ASEAN SUSTAINABLE FINANCE STATE OF THE MARKET 2022

Climate Bonds Initiative

Supported by HSBC

Prepared by Climate Bonds Initiative.

Introduction

About this report

The Association of Southeast Asian Nations (ASEAN) is an economically dynamic and culturally diverse region with a population of 650 million. The region comprises 10 member countries—Brunei, Cambodia, Indonesia, Lao People's Democratic Republic (Lao PDR), Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam—that together make up the fifth largest economy in the world, set to become the fourth largest by 2050.[1]

This is the fifth iteration of the Climate Bonds Initiative's **ASEAN State of the Market** report series. As the sustainable debt market has grown, the scope of this report has expanded, and now includes analysis of the green, social, and sustainability (GSS) bond and loan markets, plus sustainability-linked bonds (SLBs) and sustainability-linked loans (SLLs) and transition bonds, collectively described as thematic or GSS+ debt. This report describes the shape and size of this market originating from ASEAN and priced on or before 31 December 2022, along with related topics (taxonomies, transition, and policy) covered in the spotlight sections.

About the Climate Bonds Initiative

The Climate Bonds Initiative is an international investor-focused not-for-profit organisation working to mobilise the USD100tn bond market for climate change solutions.

It promotes investment in projects and assets needed for a rapid transition to a low carbon and climate resilient economy. The mission is to help drive down the cost of capital for large-scale climate and infrastructure projects and to support governments seeking increased access to capital markets to meet climate and greenhouse gas (GHG) emission reduction goals.

Contents

List of abbreviations

A&R: Adaptation and resilience

ACMF: ASEAN Capital Markets Forum

ADB: Asian Development Bank

AMS: ASEAN Member States

ASEAN: Association of Southeast Asian Nations

ATB: ASEAN Taxonomy Board

BNM: Bank Negara Malaysia

DNSH: Do no significant harm

ESG: Environmental, social, and governance

ETM: Energy Transition Mechanism

GBDB: Green bond database

GFIT: Green Finance Industry Taskforce (Singapore)

GHG: Greenhouse gas

GSS: Green, social and sustainability debt instruments

GSS+: GSS, SLBs, SLLs, and transition bonds

ICT: Information communication technology

ITSF: Inter-Agency Technical Working Group for Sustainable Finance, Philippines

JETP: Just Energy Transition Partnership

KPI: Key performance indicator

MAS: Monetary Authority of Singapore

SC: Securities Commission Malaysia

SDG: Sustainable Development Goal

SLB: Sustainability-linked bond

SLBS: ASEAN Sustainability-Linked Bond Standards

SLL: Sustainability-linked loan

SPO: Second Party Opinion

SPT: Sustainability performance target

SRI: Sustainable and Responsible Investment

S&S: Social and sustainability

UoP: Use of proceeds

WC-CMD: ASEAN Working Committee on Capital Market Development

WG-SF: Working Group on Sustainable Finance, Thailand

YOY: Year-on-year

Report highlights

Market contracts in 2022, but many positives remain

Following a very strong 2021, and reflecting adverse market conditions – namely rising inflation and interest rates – that negatively impacted global capital markets activity, the ASEAN sustainable finance market contracted in 2022 for the first time ever (-32% YOY). However, volumes stayed robust at USD36bn, almost twice the level of 2020.

Issuance was lower across most market segments in 2022, albeit to varying degrees. Green bonds and green loans fell the least at -26%, whereas SLBs plunged almost 90% and SLLs 40% after 'exploding' in 2021. The exceptions were green Sukuk and social bonds which both achieved record volumes. Despite this, social bond issuances remain sparse, with only one deal issued by Thailand's Government Savings Bank (THB10bn/USD295m) during the year.

Loans remain the most popular debt instruments in the region, with SLLs comfortably at the top and green loans exceeding green bonds/Sukuk.

The overall number of issuers dropped from 103 in 2021 to 64 in 2022. This is close to the level of 2020 (61) but with almost twice the amount issued, reflecting a larger average amount per issuer driven by more benchmark deals, including from sovereign issuances.

Singapore tops most market segments

No new issuer domiciles were added in 2022. The group of ASEAN-6 covered in previous reports remains the same among GSS (i.e., thematic UoP) instruments, while Cambodia and Myanmar have seen small SLL transactions but none in 2022.

Singapore remains the clear leader and most developed market overall in the region both cumulatively and in 2022, despite issuance dropping considerably in 2022 (-45% YOY) in line with most of the world. The country accounts for 63% of cumulative ASEAN issuance, slightly above the 60% in 2022. Singapore is top across the green, SLL and SLB segments.

Driven by its sovereign sustainability issuances, Thailand is strongest cumulatively among social and sustainability bonds. Nevertheless, the Philippines' inaugural sustainability sovereign in 2022 earned the nation first place during the year in this theme.

Sovereigns stay strong; Singapore and Philippines enter

Sovereign issuances remained relatively robust in 2022, showing the most resilience of all issuer types in the region.

Market analysis summary: SLLs, green and sustainability segments dominate

	Green*		Social		Sustainability		SLB		SLL**	
	2022	Cumulative	2022	Cumulative	2022	Cumulative	2022	Cumulative	2022	Cumulative
Amount issued (USDbn)	12.8	50.6	0.3	0.9	7.8	22.6	0.3	2.7	14.9	52.0
Number of issuers	24	117	1	7	11	29	2	10	27	77
Average amount per issuer (USDm)	535	432	295	129	705	780	136	265	552	675
Number of currencies	8	13	1	2	5	7	3	5	4	8
Number of countries	5	6	1	2	3	6	2	4	5	8
Largest country (by amount issued)	**2022**: Singapore **Cumulative**: Singapore		**2022**: Thailand **Cumulative**: Thailand		**2022**: Philippines **Cumulative**: Thailand		**2022**: Singapore **Cumulative**: Singapore		**2022**: Singapore **Cumulative**: Singapore	
Largest issuer	**2022**: Perennial Shenton Property Pte Ltd (USD2.1bn) **Cumulative**: Republic of Indonesia (USD5.5bn)		**2022**: Government Savings Bank - Thailand (USD295m) **Cumulative**: National Housing Authority - Thailand (USD314m)		**2022**: Thailand Government (USD2.7bn) **Cumulative**: Thailand Government (USD7.7bn)		**2022**: Ascott REIT MTN Pte Ltd (USD259m) **Cumulative**: Sembcorp Financial Services Pte Ltd (USD497m)		**2022**: Olam International Ltd (USD4.9bn) **Cumulative**: Olam International Ltd (USD9.9bn)****	
Largest deal	**2022**: Perennial Shenton Property Pte Ltd (USD2.1bn) **Cumulative**: Perennial Shenton Property Pte Ltd (USD2.1bn)		**2022**: Government Savings Bank - Thailand (USD295m) **Cumulative**: Government Savings Bank - Thailand (USD295m)		**2022**: Thailand Government (USD1.6bn)*** **Cumulative**: Thailand Government (USD6.8bn)		**2022**: Ascott REIT MTN Pte Ltd (USD147m) **Cumulative**: Sembcorp Financial Services PTE Ltd (USD497m)		**2022**: Olam International Ltd (USD2.9bn) **Cumulative**: Trafigura Group Pte Ltd (USD5.5bn)	

NB: Figures in USD equivalent only. Cumulative means the total cumulative amount (since the first deal/market inception, e.g., 2016 for green bonds). Countries refer to issuer domiciles.
*Includes green bonds, loans and Sukuk. Most green loans from 2022 are based on Refinitiv data but have not yet been screened for inclusion in the Climate Bonds Green Bond Database (most if not all are likely to be included). **SLL data is from Refinitiv as Climate Bonds does not track this segment (yet). ***Most of the Thai sustainability sovereign is from a tap of its original 2020 deal (12 taps in total, of which three in 2022). Excluding it, the largest deal from 2022 is BDO Unibank's (USD1bn). ****Second largest SLL issuer is Trafigura Pte Ltd, also from Singapore (USD7.9bn).

Singapore and the Philippines became two new sovereign issuers (of green and sustainability bonds respectively), adding to the already significant volume of ASEAN sovereign debt. In the face of adverse market conditions, governments tend to be the least likely issuer type to be affected, especially when neighbouring or peer countries show leadership in the market – this trend seems to be present in the ASEAN region.

This is a very positive sign given the importance of sovereign transactions, both in stimulating market activity and development as well as in allocating large amounts of capital to sustainable projects and activities. The two regions globally with the highest share of sovereign issuance are ASEAN and Latin America, a feature which has persisted for a few years now.

Sovereign issuance in ASEAN is concentrated in sustainability bonds, which enable governments to raise funds for a combination of green and social projects. Thailand (2020, tapped in 2021 and 2022), the Philippines (2022), Malaysia (2021) and Indonesia (2021) make up the list. Sovereign green debt has only been issued by Indonesia (every year since 2018) and Singapore (2022), the latter being an important milestone for the region's thematic finance market.

Corporate issuance fell drastically in 2022, especially in the green theme. This is in stark contrast to the cumulative figures and our previous report, where corporates dominated green volumes. Interestingly, non-financials have dominated corporate green bonds, while corporate sustainability bonds in the region have primarily been issued by financial institutions.

Currency use varies by theme and country

In the green theme, 2022 saw increased denomination in local currencies at the expense of foreign ones. Barely any USD green debt was issued during the year in Singapore, by far the region's largest market. Only 20% of the 2022 green volume was issued in foreign (hard) currencies, versus 33% cumulatively. The vast majority of foreign denomination is in USD, which accounted for 17% of the 2022 volume and 28% overall.

An increasing share of local currency denomination is generally a positive sign, suggesting that domestic markets are becoming more developed and local/regional investors are playing a larger role. One of the objectives of governments, MDBs and organisations like Climate Bonds is precisely to help grow large, liquid thematic capital markets with participation from local investors, and the ASEAN green bond market clearly seems to be moving in that direction (although differences by country persist, of course).

In line with its relative size, the ASEAN S&S market shows less currency diversification and more broadly less maturity than its green counterpart. This includes the use of fewer local and foreign currencies, the latter being highly concentrated in USD looking at number of deals, but less so looking at amount issued.

The main reason for the USD's lower share by amount issued is that most of the Philippines' 2022 sovereign deals came in JPY, a new currency for the region's S&S market. This follows on from the JPY/PHP currency swap facility under the cross-border liquidity arrangement between the Philippines' Bangko Sentral and the Bank of Japan, and is likely a result of the Philippine Government trying to increase its investor appetite and base through hard currency denomination.[2] Its other, and larger, sustainability bonds were issued in USD.

The currency analysis among SLLs and SLBs shows a high share of USD denomination and fewer currencies used versus green debt instruments, despite the market being slightly larger. The SGD is comfortably in second place among SLLs given Singapore's large market, but the USD still dominates heavily in the country; this contrasts with green debt issuance, where SGD reigns supreme. Part of this could be related to the profile of issuers accessing each market, with a higher share of local and smaller issuers among green debt instruments versus larger international ones among SLLs. Nevertheless, the difference is still larger than expected and Climate Bonds will continue to monitor this trend.

Increasing deal sizes and longer tenors in 2022

A considerably higher share of deals in 2022 were benchmark-sized (USD500m+). This was driven by several deals over USD1bn, including from sovereigns (Indonesia, Thailand, Singapore), financial corporates (e.g., BDO Unibank) and non-financials from the real estate sector (e.g., Asia Square Tower).

Sovereigns are generally less sensitive in the face of increasing interest rates. On the corporate side, the relative 'stickiness' of larger deals could be due to them being less flexible than smaller deals (e.g., planned/decided for longer), even as rates rise. Although hard to be sure, the data shows some support to this, as larger deals were distributed throughout the year while smaller ones were relatively more concentrated in the first half of the year.

By contrast, a much lower share of 2022 versus cumulative issuance came through small deals. This may be a reflection of adverse market conditions, which potentially impacted smaller issuers more and prevented some from coming to market. This trend is more visible among green debt than any other theme.

Relatively short tenors are common in ASEAN across all themes, which may be linked to the high share of loans in the region. However, green bonds, green Sukuk and S&S bonds saw more long-dated deals in 2022, which pushed up the average tenor. This may again reflect adverse and volatile market conditions, with issuers anticipating rising inflation and a recession in the near term. This may cause some to favour longer dated projects/instruments and/or refrain from issuing shorter term debt while waiting for more favourable interest rates. Yield curves in ASEAN countries were not inverted (like with US Treasury bonds) but did show some flattening versus the previous year.

Active year for policy and market development initiatives

While issuance volumes were generally lower versus 2021, many relevant policies and initiatives were announced and/or implemented during 2022. These complement frequent sovereign issuances which have become the norm in ASEAN and set a very promising tone for the future of sustainable finance in the region. They indicate a high level of interest from governments in the region to develop the market.

Although most are national measures, some span the entire region, the latter mainly led by the ASEAN Capital Markets Forum (ACMF). A full and much longer list with more detailed discussion is provided in the spotlight sections of this report, but to highlight a few:

- **Continued taxonomy development**, including stakeholder engagement and consultation of the ASEAN Taxonomy Version 1 following its publication in late 2021 (a Version 2 has already been released in 2023), as well as the launch of taxonomies in Indonesia and Malaysia and taxonomies in Singapore and Thailand released for public consultation: these aim to bring more clarity and consistency to definitions of green/sustainable/transition activities, facilitating capital flows and supporting private and public investments into such projects. This should enable the credible growth of thematic finance. Looking ahead, policymakers should ensure technical criteria are science-based and tightened over time.
- **Enhanced building blocks for credible transition finance:** entities operating in many sectors must undergo a major transformation to reach net-zero GHG emissions by 2050. A key tool to enable this is the creation of a robust transition plan that is science-based, coherent,

comprehensive, transparent, and covers all material scopes of emissions and business activities. This allows organisations to plan their transition path and evaluate progress over time, communicate their plan to the market/investors while reducing or even eliminating greenwashing risks, and structure their finance accordingly (for example via sustainability-linked instruments).

Transition plans are currently not mandatory in ASEAN, and very few companies have set one that meets the characteristics in the previous paragraph. In line with other regions (namely the UK and EU), ASEAN governments and regulators can and should work to introduce requirements for mandatory transition plans. The building blocks now exist, particularly given the broader development of sustainability reporting globally (see page 28), introduction of reporting rules, tools and platforms by some ASEAN stock exchanges, continued taxonomy development (including on transitional activities, e.g., in Singapore), and recent publication of the ASEAN SLBS. The time is ripe to grow transition finance, and to accelerate the transition.

- **ASEAN SLB Standards (SLBS)** published by the ACMF, based on ICMA's SLBP: these are expected to support SLB issuance across a broader issuer base while ensuring sufficient consistency in structures and transparency. This will complement the ASEAN standards for GSS instruments and help to develop a more robust, credible and standardised market of sustainability-linked instruments.
  - **There does not seem to be a plan for an equivalent standard for SLLs**. This may be more challenging but could be a worthwhile goal given the size of this market in ASEAN and the fact that loan markets are generally more opaque in their disclosure / it is generally harder to ensure adequate levels of transparency among SLLs. However, the SLBS can already provide much support to SLL issuers in the region.

- **Singapore:** launch of the ESG Impact Hub and ESGenome Disclosure Portal, new listing rules requiring all SGX-listed entities to provide climate reporting on a 'comply or explain' basis, and establishment of Sustainable Finance Advisory Panel by the MAS.
- **Malaysia:** release of the revised Sustainability Reporting Guide, publication of the Climate Data Catalogue and expansion of the SRI Sukuk and Bond Grant Scheme for performance-linked instruments.
- **Thailand:** release of Sustainability Reporting Guide and Guidelines on Management and Disclosure of Climate-related Risk by Asset Managers.
- **Indonesia:** introduction of carbon tax, launch of Energy Transition Mechanism (ETM) Country Platform by the Ministry of Finance, and launch of Just Energy Transition Partnership (JETP) at G20 Summit.
- **Philippines:** launch of Rules on Sustainable & Responsible Investment Funds and release of the Sustainable Central Banking Strategy.
- **Vietnam:** launch of Just Energy Transition Partnership (JETP), which will mobilise an initial USD15.5bn to support the country's green transition, and approval of 2022-2025 government programme for sustainable business development.

Methodology

Scope and structure of analysis

The analysis in this report is largely based on the instruments and data tracked by Climate Bonds. It includes the following thematic debt themes: **green**, **social**, and **sustainability** (GSS) UoP bonds/loans/Sukuk, along with general-purpose **SLBs** and **SLLs**. Transition (UoP) bonds are also included in theory, but in practice there has only been one from ASEAN (from 2021) and its post-issuance report shows that it only financed natural gas projects; it has thus been excluded from the analysis given fossil fuel investments (outside of managed phase-out/plant decommissioning) are not aligned with Climate Bonds' eligibility criteria (see page 8).

The collection of the above is referred to as the GSS+ market. A related market is that of unlabelled climate-aligned bonds, a segment which Climate Bonds also tracks (more details below). However, the results remain very similar to those covered in last year's report (link here) and were not included this time.[3]

Climate Bonds has historically focused on the green theme through the Green Bond Database (GBDB), which includes not only bonds but also other instruments such as loans, Sukuk and asset-backed securities (ABS). We note that many green loans from 2022 have not yet been screened for inclusion in the database, but most are likely to be included based on previous experience. In addition, due to the importance of loans in ASEAN and their different characteristics as debt instruments (see below), loans are shown separately to bonds (and Sukuk) in some parts of the analysis.

The database expansion to other themes (S&S bonds, transition bonds, and SLBs) is more recent, enabling a broader view of the thematic debt market which is increasingly reflected in our research and reports. However, only bonds – not loans – are included across these themes. It is also important to note that while GSS instruments are screened as part of the respective methodology requirements, SLBs and transition bonds are not yet screened against any methodology (e.g., to assess the ambition and materiality of targets).

Finally, SLLs are not yet tracked by Climate Bonds. The SLL data covered in this report is from Refinitiv and, like with SLBs, the deals have not been screened.

Reduced loan disclosure

Loans are debt instruments that differ from bonds. One important difference, particularly in the sustainable finance market, is that loans generally have more opaque disclosure given they tend to be privately (often bilaterally) arranged. This means it is often hard to a) find relevant deals, and b) find essential information about the deals, including details such as loan amount and term, as well as use of proceeds.

Climate Bonds tracks green loans within the Climate Bonds Green Bond Database (GBDB), but with the caveat that this data is collected on a best-efforts basis (unlike green bonds, where the confidence level is higher) and deals may take longer to be added to the database. Green loan figures included in this report are therefore indicative and should be treated as such. They have been included in this report provisionally given that most or even all are likely to be included following screening. For similar reasons, SLL data should also be treated as indicative.

