclosures in alignment with ISSB: listed companies from FY2025, non-listed companies of revenues >\$1bn from FY 2027
<b>South Korea</b> 	•	Financial Services Commission to implement disclosure system including ISSB in 2025, focusing on KOSPI-listed firms with >\$1.5 bn assets
<b>Taiwan</b> 	✓	Financial Supervisory Commission announced plans to enhance sustainability disclosures among listed companies, implementing ISSB standards in stages from FY2026-2027.
<b>Thailand</b> 	•	Aug 2023: Securities & Exchange Commission issued a manual on best disclosure practices including ISSB
<b>Vietnam</b> 	◦	-

Legend:

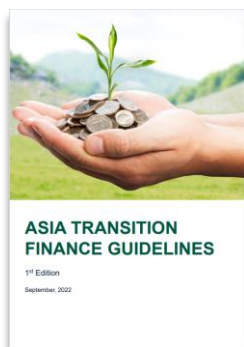
✓ = Advanced (FY target stated) • = Developing Plans ◦ = No announcement released

# MUFG's Value Proposition

# Financing of Energy Transition | MUFG's strategic involvement

Globally, MUFG has been a leader in private sector-led rule making discussion to accelerate the energy transition via advancing transition finance

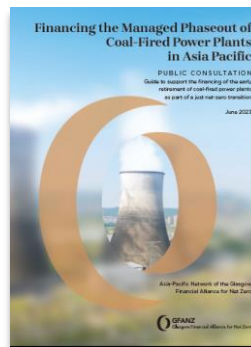
## Asia Transition Finance Study Group (ATFSG)



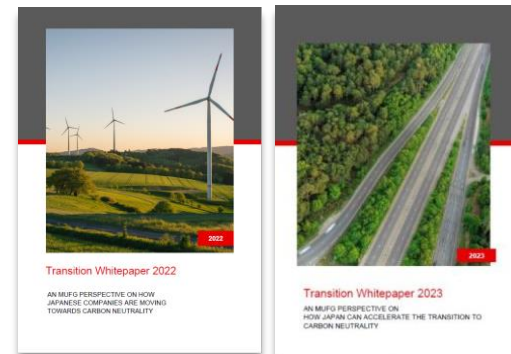
## Net Zero Banking Alliance (NZBA) by UNEFPI



## Glasgow Financial Alliance For Net Zero (GFANZ)



## Publishment of Transition Whitepapers



Regionally, MUFG actively engages in strategic working groups driving the establishment of regional transition finance rulebooks

## ASEAN Taxonomy Taskforce



## GFIT: Singapore-Asia Taxonomy





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