GSS+ market

GSS debt instruments

Green: dedicated environmental benefits (green bonds, loans, Sukuk, etc., together referred to as green debt: captured in the GBDB since 2012).

Social: dedicated social benefits (social bonds: captured in the S&S Database since 2020).

Sustainability: green and social benefits combined into one instrument (sustainability bonds: captured in the S&S Database since 2020).

Transition debt instruments

SLBs: coupon step-ups/step-downs linked to entity-level sustainability performance targets (SPTs) (captured in the SLB and Transition Bond Database since 2021).

SLLs: rate step-ups/step-downs linked to entity-level SPTs (not yet tracked by Climate Bonds).

Transition bonds: use of proceeds (UoP) supporting transition at activity or entity level (captured in the SLB and Transition Bond Database since 2021).

Climate-aligned issuers/bonds

Unlabelled bonds from climate-aligned issuers finance climate-aligned projects, assets, and expenditures, but are not labelled by issuers (captured in the Unlabelled Climate-Aligned Issuer Database since 2012).

Methodology overview

This report is largely based on the following three Climate Bonds' databases, with only SLLs and some 2022 green loans based on external (Refinitiv) data:

1. Green Bond Database (GBDB)

2. Social and Sustainability (S&S) Bond Database

3. SLB and Transition Bond Database

Minimum requirements for inclusion

Apart from the climate-aligned database (see below), debt instruments must have a label to qualify for inclusion. Debt labels describe the types of projects, activities, or expenditures financed, and/or their benefits.

Green, social, sustainability, and transition debt must finance sustainable projects, activities, or expenditures. Green, social, sustainability, and transition are the most common labels respectively among these instruments, but a broad range is used. Among performance-linked instruments, SLBs/SLLs must annunciate clear SPTs for the entity.

Green

All deals in the green theme have been screened to verify their integrity. Screening is based on a set of process rules stipulated in Climate Bonds' GBDB Methodology, including the following two overarching criteria:[4]

1. Deals must carry a variant of the green label.

2. All net proceeds must verifiably (public disclosure) meet Climate Bonds' green definitions derived from the Climate Bonds Taxonomy.[5] All green debt instruments are reviewed to ensure their green credentials.

Social and sustainability

Social and sustainability (S&S) deals are classified based on the UoP (which is typically related to the deal's label), as follows:

Sustainability: UoP includes a combination of green and social projects, activities, or expenditures, e.g., renewable energy, low-carbon transport, employment generation and gender equality.

Social: UoP is exclusively related to social projects, e.g., health, employment, gender equality, affordable housing, etc.

Any instrument financing only green projects is included in the GBDB should it meet eligibility requirements, irrespective of its label (e.g., an SDG bond that only finances solar energy). A sustainability-labelled bond that only finances social projects will fall under a social theme, whereas one that finances a combination of green and social would be considered to fall under the sustainability theme.

Sustainability-linked bonds and loans (SLBs and SLLs)

SLBs and SLLs raise general purpose finance and involve penalties/rewards (e.g., coupon or rate step-ups/ step-downs, early repayment obligations, etc.) linked to not meeting/meeting pre-defined, time bound SPTs and associated Key Performance Indicators (KPIs), typically at the entity level.

Climate Bonds records but does not yet screen SLBs or SLLs against thresholds or targets. Screening methodologies for these debt products are under development.

Transition bonds

Transition debt includes instruments financing activities that are not low or zero emission (i.e., not green), but have a short- or long-term role to play in decarbonising an activity or supporting an issuer in its transition to Paris Agreement alignment. The SLBs and SLLs described above can lend themselves well to this purpose when calibrated appropriately. In addition, the market has seen the emergence of transition UoP bonds, which are intended to enable the inclusion of a more diverse set of sectors and activities. This segment currently includes labels such as transition (the most common), energy transition, blue transition, and green transition.

At present, transition bonds predominantly originate from highly polluting, hard- and expensive-to-abate industries. These often do not fall into the existing definitions of green but are a critical component of a transition to net zero. Example sectors include extractives such as mining; materials such as steel and cement; and transport, including aviation and shipping.

Climate Bonds records but does not yet screen transition bonds against thresholds or targets. As relevant criteria at both activity- (sector) and entity-levels are developed, Climate Bonds will introduce screening for bonds and issuers in those sectors. Climate Bonds is currently developing criteria for the cement, basic chemicals, and steel industries, along with hydrogen as a cross-industry solution.

Unlabelled climate-aligned bonds

Climate-aligned bonds are not self- nor externally labelled, and their UoP is not earmarked or ring-fenced. Nonetheless, these general-purpose bonds finance climate-aligned projects, assets, and expenditures. This financing is defined at the entity level based on the share of green revenues of an issuer.

Climate Bonds' research on these issuers covers both public and private companies. A more detailed methodology is available in Climate Bonds' Climate-Aligned Investment Opportunities: Climate Aligned Bonds and Issuers 2020 report.[6]

Climate Bonds has been researching bonds financing climate-aligned assets since 2012, to identify opportunities in the unlabelled bond market, and drive investments towards green assets and technologies. Because they are not labelled as green, climate-aligned bonds often lack the visibility and transparency inherent in green bonds that typically come with a framework detailing the relevant assets, projects, or expenditures being financed. Identifying these bonds highlights opportunities to scale up the labelled green bond market; for example, as climate-aligned debt rolls off, it could be refinanced with a green label. The green label could achieve cheaper funding for the issuer and enable its inclusion in dedicated mandates. This research also offers an entity level assessment by identifying the share of revenues linked to green activities for bond issuers included in the scope of the analysis.

Climate-aligned issuers: issuers that derive at least 75% of their revenues from climate-aligned business activities. These comprise:

- **Fully-aligned issuers**: issuers that derive ≥ 95% of revenue from climate-aligned activities.
- **Strongly-aligned issuers**: issuers that derive ≥ 75% of revenue from climate-aligned activities.

Unlabelled climate-aligned bonds: bonds that finance climate-aligned activities but are not labelled by the issuer, pro-rated according to the revenue alignment above.

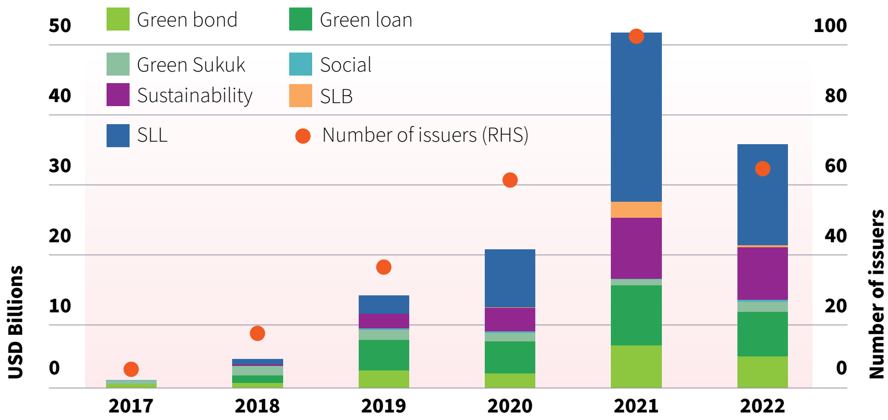
Climate-aligned outstanding debt: outstanding volume issued by fully-aligned + strongly-aligned issuers.

Labelled bonds are not included in the unlabelled climate aligned research due to differences in format and to avoid double counting.

NB: Throughout the report, 'cumulative' means the total amount since market inception in ASEAN (i.e., the first deal, for example 2016 for green bonds).

Market overview

Only green Sukuk and social bonds grew in 2022; loans remain very common



Source: Climate Bonds Initiative

NB: In yearly charts only 2017 to 2022 is shown due to very small size of 2016 and 2015, but all years are included in total data/charts. Social and Sustainability (S&S) bonds are separated in the first chart but grouped in most of the remaining analysis since there have been very few social bonds in the region and social bonds share many similarities with sustainability bonds.

The ASEAN GSS+ market

Following a very strong 2021, and reflecting adverse market conditions (namely rising inflation and interest rates) that negatively impacted global capital markets activity, the ASEAN sustainable finance market contracted in 2022 for the first time ever (-32% YOY). However, volumes stayed robust at USD36bn, almost twice the level of 2020.

Issuance was lower across the various market segments, with the exception of green Sukuk and social bonds which both had record years in terms of amount issued; even so, social bond issuance remains sparse with only one deal issued by Thailand's Government Savings Bank (THB10bn/USD295m).

Driven by adverse market conditions, the remaining segments saw issuance drop, albeit to varying degrees. Green bonds and green loans fell the least at -26%, whereas SLBs plunged almost 90% and SLLs 40% after 'exploding' in 2021. Loans remain the most popular debt instruments in the region, with SLLs comfortably at the top.

We note that the SLLs included in this report have not been screened since Climate Bonds does not yet track this market, and most green loans from 2022 have not yet been screened against the Climate Bonds GBDB, although almost all are likely to be included upon screening (see Methodology section for more details). Loan figures should therefore be treated as indicative.

Sukuk, along with bonds and loans, are disaggregated in some parts of the analysis for the green theme. Other themes have also had Sukuk issuances, but a) in our more recent S&S database we do not yet track loans nor do we classify instrument types such as Sukuk, b) among SLBs we do differentiate Sukuk but there have not been many (under 10% of SLB volume in ASEAN), the profile was largely similar to 'regular' SLBs, and the SLB market is much smaller than the green debt market.

The overall number of issuers dropped from 103 in 2021 to 64 in 2022. This is close to the level of 2020 (61), but the total amount is almost double, reflecting a larger average amount per issuer. Indeed, this trend holds against other years, with ASEAN issuers on average raising more in 2022 (USD563m) than any other period. Part of this is due to the changing profile of issuer types, as sovereigns (i.e., larger issuers) increasingly access the market.

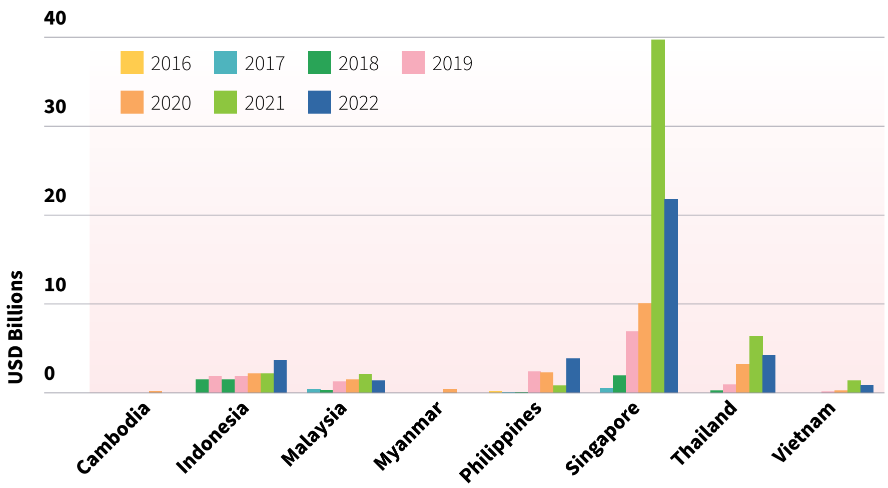
Like in the rest of the world, transition bonds are rare in ASEAN. This is likely a result of the lack of a widespread 'transition taxonomy' which can be used to qualify eligible investments, and the fact that performance-linked instruments (SLBs and SLLs) have emerged as the preferred mechanism to finance entity-level transitions. While there is increasing guidance on transition finance – e.g., from Climate Bonds and ICMA – the transition label for UoP instruments thus remains rare, and it is unlikely that this will change significantly, at least in the near future. Nevertheless, transition bonds are a possible instrument that companies can consider, as long as relevant transition finance principles are followed.

The only transition bond from ASEAN is the CNY2bn (USD310m) two-year deal issued by China Construction Bank's Singapore branch in 2021. According to its post-issuance report, the proceeds have been fully allocated to natural gas projects (distributed energy generation, cogeneration and trigeneration) despite several other projects having been listed as eligible at issuance in its framework.[7] Climate Bonds does not consider fossil fuel investments as eligible transition activities (apart from managed phase-out/plant decommissioning) to avoid lock-in of related assets. The deal is thus not included in the figures of this report, although it would represent a very small share anyway.

Singapore represents 63% of cumulative volume, 60% of 2022

Country-wise, Singapore remains the clear leader in the region both cumulatively and in 2022, but saw issuance drop considerably in 2022 (-45% YOY). Thailand (#2) experienced a similar trend (-33%), while sustainable debt issuance in Indonesia (#3, +66%) and the Philippines (#4, +347%) grew markedly in 2022. This was largely due to robust sovereign issuance in Indonesia and the Philippines, but also because the markets are still relatively small and significant fluctuations are to be expected when this is the case. Yearly variations become more meaningful as markets mature.

Singapore remains leader but several other countries saw increases in 2022



Source: Climate Bonds Initiative

No new countries were added in 2022. The group of ASEAN-6 covered in previous reports remain the same among GSS (i.e., thematic UoP) instruments. Myanmar and Cambodia are by far the smallest markets with only minor SLL issuance in 2020 and no GSS deals yet.

Overall, Singapore accounts for 63% of cumulative issuance, slightly above the 60% in 2022. It is quite possible that the years ahead may bring further convergence across ASEAN, along with the entry of new countries from the region.

NB: Individual country analyses are provided in the appendix.

Issuer type profile varies by theme and instrument type

Loans are only obtained by companies (i.e., corporates and, in some cases, government-backed entities, according to the Climate Bonds classification), while bonds (and Sukuk) can be issued by a range of organisations. But the profile of issuer types also varies considerably when comparing themes.

Green bonds show the most varied profile cumulatively, closely followed by the sustainability bond market. This is in line with the rest of the world and highlights the wide accessibility of the use-of-proceeds format across issuer types. Interestingly, however, corporate sustainability bonds in ASEAN have primarily been issued by financial institutions, while non-financials dominate corporate green bonds.

Corporate issuance fell drastically in 2022, especially in the green theme. This is in stark contrast to the cumulative figures and our previous report, where corporates dominated green volumes.

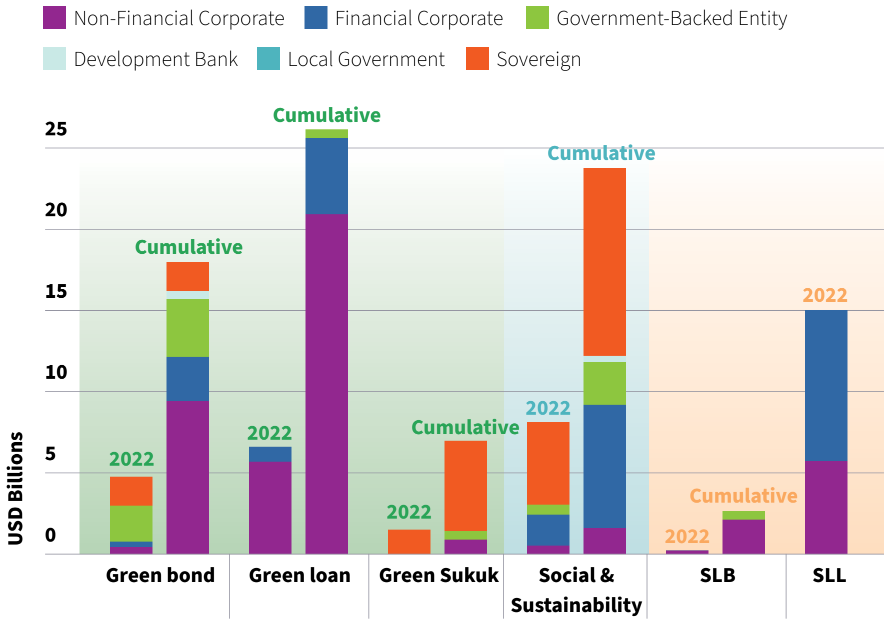
Sovereign issuance is concentrated in sustainability bonds, which enable governments to raise funds for a combination of green and social projects. Thailand (2020, tapped in 2021 and 2022), the Philippines (2022), Malaysia (2021) and Indonesia (2021) make up the list.

Sovereign green debt has only been issued by Indonesia (every year since 2018) and Singapore (2022), the latter being an important milestone for the region's thematic finance market. Driven by Indonesia's deals, Sukuk is the preferred instrument type for sovereign green bonds – Indonesia won the Climate Bonds Award for Largest Green Sukuk in 2022 (USD1.5bn).

There has been very little issuance from development banks in ASEAN compared to the rest of the world, both versus regional institutions (such as the IDB in Latin America) and global MDBs (such as the IFC, World Bank, etc.). This includes S&S bonds, which saw heavy development bank issuance across the world during 2020-21 to finance responses to the COVID-19 pandemic. Development agencies in ASEAN, both national and regional, could provide further support to the market through their own financing.

In a similar vein, local/municipal governments from ASEAN countries have yet to access the thematic debt market, although their ability to access capital markets may differ between countries. Sovereign issuance is clearly preferred in ASEAN and often the first route for public sector issuance, especially in emerging markets.

Low share of corporates in green bond issuance in 2022 versus cumulative level; S&S and green Sukuk dominated by sovereigns



Source: Climate Bonds Initiative

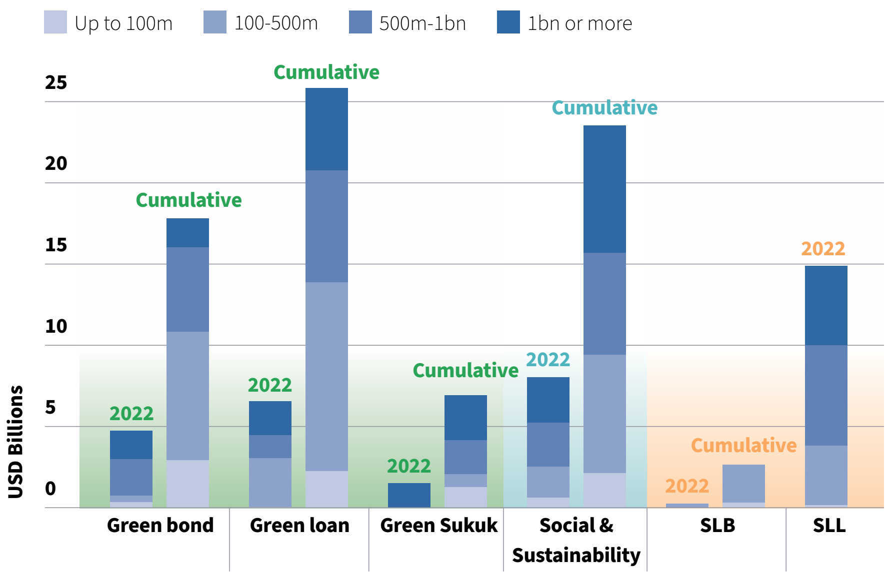
NB: Loans and Sukuk can also exist for other themes (not just green) but not disaggregated; refer to methodology for explanation. SLL only for 2022 in this and subsequent charts given lack of comprehensive/consistent data, but issuer type profile unlikely to differ significantly in other years.

Benchmark deals gain share in 2022

Deal sizes show less variation by theme/instrument than issuer types and tenors, with a relatively even split looking at cumulative volumes.

2022 brought some change, however, as a considerably higher share of deals were benchmark-sized (USD500m+). This included several deals over USD1bn, including sovereigns (Indonesia, Thailand, Singapore), financial corporates (e.g., BDO Unibank) and non-financials from the real estate sector (e.g., Asia Square Tower).

Increasing deal sizes: relatively high share of benchmark size and low share of under USD100m deals in 2022



Source: Climate Bonds Initiative

By contrast, a much lower share of 2022 versus cumulative issuance came through small deals. Only a few green bonds, sustainability bonds and SLLs under USD100m were issued, largely from non-financial corporates followed by government-backed entities.

As the World Bank notes, the outreach of sustainable financial markets is extremely limited, with a sizeable gap in sustainable financing, especially for SMEs.[8] Ultimately, organisations of all sizes will need to finance their transition and sustainable activities.

Relatively high share of long tenors in 2022

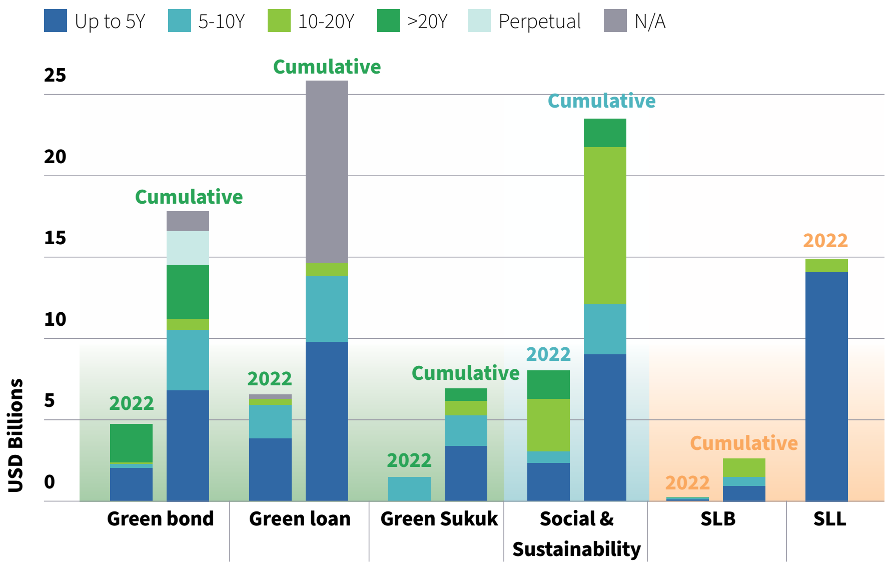
2022 deal tenors were relatively longer than among cumulative issuance. This may reflect adverse and volatile market conditions, with issuers favouring longer dated projects/ instruments and/or refraining from issuing shorter term debt and waiting for more favourable interest rates.

The first sustainability bonds with a tenor above 20 years (excluding perpetuals) came in 2022, while most of the green bond volume maturing in 20 or more years also came in 2022.

Bonds generally have longer tenors than loans. According to Climate Bonds' data, no loans (green or sustainability-linked) were arranged with a term of over 20 years.

Almost all SLLs from 2022 had a term under five years, with targets being set within that period. On one hand, short tenors among sustainability-linked instruments may be positive given that they may encourage more immediate action from corporates to improve sustainability performance; but it also raises doubts as to how significant those improvements are given the short time frame, and whether the issuer has a robust and ambitious transition strategy looking further ahead. This is particularly relevant among loans, which are privately arranged and lack sufficient disclosure and transparency (e.g., to understand and assess the issuer's targets and transition plans).

Short tenors are common in ASEAN across all themes; but green bonds, green Sukuk and S&S bonds saw more long-dated deals in 2022



Source: Climate Bonds Initiative

NB: The term of many green loans was unclear or not found, and classified as not available (N/A). This reflects the fact that loan arrangements are often private and public disclosure is usually lacking. Some may be revolving facilities.

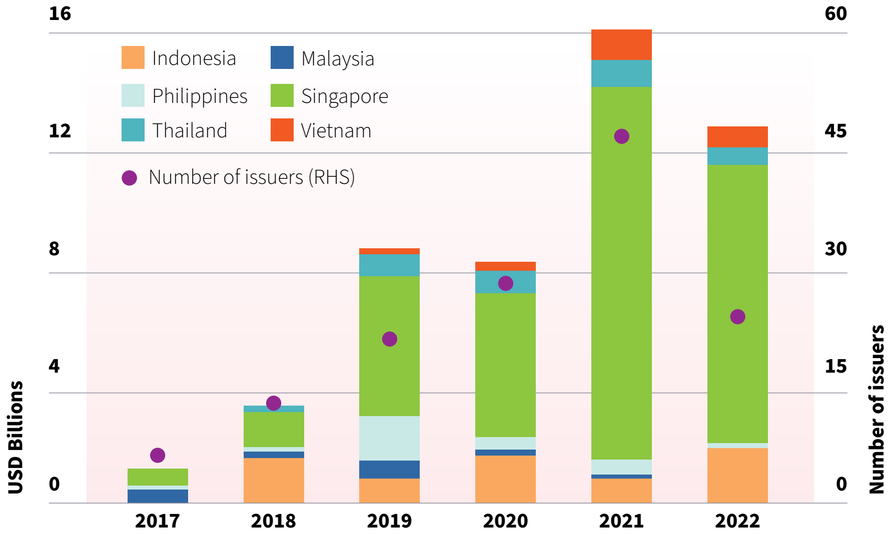
Green

Green debt issuance in ASEAN totalled USD12.8bn in 2022, representing 25% of the cumulative green volume issued since 2016 (below the 32% in 2021).

Singapore remains the top domicile by a long way, both on a yearly and overall basis. Indonesia achieved a record volume in 2022 but only through a single deal, its USD1.5bn sovereign.

Green issuance from Malaysia peaked in 2019 and the country was the only one from the ASEAN-6 group with no deals in 2022; stimulating a rebound should be a key focus area for local policymakers as well as market participants, and is likely to be supported by the policies and initiatives mentioned in the spotlight sections..

Lower green volumes in 2022 but only Malaysia did not have issuance



Source: Climate Bonds Initiative

Thailand and Vietnam have had consistent activity in recent years although volumes are still relatively low, not yet surpassing USD1bn yearly. Almost all issuance from Vietnam has come in the green theme, mostly from loans. The country has more issuers than Thailand, Indonesia and Philippines, but a considerably lower amount issued, pointing to a wider base of smaller issuers.

The total number of ASEAN green issuers in 2022 was about half that of 2021, almost 20% lower than in 2020, and the same as in 2019. But volumes were only 25% lower than in 2021, and 50% higher than in 2020 and 2019, meaning the average amount per issuer was considerably higher in 2022 (USD535m in 2022 while the previous highest was USD361m in 2019).

This trend is more visible among green debt than any other theme. The acceleration of sovereign issuance is an important reason behind it, but the average amount per issuer has also generally increased among other issuer types. Adverse market conditions could explain part of the increase, potentially impacting smaller issuers more and preventing some from coming to market.

Loans remain very popular in ASEAN, led by Singapore

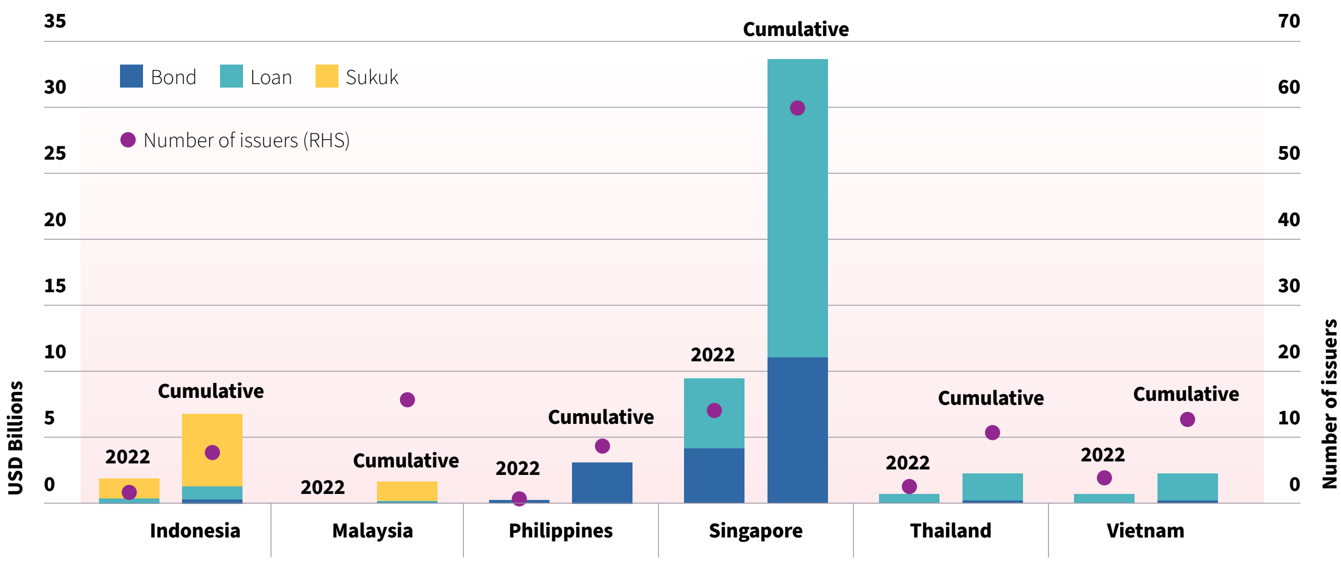
The profile of green instrument types in each country in 2022 was broadly similar versus cumulatively.

Loans continue to be very popular in the region, most visible in its large SLL market but clearly also in the green theme. They are the most used instrument in Singapore, Thailand and Vietnam, being second in Indonesia and Malaysia (behind Sukuk). In the Philippines, only green bonds have been issued to date.

As domestic markets develop and mature, a more varied and balanced use of different instruments is likely, although Sukuk will nevertheless be expected to dominate in Islamic countries and loans to remain highly popular in most countries.

The issue of reliable, consistent and transparent disclosure is an important one, however. Issuers and financial market participants can and should work to ensure an adequate level of reporting exists, particularly among loans which generally lack this. Governments and regulatory bodies can play a vital role in supporting this, for example by setting expectations on minimum disclosure requirements which all instruments should meet, and to facilitate the process through clear guidelines and templates.

Sukuk dominates green theme in Indonesia and Malaysia, while loans dominate in almost all other countries



Source: Climate Bonds Initiative

Increased use of local currency in 2022

Currency denominations vary considerably by country. More developed markets broadly have a higher share of local currency issuance, while more nascent markets make relatively greater use of foreign (hard) currencies, namely USD.

In line with this trend, 2022 saw increased denomination in local currencies at the expense of foreign ones. In Singapore, by far the region's largest market, barely any USD green debt was issued in 2022.

Only 20% of the 2022 green volume was issued in foreign (i.e., non-ASEAN) currencies, versus 33% cumulatively. The vast majority of foreign denomination is USD, which accounted for 17% of the 2022 volume and 28% overall.

The drop is most apparent among bonds, where 38% of the cumulative amount is in hard currency (92% of which USD) compared to only 1.5% in 2022. The only USD green bond was from Singapore's Solar United Network's USD70m deal, while Vietnam's PC1 Group Vingroup JSC respectively obtained USD173m and USD500m green loans, and Indonesia issued a USD1.5bn green Sukuk.

Malaysia remains the only country where only one currency (MYR) has been used so far among green deals.

In 2022, USD was used relatively less in the green theme (versus cumulative), suggesting green bond markets in the region are becoming more developed and local currency denominations becoming more common.

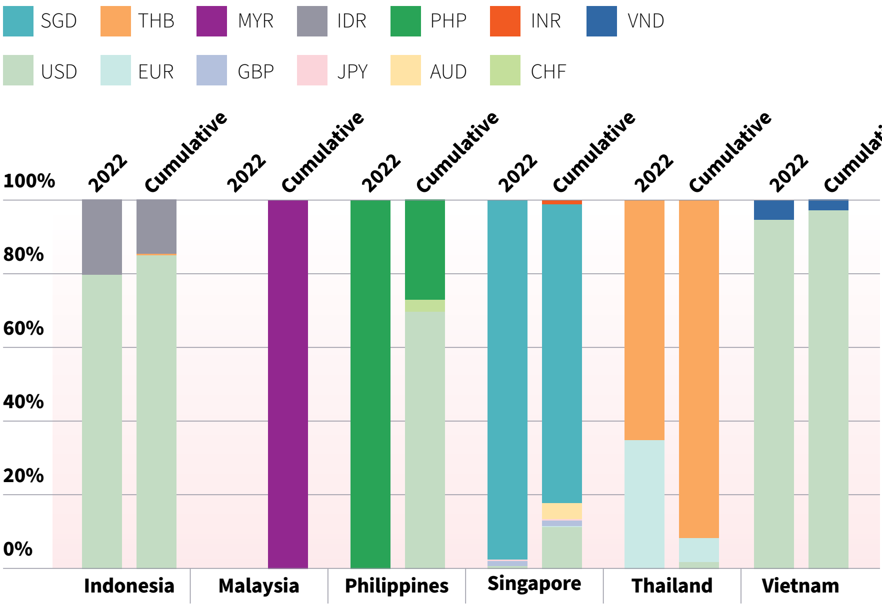
Buildings and Energy account for almost 80% overall

Energy is the most financed project category in most countries, representing more than 50% of allocations in Malaysia, Thailand, Vietnam and the Philippines.

In Singapore, however, Buildings take the lead, mainly related to construction of new green buildings and to a lesser extent retrofits and energy efficiency in the built environment. Given the large size of the country's market, Buildings are also the most financed category in ASEAN overall.

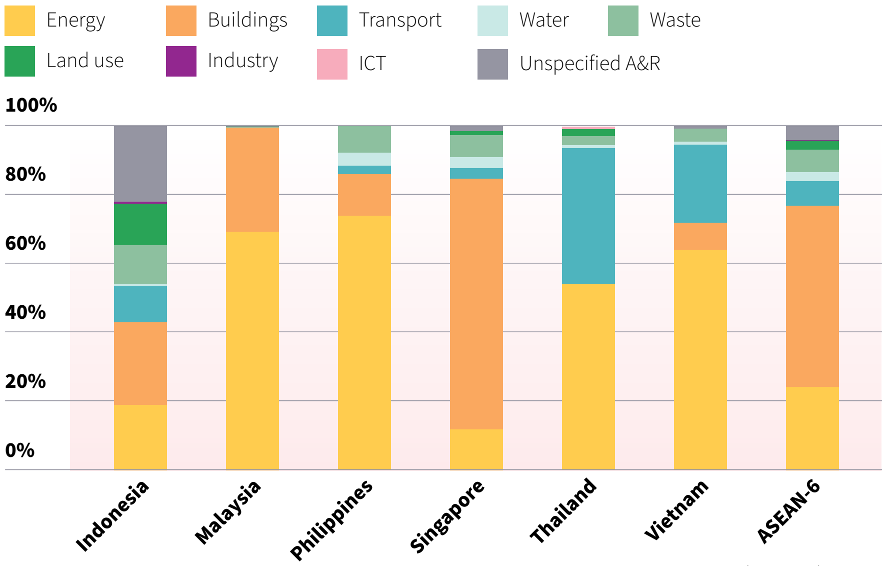
Indonesia displays the most balanced split of UoP categories, with all except for ICT financed and only Water and Industry achieving a share lower than 10%. Almost all the largest deals from Indonesia, including the sovereigns as well as Bank BRI's and Bank Mandiri's, have a wide range of categories listed in their frameworks.

USD accounted for a lower share across all countries in 2022



Source: Climate Bonds Initiative

Proceeds in most countries are mainly allocated to Energy projects, but Buildings top overall due to Singapore (cumulative)



Source: Climate Bonds Initiative

NB: Allocation of proceeds is estimated from disclosure at issuance by pro-rating equally between (financed) project categories, apart from deals issued in 2019 or earlier which have been updated based on post-issuance reporting. Unspecified A&R is an estimate of the proceeds flowing to A&R projects that are not directly specified to the projects/assets in the other categories (e.g., A&R is considered eligible in the issuer's framework but the full list of projects/assets which will be adapted / made more resilient is not provided).

Despite some variation between countries always being expected (due to differing local contexts and relative importance of certain sectors), greater variety and balance of projects is a welcome development, and a sign of a maturing market. Transport, Water and Land use projects, for example, remain heavily underfunded in most countries. On the other hand, shifting the (browner) manufacturing sector towards greener activities may come more naturally through transition instruments, including SLBs and SLLs.

SPOs and assurance make up 90% of screened 2022 volume

The analysis of external reviews is based on a more restricted sample versus the rest of this section, as it only includes screened green debt from 2022 (not the unscreened loans from Refinitiv).

In line with previous reports and the global market, Second Party Opinions (SPOs) remained the most widely used form of external review among ASEAN green debt in 2022, capturing 63% of the amount issued.

Assurance was only used in three deals of the 19 deals covered, but two of these, issued by the Singapore Housing & Development Board, were relatively large (USD1.6bn). They were assured by EY.

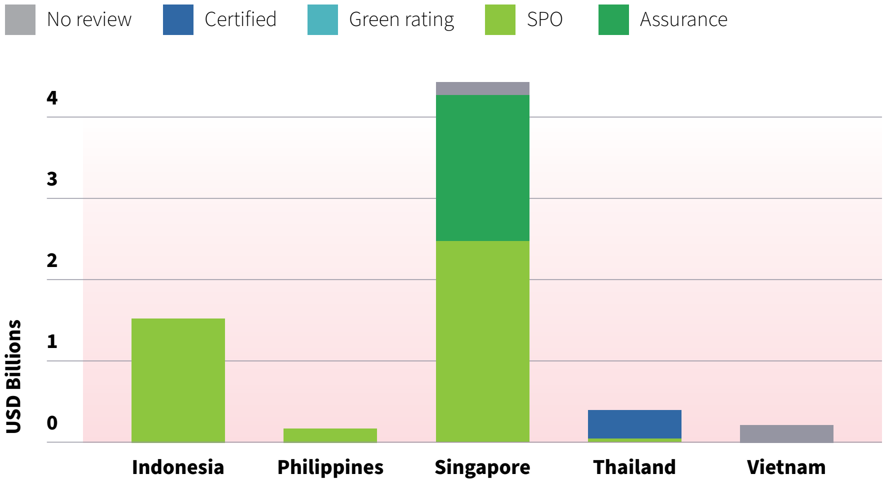
The level of Climate Bonds Certification dropped to 5%, while green ratings were not observed (unlike sustainability ratings – see the next section).

The share of deals with no review fell considerably during the year to only 5% of the amount issued. This likely reflects a) the exclusion of unscreened loans from Refinitiv given that public documentation for loans is more often lacking or harder to find, and b) the larger size of issuers and deals accessing the market, since these generally tend to obtain reviews.

Sustainalytics was the top SPO provider, reviewing 60% of the amount issued with an SPO. Cicero (36%) was the clear second, with Moody's, DNV-GL and Vigeo Eiris reaching between 1% and 2% each.

Only SPOs were used in Indonesia and the Philippines, while in Singapore they were fairly evenly split with assurance. In Thailand, Certification accounted for almost the entire issuance volume, with all five deals from Global Power Synergy Certified under Climate Bonds' Solar and Wind Criteria. In Vietnam, none of the two deals were externally reviewed.

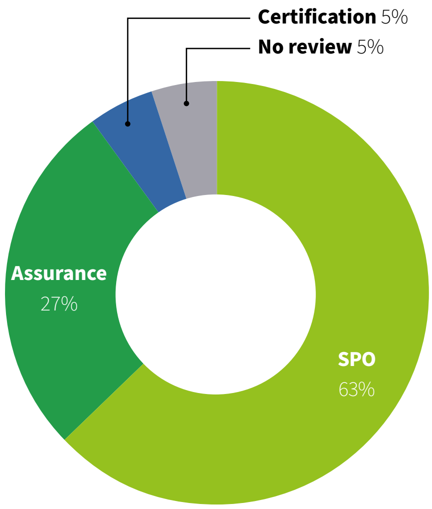
Assurance was only used in Singapore and Certification in Thailand (2022)



Source: Climate Bonds Initiative

NB: Only screened green debt included in the external review analysis (i.e., excludes unscreened loans from Refinitiv).

SPO remained the most popular form of external review in 2022



Source: Climate Bonds Initiative

NB: Only screened green debt included in the external review analysis (i.e., excludes unscreened loans from Refinitiv).

Social and sustainability

All ASEAN-6 countries saw S&S bond issuance in 2021, but in 2022 this only happened in Thailand, Malaysia and the Philippines. Even so, the total S&S volume was almost as high, driven by large sovereign sustainability deals from Thailand and the Philippines which account for the lion's share of the cumulative S&S sovereign volume.

Thailand tapped its original 2020 sustainability bond three times in 2022 for THB55bn/USD1.8bn, taking its total to THB212bn/USD6.8bn, while also issuing a new THB35bn/USD948m bond later in the year. The Philippines became a first-time thematic sovereign issuer through six deals totalling USD2.3bn: four in JPY and two in USD, ranging in maturities between five and 25 years.

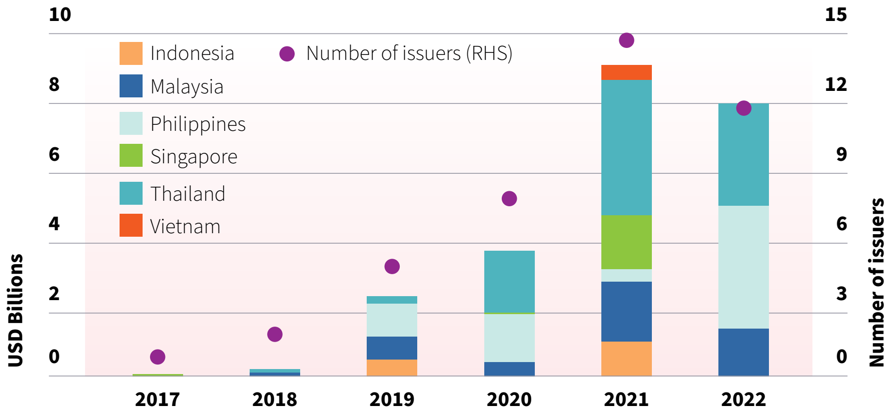
The country ranking is very different to the green debt market. Thailand leads the way cumulatively with USD9.1bn, while the Philippines is second (USD6.4bn) and top in 2022 (USD3.6bn), and Malaysia is third (USD4.4bn).

Singapore has a much smaller S&S versus green market, and did not see any S&S deals during 2022. This is in part likely to be a result of the country's small size and high population density in a highly urban environment, which have brought a relatively high GDP per capita. But building a more robust and varied labelled debt market to finance a wider array of projects (including social) still presents significant potential and should not be overlooked by policymakers and market participants, especially given rapidly increasing income inequalities over the last 25 years.[9]

Social bonds differ from sustainability bonds in that the proceeds are only used for social projects, rather than a combination of green and social. Climate Bonds typically classifies them as separate themes, but they have been combined in this section since they are similar instruments (apart from the UoP difference) and there have been very few social bonds in ASEAN. Only 10 social bonds from five issuers, totalling USD905m, have been issued in the region (Thailand and Singapore), of which only one was from 2022 (Thailand's Government Savings Bank, THB10bn/USD295m).

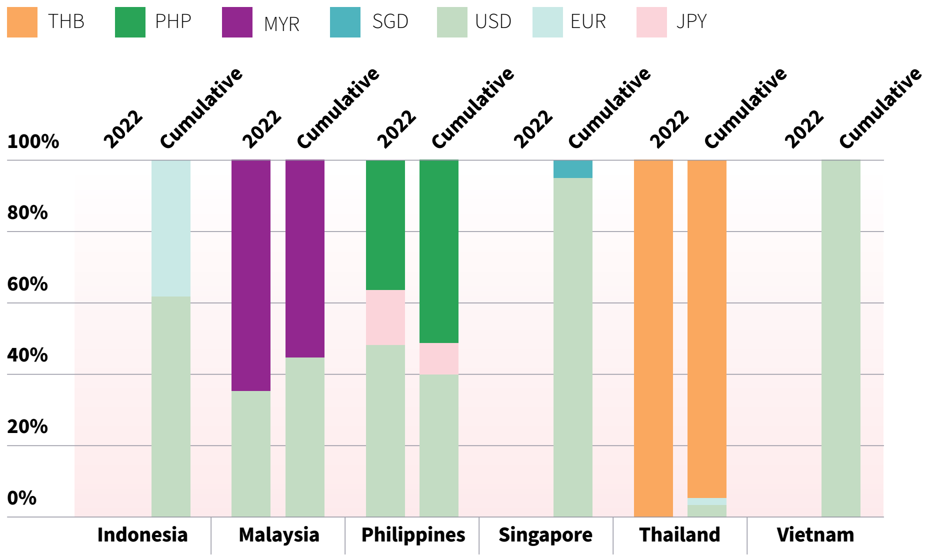
The region's S&S market is also experiencing an increase in the average amount per issuer, although this is less noticeable than with green debt. In 2022 this reached USD671m, compared to USD611m in 2021 and USD462m in 2020.

Philippines boosted by sovereign sustainability bonds in 2022; no issuance from Singapore, Indonesia and Vietnam



Source: Climate Bonds Initiative

All countries have had S&S issuance denominated in local currency as well as USD, except for Vietnam



Source: Climate Bonds Initiative

Less currency diversification versus green

In line with its relative size, the ASEAN S&S market shows less currency diversification than its green counterpart. This includes the use of fewer local and foreign currencies, the latter being highly concentrated in USD looking at number of deals, but less so looking at amount issued.

The main reason for the USD's lower share by amount issued is that most of the Philippines' 2022 sovereign deals came in JPY, a new currency for the region's S&S market. This follows on from the JPY/PHP currency swap facility under the cross-border liquidity arrangement between the Philippines' Bangko Sentral and the Bank of Japan, and is likely a result of the Philippine Government trying to increase its investor appetite and base through hard currency denomination.[10] Its other, and larger, sustainability bonds were issued in USD.

As the chart shows, Malaysia and the Philippines have had a relatively even split of local versus foreign currency, while hard currency dominates in the remaining countries; the exception is Thailand, which has the largest and most developed market and where almost all the deals (including all the largest ones) were issued in THB.

Issuance in foreign (especially hard) currency can increase the interest of international investors, but using local currencies is also important to foster the development of local markets, and a greater share of local currency denomination is a sign of more mature markets. In Singapore, for example, the green debt market is well established and most deals have been denominated in SGD; by contrast, Singaporean sustainability bonds have almost all been denominated in USD.

Green UoP across ASEAN is varied...

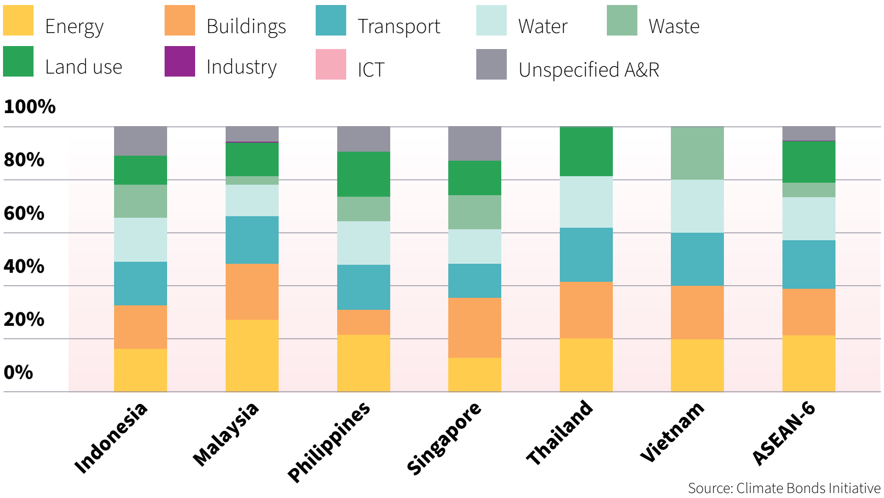
Allocations to green projects (from sustainability bonds) are varied, with almost all categories financed in each country and reaching a significant share.

The split is more even than in the green theme, which given the smaller size of the sustainability bond market (just under 50%) is somewhat surprising; but it can be explained by sustainability bonds financing a combination of green and social projects, and more rarely being focused on single types of projects (such as Buildings among Singaporean green debt).

In addition, this split is based on disclosure at issuance only, with the proceeds split evenly across the categories listed in the document(s) relevant to each bond (generally issuer frameworks and external review documents). In practice, issuers often do not finance all the categories listed in their frameworks, or do so in an uneven way. The analysis in the green theme is thus more representative of actual rather than estimated allocations, as the UoP for deals issued up to 2019 has been updated based on post-issuance disclosure.

The more surprising finding is that Thailand's sustainability bond market only features allocations to five categories (Energy, Buildings, Transport, Water and Land use), which is tied with Vietnam as the lowest number despite being the region's largest market. This is explained by the fact that while the amount issued is relatively large, there are only nine Thai deals from four issuers, and they mostly finance the same categories. The sovereigns are the most varied, with all five categories listed as eligible expenditures.

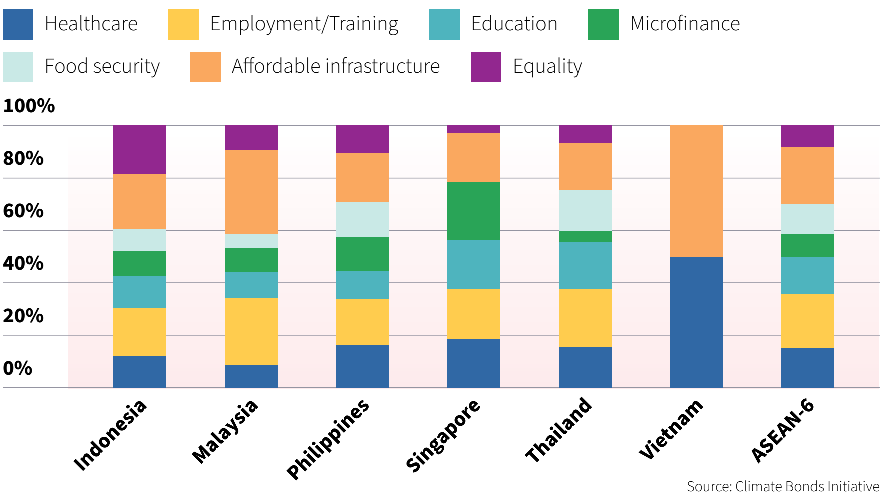
Sustainability bond allocations more even than for green instruments (cumulative)



Source: Climate Bonds Initiative

NB: Refers to green allocations from sustainability bonds (since social bonds only finance projects).

Affordable infrastructure and healthcare among most financed social project types, while equality and food security the least (cumulative)



Source: Climate Bonds Initiative

...as is social UoP

Social allocations (from sustainability and social bonds) are also varied, with all categories represented in most countries. Climate Bonds' classification and tracking of social UoP is a relatively recent addition and is broadly in line with the categories listed in ICMA's Social Bond Principles, which most issuers adhere to.

The provision or support for affordable infrastructure – often targeting lower-income groups – is among the project types highlighted most by ASEAN S&S issuers, and typically focuses on affordable housing (in line with the rest of the world). All sovereigns issued until now have included this as an eligible project type, generally through direct provision of social housing and/or targeted government programmes/subsidies for the poor and very poor.

Employment and/or vocational training is another important category. ASEAN countries have a varied profile of industries requiring a range of skilled to less specialised manual work, but employment and training programmes can provide support to the entire labour spectrum, particularly as economies transition and new technologies are developed and deployed.

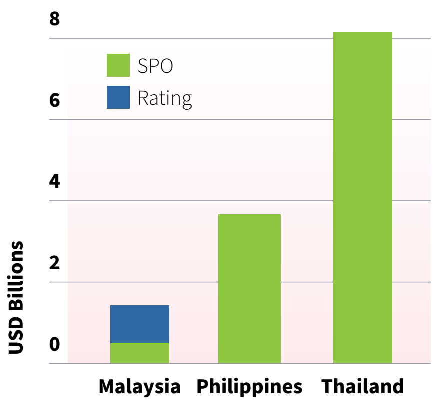
All S&S bonds from 2022 were externally reviewed

Compared to green debt, a narrower range of external reviews is generally available to social and sustainability bonds. This is in part a result of the S&S market being more nascent but more importantly due to the inherent difficulty of measuring and verifying social impacts. Climate Bonds Certification, for example, is not an option, and SPOs hold an even higher proportion of S&S debt in the global market than green bonds.

In ASEAN, SPOs again represent the lion's share with 93% of the volume, including 100% in Thailand and the Philippines. 79% of this was provided by Sustainalytics, followed by Vigeo Eiris with 19% and DNV-GL with 2%.

Curiously, ratings were chosen by seven of the 17 deals in ASEAN despite only accounting for a 7% share of the issuance volume. Sustainability ratings were the most popular form of review among Malaysian sustainability bonds (65% of amount issued). Their popularity among small deals in Malaysia may be linked to both providers being local (RAM Sustainability and MARC), and perhaps cheaper than alternative forms of review.

Sustainability ratings are popular in Malaysia driven by local providers (2022)



Source: Climate Bonds Initiative

Sustainability-linked

Sustainable finance has played an important role in financing ASEAN's green investments, but gaps remain. The GSS labels alone do not cover the financing needs of high-emission and hard-to-abate brown sectors. Therefore, transition finance is needed to support rapid change in emission-intensive activities in these sectors, such as heavy manufacturing industries and agriculture, while helping to phase out environmentally harmful activities, such as the use of coal.

This financing can comprise transition UoP bonds and/or performance-linked instruments such as SLBs and SLLs. Performance- or sustainability-linked instruments have grown much more than transition UoP bonds (both globally and in ASEAN), and are discussed in more detail in this section.

Growth of SLBs and SLLs

The sustainable debt market is still at an early stage, especially in ASEAN where the development of some regional bond markets are themselves relatively new. Within the region, as green and sustainable financing grow, the emergence of SLBs and SLLs opens the door for more issuers to participate in sustainable financing.

SLBs and SLLs are forward-looking, performance-based, general-purpose debt instruments issued with KPIs and associated SPTs at the entity level. SLBs and SLLs can be a useful tool for issuers on a low-carbon transition trajectory as they finance whole entities in transition and help to build experience and credibility on target-setting.

As general-purpose instruments, a major advantage of sustainability-linked instruments lies in the flexibility caused by the absence of pre-defined eligible projects. While the issuer commits to reaching their ESG goals, there are no restrictions on how to spend proceeds. Moreover, in contrast with the GSS debt markets where a limited number of projects with environmental and social benefits can be considered, any company can issue SLBs or SLLs, which helps to broaden access to the sustainable finance market across more issuers in more sectors (especially SLLs which can be relatively small and accessed by smaller entities).

Following the publication of the first Sustainability-linked Loan Principles (SLLP) in 2019 to formulate market best practice for SLLs, the International Capital Market Association (ICMA) announced the Sustainability-Linked Bond Principles (SLBP) in June 2020. The SLBP are voluntary guidelines intended to foster the development of the SLB market. This market segment started to grow in the second half of 2020, particularly in ASEAN where it was seen to enable issuers to access the sustainable finance market and promote capital mobilisation in a novel way. From the demand side, SLBs present additional opportunities for investors to allocate capital to meet their sustainable investment targets and serve growing demand for eligible financing opportunities.

ASEAN SLB Standards (SLBS) were recently published by the ACMF (see page 23). These are expected to support SLB issuance across a broader issuer base while ensuring enough consistency in structures and transparency.

Meanwhile, SLLs do not benefit from similar standards, at least for now. It is worth noting that loan markets are generally more opaque in their disclosure and it is generally harder to ensure adequate levels of transparency among SLLs.

Caution is advised, at least for now

Despite the impressive growth and popularity of SLBs and SLLs, issuers, borrowers, and investors must be mindful of the pitfalls around the target-linked mechanism. To be seen as useful and credible sustainable finance instruments that yield real behaviour change for an entire entity, these deals should always have ambitious SPTs, calibrated in line with sector-based pathways, and provide significant financial reward/penalty.

Other key concerns include the difficulty to benchmark the ambition of the targets or KPIs against a wider global ambition such as the Paris Agreement. Most of the SPTs and KPIs have only been prescribed by (1) the borrowers' own entity-specific sustainability improvements, not to a sector-wide decarbonisation pathway, and (2) exhibit limited transparency in the market especially with impressive growth – making it difficult to assess the impact and ambition of each bond or loan. These concerns are not insurmountable and with some clear guidance the sustainability-linked instrument market could be a valuable addition to the sustainable finance landscape in ASEAN, including in enabling entity-level transitions. The recently published SLBS are a very positive step to address some of these issues, but are limited to SLBs whose volume is much lower than SLLs in ASEAN.

Transition (UoP) bonds are rare globally

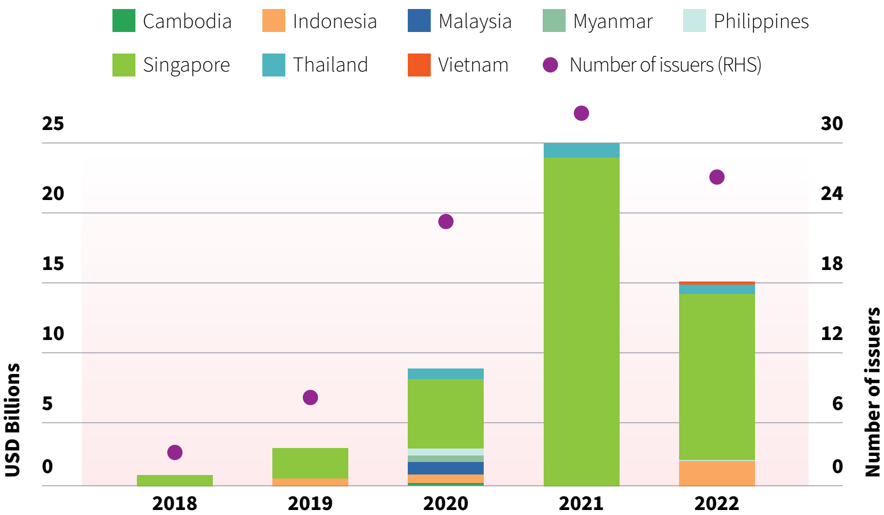
Transition bonds are UoP instruments meant to finance transition-related investments, but are far less popular than SLLs and SLBs. Few exist globally, and this is expected to persist until clear transition taxonomies exist against which to evaluate eligible transition projects. Transition is necessarily an entity-level concept which, at least for now, lends itself better to the general-purpose format. In ASEAN, the only transition bond remains the CNY2bn (USD310m) two-year deal issued by China Construction Bank's Singapore branch in 2021 (see page 8).

NB: Climate Bonds tracks SLBs but does not (yet) screen them (e.g., for ambition of their SPTs and alignment with Paris decarbonisation pathways). SLLs are neither tracked nor screened, the analysis being indicative based on Refinitiv data.

2022 SLL volumes were lower but remained healthy

SLLs represent the largest thematic finance segment in ASEAN, likely driven by the prevalence of the loan format in the region and the flexibility of this instrument along with its accessibility across issuers and sectors. ASEAN economies have many manufacturing activities which present potential for performance linked instruments to finance their transition. Many SLLs have come from the finance sector but with KPIs linked to real economy financing.

SLLs: Singapore remains clear leader but Indonesia grows most in 2022



Source: Climate Bonds Initiative

In line with green debt issuance, ASEAN SLL volumes experienced a marked drop in 2022, but were still relatively healthy at twice the level of 2020 and actually included more domiciles than 2021.

Singapore kickstarted the ASEAN SLL market in 2018 and has remained the largest source of SLLs each year by far. However, several issuers are multinational corporations with operations in many countries, such as Olam International and Louis Dreyfus Asia.

2020 was a pivotal year for the region's SLL market, with issuance stemming from all eight countries; Cambodia and Myanmar are the 'extra' ones not covered by GSS instruments, but their issuance remains small and was absent in 2022.

Smaller SLB market impacted more acutely

The ASEAN SLB market is more recent, the first deal having been Olam International's JPY7bn/USD67m in December 2020. It is also much smaller, only reaching about 5% of the size of the SLL market, and with fewer countries represented.

Singapore is again the clear leader in issuance, but by a lower margin than with SLLs. Thailand, Indonesia and Malaysia follow respectively.

The decrease in SLB volumes in 2022 was highly pronounced, and the largest percentage drop among all themes. Only one issuer from Singapore (Ascott REIT) and one from Malaysia (Cenviro Sdn Bhd) came to market, the latter through two very small deals totalling MYR55m/USD13m.

The ACMF published its ASEAN SLB Standards in October 2022 which may help to spur more issuance through more formalised and clearer guidance for corporates, and crucially help to provide greater consistency in the disclosure. It is broadly aligned with ICMA's SLB Principles (see page 23).

USD very popular among SLLs

The currency analysis, which combines SLLs and SLBs given the small size of the latter, shows a high share of USD denomination driven by SLLs. Given Singapore's large market, the SGD is comfortably in second place, but it is interesting to note that the USD still dominates heavily in Singapore; this contrasts with green debt issuance, where SGD reigns supreme.

Overall, fewer currencies have been used than among green debt instruments (i.e., SLLs have a greater concentration of currencies), despite the market being slightly larger.

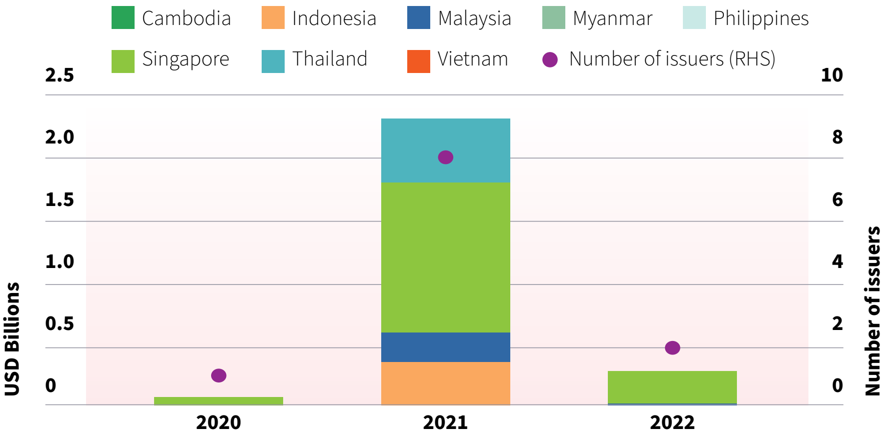
It is not clear why there are such considerable variations in currency use between themes. Hard currency – and specifically the USD – may be favoured over local currency when obtaining loans, but the share of USD among ASEAN green loans is much lower than among SLLs, at just over 10%. The profile of issuers may also play a role, with multinational corporates that account for a larger share of SLLs preferring USD given their international operations. It could also be that the markets are simply not developed and large enough to make any definitive conclusions – Climate Bonds will continue to monitor the space.

EUR denomination is comparatively very low, reaching only 1% of the cumulative SLL/SLB volume.

In 2022, a single currency was used in most countries; generally the USD, except for Malaysia (MYR).

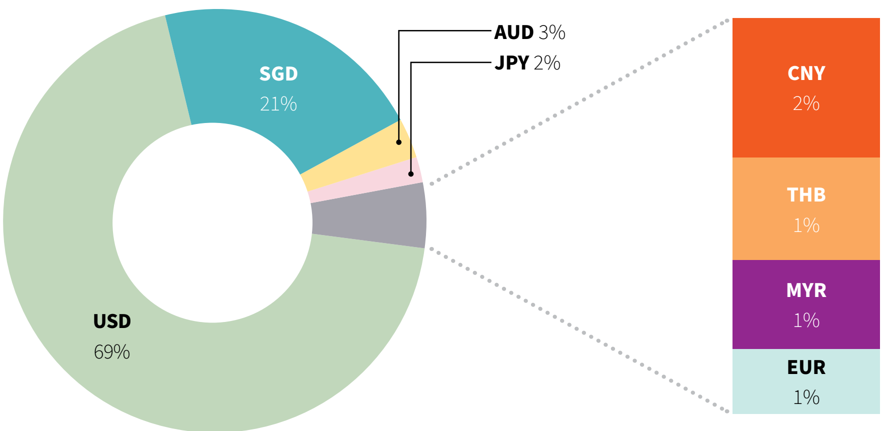
The chart highlights Singapore's most developed market and most diversified currency profile. Sustainability-linked instruments from Singapore in 2022 were denominated in AUD, EUR and JPY along with USD and SGD. More variation in other countries is also expected as their markets develop further.

Smaller SLB market was impacted more acutely in 2022; vast majority of issuance is from 2021



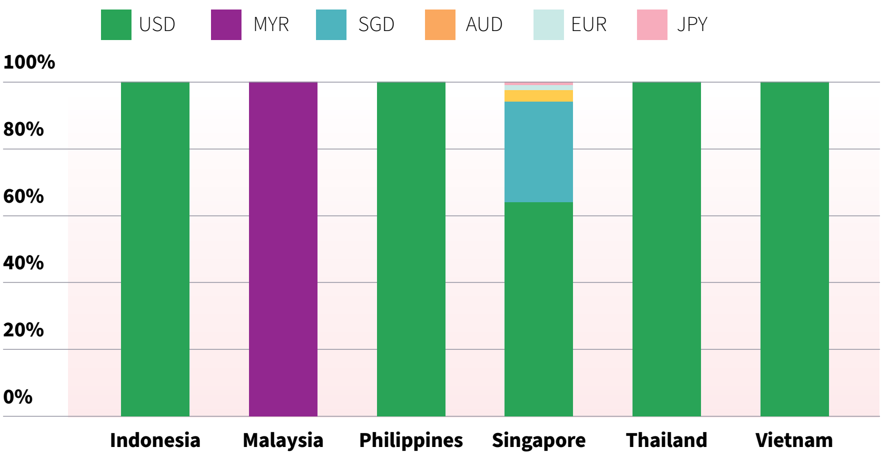
Source: Climate Bonds Initiative

USD dominates sustainability-linked format, but local currencies are also used (cumulative)



Source: Climate Bonds Initiative

2022: Singapore's large SLL market reflected in currency diversification



Source: Climate Bonds Initiative

Spotlight: Taxonomies in ASEAN

Sustainable finance roadmaps and recommendations in ASEAN

ASEAN	• Roadmap for ASEAN Sustainable Capital Markets (2020) by ACMF • Report on Promoting Sustainable Finance in ASEAN (2021) by WC-CMD
Indonesia	• Sustainable Finance Roadmap Phase I (2015) and Phase II (2021) by OJK
Malaysia	• Sustainable and Responsible Investment (SRI) Roadmap for the Malaysian Capital Market (2019) by SC
Philippines	• Philippine Sustainable Finance Roadmap (2021) by ITSF • Philippine Sustainable Finance Guiding Principles (2021) by ITSF
Singapore	• Green Finance Action Plan (2019) by MAS
Thailand	• Sustainable Development Roadmap (2019) by SEC Thailand • Sustainable Finance Initiatives for Thailand (2021) by WG-SF
Vietnam	• National Green Growth Strategy (2021) by the Ministry of Planning and Investment

Sustainable finance taxonomies in ASEAN (as of Q4 2022)

ASEAN	• ASEAN Taxonomy for Sustainable Finance – Version 1 (ASEAN Taxonomy) (2021)
Indonesia	• Indonesia Green Taxonomy: Edition 1.0 (THI) (2022)
Malaysia	• Climate Change and Principle-based Taxonomy (CCPT) (2021) • Principles-based Sustainable and Responsible Investment (SRI) Taxonomy for the Malaysian Capital Market (SRI Taxonomy) (2022)
Singapore	• Green Finance Industry Taskforce (GFIT) Taxonomy – *in development/consultation*
Thailand	• Thailand Taxonomy – *in development/consultation*

Overview and state of play of taxonomies in ASEAN

A green or a sustainable finance taxonomy is a classification system that allows for the identification of activities and investments that meet specific eligibility criteria based on environmental or broader sustainability objectives. The popularity of taxonomies is reflected in the increasing number of countries and regions following Climate Bonds (which created the first, over ten years ago), China and the EU. More specifically, almost 30 jurisdictions have or are currently in the process of establishing a sustainable finance taxonomy.

The need for a sustainable finance taxonomy in ASEAN was first identified in 2019 by the ACMF.[11] This recommendation was subsequently reinforced by the ASEAN Working Committee on Capital Market Development (WC-CMD), which highlighted the importance of a common sustainable finance taxonomy in providing guidance and assurance to the region's financial sector.[12,13]

Financial sector regulators in key ASEAN Member States (AMS) have been actively developing sustainable finance roadmaps that outline ambitions for sustainable markets, with taxonomies a key foundation to this.

The Securities Commission Malaysia (SC) recognised the need for a taxonomy in Malaysia to build climate resilience and provide greater clarity in the financial sector, to be developed via the Joint Committee on Climate Change (JC3), which the SC co-chairs alongside Bank Negara Malaysia (BNM).[14]

In Singapore, the Green Finance Industry Taskforce (GFIT), convened by the Monetary Authority of Singapore (MAS), proposed a taxonomy for financial institutions in January 2021. The purpose was for the tool to help stakeholders with the identification of activities that can be either considered green or transitioning towards green, with particular relevance to those active across ASEAN.[15] Adopting a traffic light classification system to differentiate the contribution of an activity to climate change mitigation, a key trait of this taxonomy is the criteria and thresholds related to transition activities. This enables a progressive shift towards net-zero across various sectors.

The Financial Services Authority of Indonesia (OJK) and Thailand's Working Group on Sustainable Finance (WG-SF) followed suit, identifying the development of a taxonomy as a priority tool and initiative.[16,17] The Vietnamese government also announced its intention to develop a system of national green classification standards and criteria to classify and identify economic activities towards sustainability, environmental and social friendliness.[18] Meanwhile, the Inter-Agency Technical Working Group for Sustainable Finance (ITSF) of the Philippines expressed its preference of having a principles-based taxonomy as part of the government's action plans in promoting sustainable finance in the country.[19]

With regards to already published taxonomies, the ASEAN Taxonomy Board (ATB) – a collaborative initiative of four ASEAN finance sectoral bodies – released a taxonomy for the region which aims to serve as an overarching guide and a common building block to foster sustainable finance adoption by AMS.

In Malaysia, BNM issued a broad principles-based climate taxonomy for its regulated entities in 2021. This was followed by SC's more granular sustainable investment taxonomy for the country's capital market in 2022, which also introduced the first taxonomy with a social component in the region.[20,21] Indonesia also launched its green taxonomy in 2022, providing an overview of the classification of economic activities that support environmental protection and management efforts, as well as mitigation and adaptation to climate change.[22] In Singapore and Thailand, proposed taxonomies are currently in the consultation phase (as of the time of writing).

While there are differences in the principles and methodologies adopted in national and regional taxonomies, the basic structure of taxonomies assesses whether an economic activity is making a substantial contribution to specific objectives (environmental in the case of green taxonomies) while avoiding significant harm to other objectives (commonly known as the 'do no significant harm' principle, or DNSH).

Beyond this, taxonomies can generally be classified via two main approaches:

1. Technical screening criteria-based, i.e., sector-specific thresholds and screening criteria for economic activities based on their contribution towards specific objectives;

2. Principles-based, whereby the taxonomy defines a set of core principles for market participants.

Different approaches, objectives, granularity, and coverage of activities in taxonomies impact their practical application in terms of data collection, product design, and verification processes.

Detailed screening criteria and disclosure requirements naturally provide a much stricter classification system, although they are difficult to set for an entire economy. When available, this enables investors to better monitor the progress of investments and use the classification as a proxy of impacts within the respective sectors. Similarly, financial institutions and intermediaries can leverage the classification system for product and service development, risk management, and marketing, branding and labelling.

Comparison of sustainable finance taxonomies in ASEAN (as of Q4 2022)

Taxonomy	Approach	Objectives	Sector coverage	DNSH
ASEAN Taxonomy V1 *NB: V2 was released in March 2023 and will be discussed in more depth in future publications*	Principle-based (Foundation Framework) *(Technical screening criteria to come via Phase 2 – Plus Standard)*	• Climate change mitigation • Climate change adaptation • Protection of healthy ecosystems and diversity • Promotion of resource resilience and transition to circular economy	Sector-agnostic (Foundation Framework) *(Plus Standard will be sector-specific)*	Essential criteria – an assessment must be undertaken to ascertain whether the economic activities are causing significant harm to the broader environment while fulfilling one or more of the environmental objectives.
THI (Indonesia)	Technical screening criteria	• Climate change mitigation • Climate change adaptation	919 sectors and sub-sectors mapped to sub-sectors, groups, and business activities based on the Indonesia Standard Industry Classification (KBLI)	Indonesian traffic lights system has been established based on compliance with DNSH criteria. The taxonomy has four principles , including Social and Environmental Risk Management Principles; this includes precautionary prudential principles in assessing social and environmental risks through identification, measurement, mitigation, supervision, and monitoring processes.
CCPT (Malaysia)	Principle-based	• Climate change mitigation • Climate change adaptation		Although it does not address DNSH criteria, it mentions that the impact of the economic activity in the wider ecosystem must be taken into account. The taxonomy outlines that the following environmental objectives must be met: (a) Prevent, reduce and control pollution (air, water and land); (b) Protect healthy ecosystems and biodiversity; and (c) Use energy, water and other natural resources in a sustainable and efficient manner.
SRI Taxonomy (Malaysia)	Principle-based (Phase 1) *(Technical screening criteria to come via Phase 2 – Plus Standard)*	**Environment** • Climate change mitigation • Climate change adaptation • Protection of healthy ecosystems and biodiversity • Promotion of resource resilience and transition to circular economy **Social** • Enhanced conduct towards workers • Enhanced conduct towards consumers and end-users • Enhanced conduct towards affected communities and wider society	Sector-agnostic (Phase 1) *(Plus Standard will include metrics and thresholds for focus sectors)*	Guiding questions are provided to allow users of the SRI Taxonomy to assess the substantial contribution and DNSH to any of the other environmental or social objectives.

Comparison of sustainable finance taxonomies in ASEAN (as of Q4 2022)

Taxonomy	Approach	Objectives	Sector coverage	DNSH
GFIT Taxonomy (Singapore) *Not yet finalised*	Technical screening criteria	• Climate change mitigation • Climate change adaptation • Protect biodiversity • Promote resource resilience and circular economy • Pollution prevention and control	• Agriculture and Forestry / Land Use • Construction / Real Estate • Transportation and Fuel • Energy (including upstream) • Industrial • Information and Communication Technology • Waste and Water • Carbon Capture and Storage	High-level guidelines around DNSH will be included following the EU approach.
Thailand Taxonomy (Thailand) *Not yet finalised*	Technical screening criteria	• Climate change mitigation • Climate change adaptation • Sustainable water conservation • Resource circulation • Pollution prevention and management • Biodiversity conservation	• Energy • Transportation	Incorporates generic DNSH. Activity-specific DNSH criteria are expected in due course.

NB: The Singapore GFIT taxonomy was released for public consultations on 28 January 2021, 12 May 2022, and most recently on 15 February 2023. Meanwhile, the public consultation exercise of the Thailand Taxonomy ran from 26 December 2022 to 26 January 2023. The information included in this report is valid as of the time of writing.

Expected developments in 2023

2023

ASEAN released Version 2 of its regional taxonomy in March 2023, including the basis for technical screening criteria as part of the Plus Standard (the second phase of the taxonomy). This follows Version 1 of the ATB's ASEAN Taxonomy for Sustainable Finance, which was released in 2021.[23]

Malaysia's capital market regulator is currently considering a Plus Standards for its SRI Taxonomy, while its central bank will expand the use cases to include sector- or project-specific use cases for CCPT, based on the Value-based Intermediation Financing and Investment Impact Assessment Framework (VBIAF) Sectoral Guides.[24,25]

Singapore is expected to publish its green and transition taxonomy, pursuant to three rounds of public consultations, by the end of H1 2023.[26]

Thailand is set to complete the consultation of the first phase of the Thailand Taxonomy in H1 2023. Focusing on the energy and transportation sectors, this will potentially be expanded to cover six environmental objectives in five economic sectors.[27]

Vietnam is in the midst of developing its green taxonomy with environmental screening criteria, thresholds and indicators, which aims to promote green credit (including green bonds) in the country.[28]

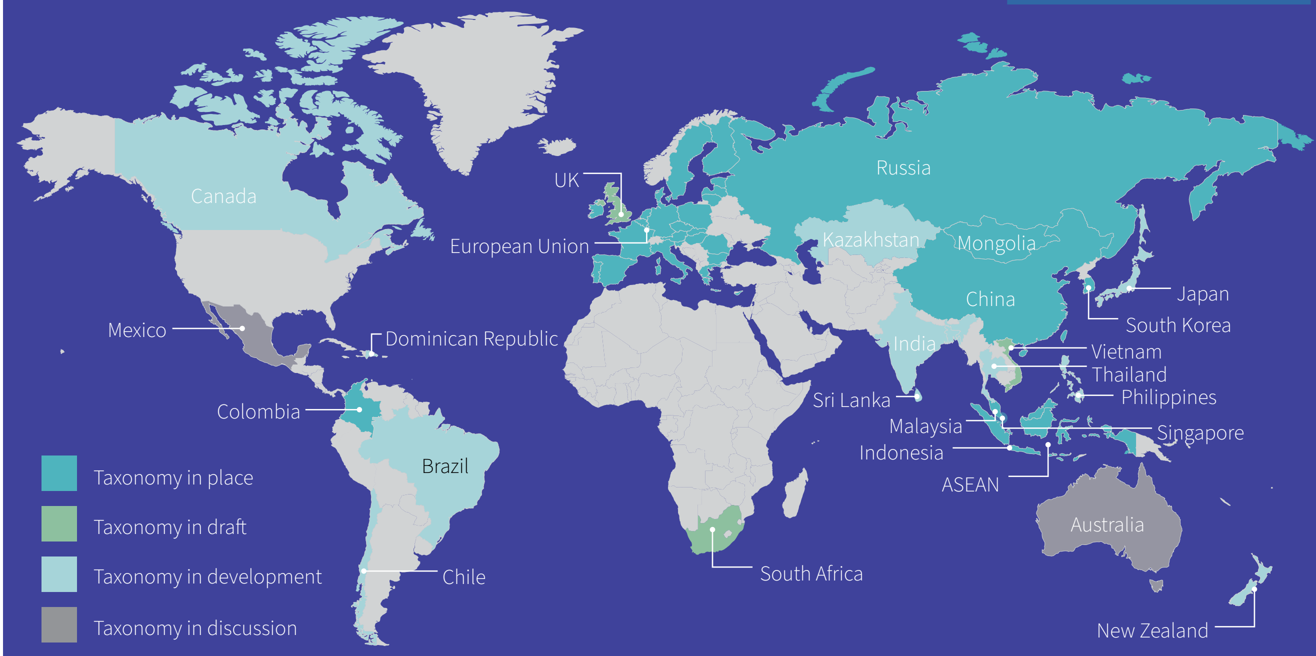
NB: Correct as of the time of writing. It is possible that some developments materialise ahead of publication.

Climate Bonds has worked with several AMS to support the development of taxonomies. This included the ASEAN Taxonomy for Sustainable Finance – Version 1 by providing sector-agnostic guidance on principles that could be used to identify sustainable activities. For the Indonesian green taxonomy, Climate Bonds was invited to provide broad intervention notes. Climate Bonds is also currently supporting taxonomy consultations in Thailand and Singapore, whilst providing capacity development to various financial market stakeholders, including in Vietnam, to ensure effective taxonomy implementation.

Taxonomies – Climate Bonds

Climate Bonds launched its voluntary guidelines in the form of a taxonomy and related Certification scheme in 2012, intended to be a guide to climate aligned assets and projects.[29] Consistent with the goals of the Paris Agreement, the Climate Bonds Taxonomy is based on the latest climate science and identifies the assets, activities and projects needed to deliver a low-carbon economy.[30]

Status of taxonomies around the world (Q1 2022)[31]



For more information on Climate Bonds' views on taxonomies, please refer to the following publications:

Global green taxonomy development, alignment, and implementation[32]

ASEAN economies exposure to climate transition risks: Applying taxonomy to enhance climate disclosures[33]

Embedding sustainability into the COVID recovery: A primer for ASEAN Central Banks[34]

Recommendations

Other ASEAN jurisdictions, such as Cambodia and the Philippines, are currently considering green taxonomies. Various efforts are also being carried out to scale up sustainable finance in other AMS, such as Brunei, Laos and Myanmar, both through regional and national levels.[35,36,37]

Although the progress of taxonomy development varies among AMS, it is a positive note that policymakers and regulators thus far recognise the importance of cross-agency coordination and public-private sector collaboration in developing a common classification of green activities for financing and investment purposes. This also becomes important at an international level given the proliferation of taxonomies across the region and the rest of the world. Pursuing interoperability, for example by using similar approaches and KPIs as other existing taxonomies and maintaining close dialogue across regulators, is vital.

Overall, AMS should assist their economies and regional counterparts to transition, including through the implementation of taxonomies that support national environmental priorities. While different countries are at different stages of this process, the following are Climate Bonds' recommendations which apply to all countries:

- Support the development of green and transition taxonomies that are science-based, granular, inclusive and robust as much as possible – this will facilitate the operationalisation of the Paris Agreement climate goals by AMS;
- Increase the level of ambition over time – taxonomic classifications should be revised over time in line with the necessary ambition of relevant national and sectoral pathways;
- Support the interoperability of taxonomies (regionally and globally where possible) to reduce market fragmentation risks and establish a harmonised and science-based common language for taxonomies;
- Promote transition and green investments by applying taxonomies to encourage and ease the issuance of thematic bonds and other innovative instruments across ASEAN markets;
- Support the development of use cases for the application of taxonomies, alongside sharing of best practices for financial and real economy players;
- Set up guidelines and frameworks for entity transition plan/strategy disclosures that allow financial institutions in the region to monitor if issuers/borrowers are developing, monitoring and on track to reduce carbon emissions and risks in line with agreed targets by AMS;
- Encourage financial institutions in ASEAN to disclose climate-related risks and performance using the definitions of green- and transition-related assets from taxonomies, as well as setting strategies and steering finance to mitigate these risks;
- Facilitate dialogue and greater cooperation among AMS regulators/policymakers in taxonomy development, including capacity building and exchange of technical capabilities to scale up the development of sustainable finance in respective capital markets.

Climate Resilience Taxonomy

Climate Bonds has launched a Global Resilience Programme which will include developing guidance to enable issuance for projects that support global climate resilience.[38] The first phase of the programme will focus on developing a Climate Resilience Taxonomy, designed to direct sustainable finance towards credible resilience projects. The second phase will involve the development of detailed criteria for all relevant sectors, enabling Certification of resilience-focused instruments across the entire economy.

Spotlight: Transition in ASEAN

State of transition planning in ASEAN

Transition is fundamental across all companies and business activities that are needed beyond 2050 and have a 1.5°C decarbonisation pathway, especially in the hard-to-abate sectors (mainly industrial and/or reliant on fossil fuels, e.g., cement, steel, aviation). This means that companies whose activities are not currently aligned with a low-carbon economy, and for which substitutes either already exist or will exist, must be supported to transition away from their current 'brown' activities while 're-orienting' their business model to align with a net-zero world.

Entities are increasingly publishing net-zero commitments in line with national pledges to reduce GHG emissions and limit global warming to 1.5°C. However, these net-zero targets are often set only for the long term, without a clear pathway or strategy outlining the business changes that will be needed or how the changes will be financed and overseen. To operationalise these commitments, it is necessary to identify relevant sector decarbonisation pathways, quantify the costs associated with required business changes, establish senior level oversight to drive change, and put in place regular internal and external progress reporting.

Sustainable debt markets have mainly been mobilised through the UoP instrument model, particularly green bonds. As the market has matured, and international and national taxonomies developed to help define eligible assets and activities and establish credibility, transition finance instruments such as SLBs, SLLs and transition bonds have emerged. While GSS bonds have been concentrated in key sectors like energy, buildings, and transport, with clear green assets/activities (e.g., renewable energy generation), transition instruments are more inclusive in that they can be accessed by issuers in high-emission, hard-to-abate sectors.

Crucial need for transition plans

To reach net-zero GHG emissions by 2050, entities operating in many sectors must undergo a major transformation. A key tool that will enable this transformation is a robust transition plan that is science-based, coherent, comprehensive, transparent, and covers all material scopes of emissions and business activities.

Transition plans identify and plan how an entity will align its business activities with net zero by 2050, outlining the costs and implementation action needed in the short and long term to transform operations. Recent economic growth in ASEAN has been underpinned by fossil fuels which are plentiful and relatively cheap, meaning that for many entities, current business models are high-emission. Many companies in the region also operate in the traditional hard-to-abate sectors, which must make the most dramatic changes to their business models if they are to reach net zero.

Transition plans allow organisations to chart their transition path and evaluate progress over time, as well as communicate this to the market/investors and reduce or even eliminating greenwashing risks. They are also important pieces to help companies access financing, and will increasingly become a requirement to obtain sustainable financing, be it in the form of performance-linked or UoP instruments. Among the former (i.e., general purpose, sustainability-linked instruments), transition plans can also provide the necessary information to help corporates and financial institutions structure coherent and science-based KPIs and SPTs; this will facilitate the growth of transition finance while increasing the clarity and credibility of the market, and reducing greenwashing risks.

Overview of transition plans

Company	Hallmark 1 Paris-aligned targets	Hallmark 2 Robust plans	Hallmark 3 Implementation plans	Hallmark 4 Internal reporting	Hallmark 5 External reporting	Ease of access
Siam Cement Group	Strong	Medium	Medium	Strong	Strong	Medium
Malayan Cement (YTL Cement)	Weak	Strong	Medium	Medium	Medium	Medium
PT Semen Indonesia	Medium	Medium	Medium	Medium	Medium	Medium
Gunung Raja Paksi	Weak	Medium	Weak	Medium	Medium	Medium
NS Bluescope/Bluescope	Medium	Strong	Medium	Strong	Strong	Medium
PTT Global Chemical	Weak	Medium	Medium	Strong	Strong	Medium
Petrochemical Corporation of Singapore (suggested plan)	N/A	N/A	N/A	N/A	N/A	N/A
PT Cikarang Listrindo TBK	Weak	Weak	Weak	Medium	Medium	Medium
PTT Public Company Limited	Weak	Weak	Weak	Medium	Medium	Medium
Olam Singapore	Strong	Weak	Medium	Medium	Medium	Weak

Transition plans are currently not mandatory in ASEAN, and very few companies have set plans that meet the characteristics of a credible and ambitious strategy as defined by Climate Bonds. In line with other regions (namely the UK and EU), ASEAN governments and regulators can and should work to introduce requirements for mandatory transition plans. The time is ripe, particularly with the broader development of sustainability reporting globally (see page 28), introduction of reporting rules, tools and platforms from some ASEAN stock exchanges, continued taxonomy development – including on transitional activities, e.g., in Singapore – and recent publication of the ASEAN SLBS (see below). In 2023, the ACMF has already announced it is developing transition guidelines aimed at assisting companies in developing and communicating their transition plan and efforts.

Transition plans are voluntarily emerging from early movers in the private and public sector who are attempting to identify the necessary steps to align with a net-zero future. The content of these plans at present is extremely varied in both quality and scope. It is expected that transition plans will become mandatory for private sector actors in many jurisdictions as part of the global effort to meet Paris Agreement commitments and reach net-zero emissions.

Climate Bonds guidance: Five Hallmarks

As part of Climate Bonds' Transition Programme, these needs were recognised early on, and the first iteration of [Transition Finance for Transforming Companies](#) was published in 2021.[39] This guidance, updated in 2022, provides a simple yet useful principle-based framework designed to support entities in developing credible and ambitious transition plans. This work is aligned with and complements guidance from other organisations including ICMA, GFANZ, TPI, ACT Initiative, and SBTi, among others.

Climate Bonds' latest guidance identifies five hallmarks of a credibly transitioning entity (Five Hallmarks), i.e., an entity whose transition is rapid and robust enough to align with the global goal to nearly halve emissions by 2030 and reach net zero by 2050. The Five Hallmarks address the requisite ambition of entity-level targets and reflect the entity's willingness and ability to deliver on those forward-looking targets.

Climate Bonds analysis: ASEAN transition plans

Following on from this work, Climate Bonds recently published its *Scaling Transition Finance – ASEAN* report, analysing the transition plans of ASEAN-based entities to assess the current state of transition planning and provide recommendations for next steps.[40] The entities selected were from a range of hard-to-abate sectors including cement, electric utilities, oil and gas, steel, chemicals and agriculture, and where possible were active in the debt markets.

The core aim was to provide guidance to entities in terms of the content and scope of transition plans in order to be considered a credibly transitioning company.

Supported by the Oak Foundation, the report incorporated an analysis of ten company-level transition plans (see previous page), a checklist to achieve Climate Bonds' Five Hallmarks of a credibly transitioning company, and guidance for issuers on SLBs.

Sustainability-linked instruments

Entities operating in sectors with well-established transition pathways, such as real estate, transportation, and utilities, can relatively easily identify projects, assets, and expenditures suitable for green (i.e., UoP) bond financing. For those operating in hard-to-abate sectors such as cement, steel, and basic chemicals, the pathways are only beginning to be established and the journey to net-zero can still, at least partially, rely on untested technologies. For these entities, the performance- or sustainability-linked structure (SLBs/SLLs), and occasionally transition UoP bonds, can be more suitable financing vehicles. The activity of issuing a sustainable debt instrument, be it a green bond or an SLB, signals to investors that the issuing entity is identifying and addressing climate-related business risks.

As of December 2022, Climate Bonds had recorded USD2.65bn of SLBs from ASEAN. However, issuers have been criticised for a lack of ambition and credibility, mainly because chosen targets are set against business baselines rather than science-based pathways and are difficult to benchmark and compare to peers and required sectoral trajectories.

ASEAN SLBS: an important tool

A key development in this space was the release of ASEAN Sustainability-Linked Bond Standards (ASEAN SLBS) by the ACMF in November 2022.[41] The ASEAN SLBS, which are based on the ICMA's SLBP, are intended to contribute to the development of the region's SLB market by facilitating enhanced transparency, consistency, and uniformity of the instruments, thereby reducing due diligence costs of investors. Issuers are required to outline realistic SPTs in terms of ambition level and consistency with the issuer's transition plan, alongside relevant disclosures for investors (at and post-issuance).

While the ASEAN SLBS do not answer all questions (for example, specifying which pathways should be used in each sector), they provide considerable guidance to issuers across five core components: selection of KPIs, calibration of SPTs, bond characteristics, reporting, and verification. This is likely to not only grow SLB issuance – hopefully towards the much larger size of the region's SLL market – but also increase standardisation and, over time, improve the level of ambition and credibility of issuers' transition plans and SLBs.

Climate Bonds' instrument-level guidance

To reinforce the credibility of sustainability-linked instruments, Climate Bonds encourages issuers and others to use the following guidance:

1. Sustainability-linked instruments are only as powerful as the entity's underlying transition plans: Sustainability-linked instruments can be powerful, forward-looking financial instruments when they include KPIs with ambitious SPTs material to the main sources of emissions. The transition impact of a sustainability-linked instrument is intrinsically linked to the credibility of the transition plan and ambition of associated performance targets.

2. Sustainability-linked instruments should include all material scopes of emissions: Paris Agreement-aligned targets call for GHG targets: in the short-, mid-, and long-term; to be inclusive of scope 1, 2, and 3; and to be aligned with a science-based sector-specific pathway which will limit global warming to no more than 1.5°C.

Credible transition plans	Credible sustainability-linked bonds
Paris-aligned targets	Key performance Indicators Sustainability Performance Targets
Robust Plans	Strategies to achieve the SPTs
Implementation Action	Achieving the SPTs
Internal monitoring	Internal monitoring
External Reporting	SLB Reporting

3. Sustainability-linked instruments require robust emission targets and decarbonisation pathways: The strongest sustainability-linked instruments utilise absolute GHG emission targets, science-based sector decarbonisation pathways, or GHG emission intensity targets with a unit of production as the denominator. Economic intensity targets can be used but are considered less robust and ambitious than absolute or physical intensity methods. Credible economic intensity targets require a greater annual percentage reduction (7% per year, compounded) and should be calculated using the GHG emission per value added (GEVA) method.

4. Sustainability-linked instruments should have clear and consistent structures: The strongest sustainability-linked instruments are clear and consistent in their structure, which is preferred by investors/lenders. Issuers should avoid setting call dates prior to KPI observation dates, step-ups that only kick in at the end of the bond's term, and performance target observation dates being set after the maturity of the bond. Climate Bonds encourages issuers to place first call dates after the KPI observation date or include provisions in legal documentation that apply the coupon step-up if the bond is called before the KPI observation.

Transition Programme – Climate Bonds

Climate Bonds' Transition Programme aims to mobilise global capital for financing the transition of high-carbon sectors to align with a low-carbon, sustainable and resilient economy.[42]

Transition plans (also known as sustainability strategies, climate policies, climate action plans, and other related terms) underpin the strategies for businesses to reach net zero. Including relevant KPIs and targets among other components, the plans outline the entity's climate ambition and the business transformation necessary to reach that ambition.

Climate Bonds has been involved in various transition-related initiatives in ASEAN:

- Climate Bonds is one of the knowledge and technical partners of PT Sarana Multi Infrastruktur (Persero) ('PT SMI'), which is Indonesia's Energy Transition Mechanism (ETM) Country Platform Manager.[43]
- Climate Bonds worked with Climate Policy Initiative (CPI) and Rocky Mountain Institute (RMI) to create guidelines for credible coal phase-out projects, which can facilitate the rapid transition to clean energy globally. It provides a framework for assessing the climate and social credibility of financial transactions that accelerate a managed phaseout of coal-fired power plants (particularly relevant in some ASEAN states) and has been released for public consultation end-November 2022.[44]
- Climate Bonds has been invited to be a knowledge partner of the Glasgow Financial Alliance for Net Zero (GFANZ) Asia-Pacific (APAC) Network regional workstream to develop guidance for financial institutions on how they can facilitate the managed phase-out of coal power generation in the region.[45]
- In collaboration with the United Nations Global Compact Thailand (GCNT) and the Thai Securities and Exchange Commission (SEC), Climate Bonds has translated its sector criteria for hard-to-abate economic sectors into the Thai language to guide industry players as they develop their transition strategies and plans.[46]
- As part of its Transition Programme, Climate Bonds continues to engage with relevant stakeholders in ASEAN to provide guidance and support needed for them to understand, assess and develop credible transition plans.

For more information on Climate Bonds' views on transition finance, please refer to the following publications:

- Financing credible transitions: How to ensure the transition label has impact[47]
- Transition finance for transforming companies: Tools to assess companies' transitions and their SLBs[48]

Driving Green Investment – Climate Bonds 2023 Transition Programme[49]

New industry standards and an expansion in criteria and Certification avenues for investors will be the foundation of Climate Bonds' transition programme for the year ahead.

- Expand the Climate Bonds Standard – enabling entity-level and SLB/SLL Certification (see box below);
- Expand the Climate Bond Standard Transition Sectors to Criteria for Hydrogen Infrastructure, Energy Utilities, Metals and Mining, and Commodities Supply Chain;
- Proposed Crop and Livestock Criteria for 2023, building upon existing Agriculture Criteria;
- Continue providing guidance to policymakers and regulators on gas, steel and global resilience;
- Build resilience in the age of volatility, following the launch of its Global Resilience Programme; and
- Engage stakeholders globally to provide guidance and support needed for them to understand, assess and deliver credible transition plans.

Climate Bonds expands Certification scheme to include corporate entities and SLBs[50]

Certification under the Climate Bonds Standard Version 4.0 (CBS v4) is expanding beyond UoP bonds to include non-financial corporates and their sustainability-linked debt. Launched in April 2023, the new CBS v4 is a major new development for Climate Bonds, which has driven credible climate financing for over a decade. Drawing from its experience in developing detailed sector criteria for assets, activities and investments, Climate Bonds intends to provide transparent science-based criteria for non-financial corporate entities, credible SLBs and similar instruments, and assurance for investors that sustainability requirements have been met in respect of any Certified issuance.

This work goes beyond sectoral transition pathways and includes key governance elements that indicate an entity's preparedness to transition to net zero. Certification will be available for corporates with emissions already 'near zero' as well as those with activities in high-emitting sectors, provided the corporate has suitably ambitious performance targets and credible transition plans. CBS v4 enables corporates aligned with 1.5-degree pathways, or those that will be aligned by 2030, to obtain Certification. SLBs issued by and in respect of the activities of qualifying non-financial corporates can also be Certified under the CBS v4.

Recommendations

The development of a well-structured, credible and ambitious transition plan underpins the necessary transition of entities, sectors and economies. The creation of transition plans is currently voluntary, but some countries are working to set regulations that will lay out the requirements for mandatory transition plans. For example, the Transition Plan Taskforce launched by the UK Government is developing a gold standard for private sector climate transition plans, complementing earlier efforts by the Financial Conduct Authority (FCA) which introduced mandatory transition plans (aligned with the TCFD) for listed companies, regulated asset owners and asset managers. Mandatory transition plan disclosure is also set to be a feature of the EU's CSRD.

No ASEAN country has made transition plans mandatory yet. Policymakers in the region should implement mandatory transition plan disclosure, and can use what has been done in other regions as a base in developing rules for the disclosure – perhaps even through a regional standard, which would bring much needed consistency between countries. This should cover organisations with material climate impacts and could be introduced via a staggered approach, focusing on the most polluting and hard-to-abate sectors first. There is also a considerable amount of guidance from organisations like Climate Bonds and others around what should be included as part of transition plan disclosure and decarbonisation pathways.

For entities, Climate Bonds' primary recommendation is to develop a coherent, comprehensive, and credible transition plan that meets the Five Hallmarks and is published prominently on their website. Most entities will need to transition their activities towards net zero and should start planning for this as soon as possible. Entities operating in some sectors may not yet have complete clarity on precisely what needs to be done further down the line but should nevertheless begin with what is currently practicable.

As such, additional recommendations include:

- Create a plan! Start the journey; enhance and improve over time.
- A transition plan should be contained in a single, clearly labelled, easily accessible document.
- The plan should be dated and include an indication of how frequently it will be evaluated to incorporate ongoing developments.
- Labelling and terminology should be applied consistently across the transition plan and related documents.
- Transition plans should address all Five Hallmarks, and where there are gaps, these should be explained and a clear plan to address them should be included; and
- To ensure maximum credibility and impact, any organisation planning to issue an SLB should follow the guidance given in the Scaling Transition Finance – ASEAN report along with the recently published ASEAN SLBS. This includes linking the SLB/SLL and related SPTs with the information contained in the transition plan of issuers/borrowers.

Spotlight: Supportive policies to scale up sustainable finance in ASEAN

Sustainable finance policy in ASEAN

The state of ASEAN sustainable finance has improved substantially since the release of the Roadmap for ASEAN Sustainable Capital Markets and the Report on Promoting Sustainable Finance in ASEAN, in 2019 and 2021 respectively.

At a regional level, the ACMF released the ASEAN SLBS and ASEAN Sustainable and Responsible Funds Standard (SRFS) in 2022, both of which are expected to support ASEAN in narrowing the gap toward net zero.[51]

Under the 2022 ASEAN Chairmanship of Cambodia, the Securities and Exchange Commission of the Philippines, alongside SC Malaysia, continue to steer regional sustainable capital market initiatives which have been crucial in accelerating the bloc's sustainable finance agenda.

The Indonesian financial sector regulator introduced its own green taxonomy, guided by its Sustainable Finance Roadmap Phase II. The central bank has also incorporated sustainability considerations in terms of reserve management and macroprudential policy formulation, as mentioned in its 2022 annual financial stability review.[52] In partnership with the Asian Development Bank (ADB), the Government of Indonesia launched the ETM along with a national ETM country platform to mobilise finance to support the transition to cleaner energy use in key sectors, in addition to announcing a JETP with International Partners Groupwhich will mobilise USD20bn over the next three to five years.[53,54] This complements efforts by the Ministry of Finance to adopt ESG policy in infrastructure financing.

In Malaysia, the capital market regulator introduced a sustainable and responsible investment taxonomy, alongside a suite of ESG frameworks, standards, guidelines, and disclosure requirements with its domestic regulatory counterparts. Malaysian policymakers and the financial sector have continued to advocate initiatives and programmes to scale up sustainable finance capabilities and adoption throughout the economy via the Joint Committee on Climate Change, thus accelerating the financial sector's response and resilience to climate risk.

The Sustainable Finance Framework was launched by the Department of Finance of the Philippines in early 2022, outlining its intention to issue thematic debt instruments in the international capital markets. Echoing the government's green finance agenda, the financial regulators, both the central bank and securities regulators also took their initiatives to emphasise its commitment to sustainable finance, demonstrated with the issuance of a circular to banks and the publication of a sustainable central banking strategy by Bangko Sentral ng Pilipinas, in addition to the issuance of a set of sustainable funds guidelines by SEC Philippines.

A range of climate and sustainable finance initiatives were introduced in Singapore by the MAS and the local exchange (SGX), including the launch of the second public consultation of its green and transition taxonomy, disclosure and reporting guidelines for ESG retail funds, and new listing rules on climate reporting for public listed entities. Some key achievements that distinguish Singapore versus its regional peers include the establishment of an international advisory panel on sustainable finance, the launch of a GFANZ APAC Network central office and the China-Singapore bilateral green finance taskforce. All of these initiatives demonstrate the country's commitment to strengthening its position as a regional and international green finance hub.

Thailand embarked on the sustainable finance journey with the adoption of Sustainable Banking Guidelines by the banking sector, issuance of sustainable funds guidelines by the securities regulator, as well as taxonomy development via a cross-agency platform led by its central bank. Various capacity-building initiatives have also been conducted by policymakers and regulators, in collaboration with the financial industry and international organisations such as Climate Bonds.

In December 2022, leaders from Vietnam and the International Partners Group launched the Just Energy Transition Partnership (JETP), which will mobilise an initial USD15.5bn of public and private finance over the next three to five years to support the country's green transition.[55] In addition, its central bank issued a circular providing guidelines for credit institutions and foreign bank branches on environmental risk management in credit extension activities.[56]

More ASEAN countries are also accessing the thematic debt market. Cambodia saw its first green bond issued in January 2023, positioning the country as an emerging player in the green finance market. Furthermore, ADB approved a USD73m sector development programme to support Cambodia's energy transition.[57]

Financial aggregation (for example via securitisation) is an additional tool that can help smaller projects to obtain funding, especially in less developed markets. To complement this, MDB and government support to de-risk (for example through blended finance and first loss capital) are important ways to attract funding to such projects/markets.

The road ahead for ASEAN sustainable finance policy

Whilst several regional initiatives and national developments by policymakers and international organisations provided a strong momentum in advancing the growth of ASEAN sustainable finance markets in 2022, stakeholders in frontier markets and countries without any thematic issuance in the region still have much work to do in accelerating their sustainable and transition finance journey. This includes increasing awareness and capacity-building efforts, enabling the development of a robust and varied regional sustainable finance market whilst catering to the appetite and needs of local currency thematic instruments.

The need for incentives and supportive financial policies have frequently been advocated by the private sector, especially corporate issuers inclined to raise financing for sustainable activities. In the ASEAN sustainable debt space, Singapore pioneered such initiative by introducing the Sustainable Bond Grant Scheme in 2017, to encourage the issuance of GSS bonds, followed by the world's first Green and Sustainability-Linked Loan Grant Scheme in 2021. Malaysia launched its SRI Sukuk and Bond Grant Scheme, formerly known as Green SRI Sukuk Grant Scheme, in 2018, to facilitate companies raising finance to meet their sustainable finance needs. Indonesia's regulator and local bourse also provided fee incentives for green bond issuances and listing (KDK No. 24/KDK.01/2018 and KEP-00038/BEI/05-2020). Similarly, SEC Thailand waives approval and filing fees for GSS+ issuances, in addition to waiver of application fee offered by the Thai Bond Market Association (ThaiBMA). Nevertheless, there is much rooms for policymakers and regulators to consider innovative financial incentives and initiatives to spur the demand and supply of the sustainable finance instruments in the market.

Building on ASEAN taxonomy development efforts, it may be timely for relevant ASEAN sectoral bodies to consider the ACMF's recommendation for a regional transition standard.[58,59] Under the Roadmap for Sustainable Capital Markets and the Joint Sustainable Finance Working Group, the ACMF and WC-CMD have advocated the benefits of transition bonds and SLBs, alongside some form of transition finance mechanism/standard, to complement existing green frameworks.

It may also be worthwhile to advocate and leverage corporate transition plans to facilitate the provision of transition finance and accelerate the bloc's transition journey in the region. As such, Climate Bonds' transition and climate

Key supportive policy/initiatives across ASEAN in 2022

ASEAN

- Release of the ASEAN Sustainability-Linked Bond Standards (ASEAN SLBS)
- Release of the ASEAN Sustainable and Responsible Fund Standards (ASEAN SRFS)
- Release of the ASEAN SDG Bond Toolkit Supplements: Legal and Regulatory Aspects for ASEAN Countries
- Targeted consultation on the ASEAN Taxonomy for Sustainable Finance – Version 1

Indonesia

Financial Services Authority
- Release of Indonesia's Green Taxonomy (THI): Edition 1.0

Ministry of Finance
- Introduction of carbon tax
- Issuance of ESG Framework and Manual
- Launch of ETM Country Platform
- Launch of JETP at G20 Summit

Malaysia

Ministry of Finance

- Release of the Principles on Good Governance for Government-Linked Investment Companies (PGG)
- Launch of the revised Malaysian Code for Institutional Investors (MCII)

Securities Commission Malaysia
- Release of the Sustainable and Responsible Investment (SRI) Taxonomy for the Malaysian Capital Market
- Launch of the SRI-linked Sukuk Framework
- Announcement on the expansion of SRI Sukuk and Bond Grant Scheme – for issuances under SRI-linked Sukuk Framework and ASEAN SLBS
- Issuance of Guidance Note on Managing ESG Risks for Fund Management Companies

Bank Negara Malaysia
- Launch of the Low Carbon Transition Facility (LCTF)
- Release of the Policy Document on Climate Risk Management and Scenario Analysis
- Announcement of the Greening Value Chain (GVC) Programme

Bursa Malaysia (stock exchange)
- Release of the enhanced Sustainability Reporting Guide Framework (complementing this, a centralised sustainability reporting platform in collaboration with LSEG has been announced in 2023)
- Launch of the Bursa Carbon Exchange (BCX)

Joint Committee on Climate Change
- Publication of the Climate Data Catalogue
- Release of the TCFD Application Guide for Financial Institutions

Philippines

Department of Finance
- Launch of the Sustainable Finance Framework
- Launch of the Green Climate Fund Readiness Programme

Securities and Exchange Commission
- Issuance of Rules on Sustainable and Responsible Investment Funds

Bangko Sentral ng Pilipinas
- Circular to banks on the release of the sustainable finance roadmap and guiding principles
- Launch of the Sustainable Central Banking Strategy

Cambodia

Announcement of USD73m energy transition development programme (funded by ADB)

Singapore

Monetary Authority of Singapore
- Launch of the ESG Impact Hub
- Establishment of Sustainable Finance Advisory Panel
- Launch of the Association of Banks in Singapore Environmental Risk Questionnaire
- Launch of the Sustainable Finance Technical Skills and Competencies (TSCs) under the IBF's Skills Framework for Financial Services
- Establishment of the GFANZ APAC Network Central Office in Singapore, with an advisory board chaired by MAS
- Launch of second public consultation of the taxonomy by the Green Finance Industry Taskforce (followed by a third consultation in early 2023)
- Issuance of circular on disclosure and reporting guidelines for ESG retail funds
- Launch of ESGenome Disclosure Portal, in collaboration with SGX
- Launch of Point Carbon Zero Programme, in collaboration with Google Cloud
- Establishment of the China-Singapore Green Finance Taskforce
- Carbon tax set to increase from the current SGD5 per tCO$_2$e to SGD50-80 per tCO$_2$e by 2030

Singapore Exchange
- Launch of Project Marketplace
- Announcement on new listing rules requiring all SGX-listed entities to provide climate reporting on a 'comply or explain' basis starting on 1 January 2022, with the rules becoming progressively tighter in the years to come

Thailand

Securities and Exchange Commission
- Release of the Guidelines on Management and Disclosure of Climate-related Risk by Asset Managers
- Collaboration between CDP and SEC Thailand to raise awareness on and drive higher levels of environmental disclosure in Thailand
- Launch of the Thailand SDG Investor Map
- Development of proposed Green Taxonomy (currently under consultation)

Bank of Thailand
- Release of the Directional Paper on transitioning to environmental sustainability
- Announcement on the ESG Declaration by Thai Bankers' Association

Stock Exchange of Thailand
- Release of the Sustainability Reporting Guide

Vietnam

Government of Vietnam
- Launch of the JETP
- Approval of 2022-2025 programme to support private firms in sustainable business development

State Bank of Vietnam
- Issuance of Circular No. 17/2022/TT-NHNN providing guidance on environmental risk management in credit extension activities of credit institutions and foreign bank branches

resilience programmes (see pages 21-25) could potentially be explored as a reference in developing such tools and best practices for ASEAN member states. This is aligned to the 'just and orderly transition' concept which should also be examined to strengthen the transition to a low-carbon economy.

The revolutionary power of disclosure

Reporting and disclosure are a related topic which underpin the ability of entities, sectors and economies to improve their sustainability performance. As is often said, 'what gets measured gets managed' (and on the flipside what doesn't get measured doesn't get managed!).

Climate Bonds has assessed reporting in the green bond market over the last few years and produced multiple reports about this (the latest one can be accessed here), finding that post-issuance UoP disclosure is widespread while impact reporting is also common, but to a lesser extent.[60] The quality of reporting, on the other hand, varies significantly. This is true in both the global and ASEAN market, and is likely to hold in other segments of the thematic debt market (upcoming research will tell).

However, reporting is an even more important topic looking beyond the instrument level, because only with entity-level reporting can an organisation's entire activities and impacts be assessed. At least for now, it remains possible for companies to, for example, issue green bonds to finance green expenditures while at the same time investing in brown assets, potentially even worsening their entity-level sustainability performance. Any entity with material sustainability-related impacts should thus be disclosing these, regardless of whether it has accessed the thematic finance market or even capital markets more broadly. And while GHG emissions and associated climate transition plans may be the most urgent core information to report, the disclosure should cover all material impacts, such as water, biodiversity, and social impacts.

Global as well as ASEAN policymakers must work to ensure sustainability reporting across the economy (likely starting with the largest companies and/or most polluting sectors) becomes a reality. Regulators in the EU are taking the lead on this front, and others including in the UK and USA are following. In ASEAN, disclosure rules are starting to be implemented, with existing ones listed on the previous page.

In some countries, namely Singapore and Malaysia, exchanges are leading by providing reporting guidelines and tools as well as implementing clear mandatory disclosure rules for listed companies. The SGX, for example, introduced new listing rules requiring all listed entities to provide climate reporting on a 'comply or explain' basis and launched the ESGenome Disclosure Portal together with the MAS in 2022. This is set to increase the availability, quality and consistency of reporting while making the process easier and more streamlined for issuers, and centralising the information for users. Likewise, Bursa Malaysia released a revised Sustainability Reporting Guide to assist listed issuers in preparing sustainability statements as part of its listing requirements, and in 2023 has announced a centralised sustainability reporting platform which will soon be launched in collaboration with the London Stock Exchange Group (LSEG).

These are very positive developments that should be built on further by regulators across the region. The work of regulators in other jurisdictions and the standards set by global bodies, such as the International Sustainability Standards Board (ISSB), Global Reporting Initiative (GRI), CDP (former Carbon Disclosure Project), Task Force on Climate-Related Financial Disclosures (TCFD), etc., can all be used to define regionally adequate reporting standards that clarify what entities should be measuring, disclosing, and managing.

Further, a centralised disclosure platform containing this data, at national or perhaps even regional level, would be of immense value, facilitating the process for reporting entities while making the information more consistent and easily accessible for investors and other users. The GFANZ-led Net-Zero Data Public Utility is an interesting initiative set to make climate-related reporting and transition plan disclosure from thousands of companies publicly available, with a beta platform expected in H2 2023. Among disclosure platforms specific to thematic debt instruments, the Green Bond Transparency Platform created by the IDB for Latin America is the only one publicly available, and has supported more consistent reporting in the region.

Mirroring developments in the EU, the launch of an ASEAN taxonomy of green/sustainable activities can act as a complementary tool that supports enhanced disclosure, promising to bring greater consistency in definitions across the region. This may be particularly relevant given that most countries are planning to or have already created their own taxonomies, which has the potential to bring fragmentation with lack of interoperability.

Policy Guide to Sustainable Finance Opportunities – Climate Bonds

Climate Bonds released its '101 sustainable finance policies for 1.5°C' programme for public consultation in October 2022, with the final document released in Q1 2023.[61,62,63]

This comprehensive sustainable finance policy guide provides a toolkit of 101 policy levers available to governments, regulators, and central bank policymakers to facilitate the transition to net zero. It outlines how policymakers can channel and accelerate public and private investment to deliver sustainable development, limit global warming to 1.5°C and ensure climate resilience. It outlines the breadth of policy opportunities available, demonstrating that governments can take immediate action to enable transition and decarbonise their economies.

Underpinned in the Climate Bonds manifesto on 'accelerating policy', Climate Bonds aims to expand its policy advocacy and engagement to step-up efforts and reach an annual USD5tn of labelled bond issuance by 2025.

Policymakers can tilt the playing field towards green in three crucial ways:

1. Speed: ensure rapid action by all decision makers;

2. Steer: tilt the whole economy to transition; and

3. Simplify: clarify and streamline sustainable investment.

101 SUSTAINABLE FINANCE POLICIES FOR 1.5°C

Appendix: Country analyses

Singapore

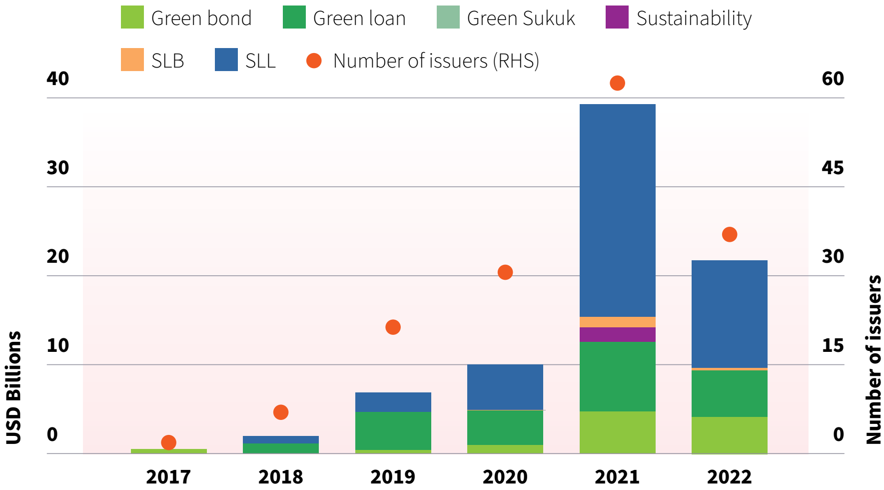
Singapore boasts the largest and most diverse thematic debt market in ASEAN, with USD81bn issued from 127 issuers (the latter being one of the highest country figures globally). Green debt and SLLs dominate heavily, representing 96% combined in terms of issuance amount. As an important financial centre with an array of large financial institutions ready to lend to sustainable projects, loans are more popular than bonds.

Singapore is considered the region's green finance hub, and this is reflected in the many market- and policy-led initiatives that have been introduced particularly by the MAS (see spotlights, especially page 27.). Several of these focus on the important topic of disclosure and aim to increase the availability, quality, consistency and accessibility of reporting, for example through the promising ESG Impact Hub, ESGenome and Project Greenprint.

Looking ahead, the development of Singapore's GFIT taxonomy for green and transition activities will further support the growth of a credible market across different segments both in Singapore and ASEAN more broadly, helping to define eligible projects in a consistent way for financial institutions.

Multinational agribusiness company Olam International ranked top in 2022 with USD4.875bn over two large SLLs (USD2.9bn and USD1.975bn) through its Olam Agri Holdings financing arm. The only other issuer with a deal over USD2bn was Perennial Shenton Property with an inaugural green loan worth SGD3bn (USD2.09bn). In a highly anticipated transaction, Singapore's Government also became a first-time issuer with a 50-year SGD2.4bn (USD1.75bn) green bond that will finance a vast array of projects with environmental benefits.

Singapore: green debt showed the most resilience in 2022



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	Fraser Property Limited	2,723	131	Loan
	Perennial Shenton Property Pte Ltd	2,091	2,091	Loan
	Singapore Government	1,753	1,753	Bond
	Singapore Housing & Development Board	1,638	1,638	Bond
	Asia Square Tower 1 Pte Ltd	1,548	-	Loan
S&S	United Overseas Bank Ltd	1,500	-	Bond
	FLCT Treasury Pte Ltd	81	-	Bond
	WLB Asset Pte Ltd*	46	-	Bond
SLB	Sembcorp Financial Services Pte Ltd	497	-	Bond
	Nanyang Tech University	481	-	Bond
	Ascott REIT MTN Pte Ltd	259	259	Bond
SLL	Olam International Ltd	9,925	4,875	Loan
	Trafigura Pte Ltd	7,905	-	Loan
	Flex Ltd (Flextronics International)	2,000	-	Loan

*Includes WLB Asset Pte, WLB Asset II Pte, and WLB Asset III Pte

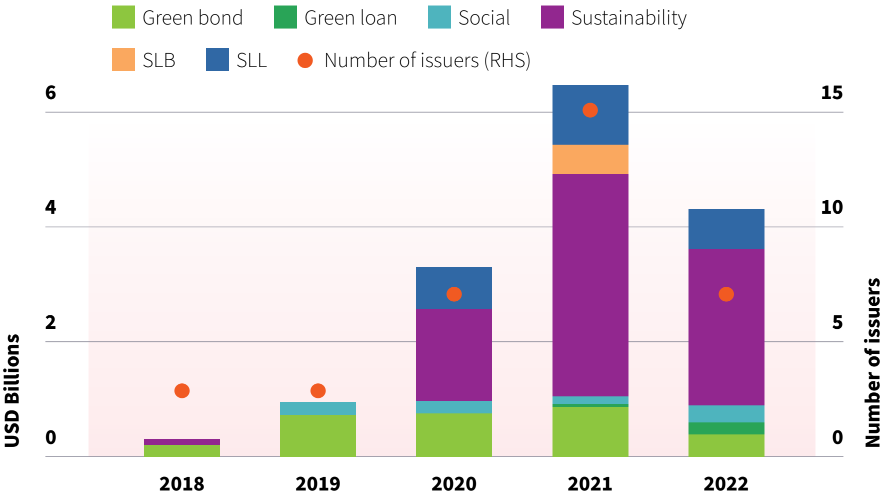
Thailand

Thailand is a relatively large ASEAN sustainable finance market that has been dominated by sovereign sustainability issuance in recent years. While this is a very positive development, an objective going forward will be to increase corporate issuance across the size spectrum and to finance a greater variety of sectors given that the focus of its GSS instruments until now has been on renewable energy. Similarly to developments in Singapore, Thailand's taxonomy of green activities is planned to be finalised later in 2023 and is set to be an instrumental tool to drive sustainable investments in the country.

Nevertheless, Thailand's market is already quite diverse in terms of themes. Despite social bonds remaining scarce across ASEAN, Thailand has seen social issuance every year since 2019, and the THB10bn (USD295m) deal from its Government Savings Bank was both the only social bond from the region in 2022 as well as the largest one yet. It will finance projects linked to employment, microfinance and equality.

2022 was marked by the Thai Government tapping its 2020 sustainability sovereign three times for a total amount of THB55bn (USD1.76bn), as well as issuing a new bond worth USD948m. On the green side, Global Power Synergy (PTT PCL) was by far the most prolific issuer in 2022, with five green bonds totalling THB12bn (USD341m), taking its cumulative total to THB19bn (USD565m).

Variety of instruments in Thailand; sovereign deals support strong sustainability bond issuance



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	BTS Group Holdings	1,000	-	Bond
	Global Power Synergy (PTT PCL)	565	341	Bond
	Energy Absolute	376	-	Bond + Loan
S&S	Thailand Government	7,742	2,710	Bond
	National Housing Authority	377	-	Bond
	Government Savings Bank	295	295	Bond
SLB/SLL	Indorama Ventures PCL	802	500	Bond + Loan
	Thai Union Group Public Co Ltd	523	-	Loan
	Cal-Comp Electronics Public Co Ltd	420	-	Loan

Malaysia

Malaysia has also seen issuances across the thematic debt spectrum, but at a smaller scale than both Singapore and Thailand despite its first deal (a sustainability bond) having come earlier, in 2015. In recent years, issuance has been patchy and only sustainability bonds have regularly come to market; they accounted for 99% of the 2022 volume.

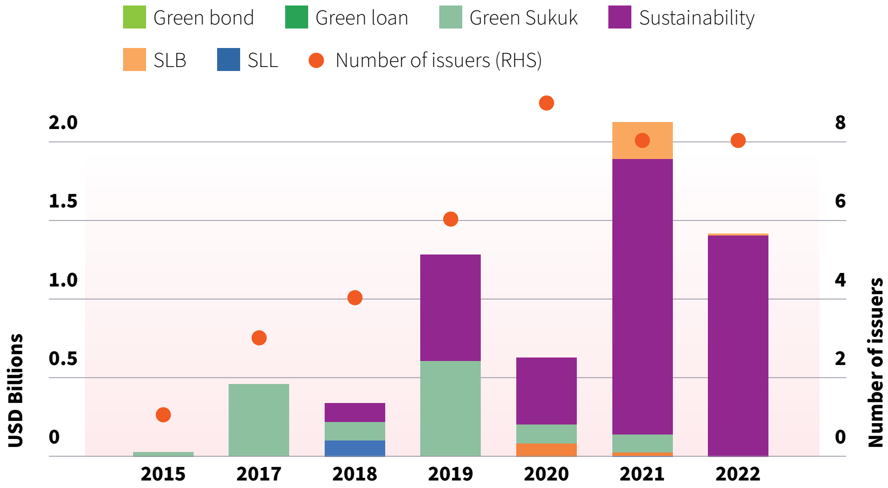
The sustainability theme dominates heavily overall, with Malaysian issuers seemingly keen to finance the social dimension (particularly projects related to affordable infrastructure and employment) along with projects delivering environmental benefits. This is very likely related to the positioning of thematic finance as SRI (sustainable and responsible investments, as used in Malaysia) rather than a narrower green focus on the part of regulators and other actors, for example with the SC's expansion of incentives from green to broader thematic instruments as part of the SRI Sukuk and Bond Grant Scheme in 2018. Unsurprisingly, the only Malaysian sovereign so far was a sustainability Sukuk.

The Malaysia market may well be at a critical liminal point, with a variety of supportive initiatives and policies introduced in 2022, such as the SC's principles-based SRI Taxonomy launched in December. These are set to launch the country to a new stage of development and lead to more consistent, robust issuance from different issuer types, further cementing the country as a leader in Islamic sustainable finance.

Thematic deals from Malaysia have tended to be fairly small. A broad base of smaller issuers is often a sign of a relatively developed market and likely reflects the various local initiatives and policies that have been implemented to foster issuance.

In 2022, for example, the average deal size was USD79m, although most issuers came to market more than once. Cagamas Bhd remained a highly frequent issuer with four deals, matched by first-time issuer Pengurusan Air Selangor Sdn Bhd. CIMB Bank was one of the only issuers with just one transaction, a USD500m deal that was comfortably the largest of the year.

Malaysia has had issuance across GSS+ universe but more size and consistency needed



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	Permodalan Nasional Berhad	383	-	Sukuk
	Quantum Solar Park Malaysia Sdn Bhd	236	-	Sukuk
	Telekosang Hydro One Sdn Bhd	208	-	Sukuk
	Cypark Ref Sdn Bhd	131	-	Sukuk
	SEGI Astana SDN Bhd	104	-	Bond
S&S	CIMB Bank Bhd	1,180	500	Bond
	Cagamas Bhd	1,174	146	Bond
	Malaysia Wakala Sukuk Bhd	800	-	Bond
	TNB Power Generation Sdn Bhd	342	342	Bond
	SME Development Bank Malaysia Bhd	231	112	Bond
SLB/SLL	Axiata Group Bhd	802	-	Loan

Indonesia

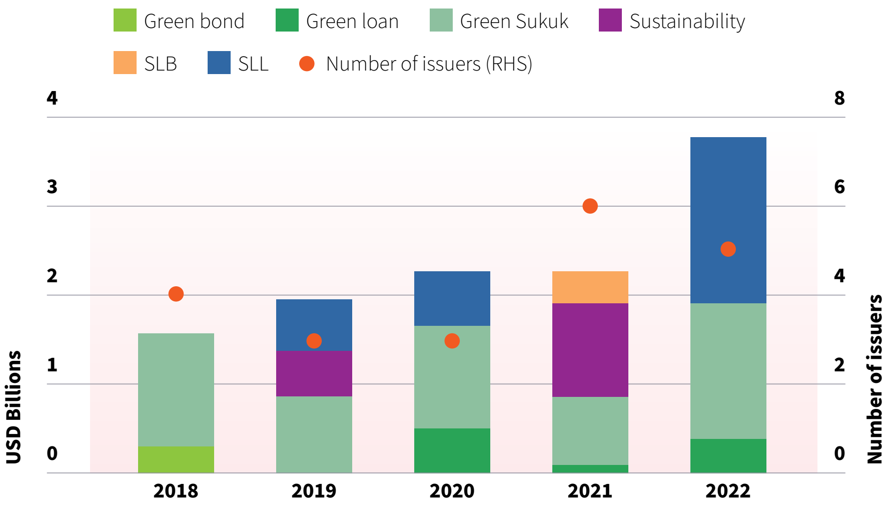
Indonesia's thematic market is somewhat similar to Malaysia's in that issuance has spanned all the segments but in a patchy way. Unlike Malaysia's, however, Indonesian deals and issuers are relatively large, with the issuance volume dominated by the sovereign transactions.

2022 was marked by Indonesia's largest sovereign (green) Sukuk yet, a 10-year USD1.5bn deal well received by the market. The country's only other sovereign surpassing USD1bn was its first, a five-year USD1.25bn Sukuk back in 2018. After issuing a sustainability sovereign in 2021, only the green transaction came in 2022; one expects the government to return to accessing other segments in the years ahead.

2022 also saw Indonesia introduce important supportive tools and policies that are set to stimulate the nation's thematic debt market. Mirroring developments in other regional states, the release of a green taxonomy by the Financial Services Authority (guided by its Sustainable Finance Roadmap Phase II) will bring more clarity and consistency to the definition of green activities, while the introduction of a carbon tax and launch of the Energy Transition Mechanism by the Ministry of Finance are likely to spur more sustainable investments by corporates and by extension financial institutions. Hosting the 17th G20 Summit in Bali in November 2022 may have provided further impetus to Indonesia's transition, coupled with the launch of the ETM Country Platform and JETP.

Despite a record USD3.7bn issued, only five of the country's cumulative 28 deals came during 2022, translating into an average deal size of USD743m. Apart from the sovereign green Sukuk, the only other transaction reaching USD1bn (both in 2022 and overall) was an SLL from PT Bank Rakyat, its first thematic issuance.

2022 green sovereign supports Indonesia's strongest year yet



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	Republic of Indonesia	5,485	1,500	Sukuk
	PT Perusahaan Listrik Negara (PLN)	500	-	Loan
	PT Wijaya Karya Tbk	383	383	Loan
S&S	Republic of Indonesia	586	-	Bond
	PT Bank Rakyat Indonesia Tbk (Persero)	500	-	Bond
	Bank Mandiri Persero Tbk PT	300	-	Bond
SLB/SLL	PT Bank Rakyat Indonesia Tbk (Persero)	1,000	1,000	Loan
	PT HLI Green Power	711	711	Loan
	PT Perusahaan Listrik Negara (PLN)	600	-	Loan

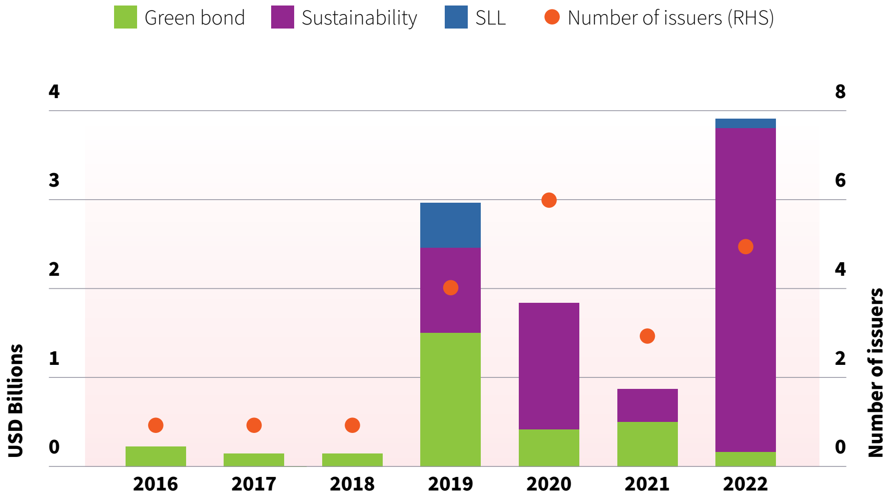
Philippines

2022 was an important year for Philippine sustainable finance with its inaugural sovereign issuances: three deals totalling USD2.3bn, with the one denominated in JPY issued as four tranches ranging in tenors from five to 20 years. All were sustainability bonds financing a variety of green and social categories. First-time issuer BDO Unibank (PHP52.7bn/USD1.03bn) and repeat Rizal Commercial Banking Corp (PHP14.8bn/USD289m) were the other two contributors to sustainability bond issuance.

By contrast, volumes in other segments were low. The level of green bond issuance was below that of the previous three years, the only deal being a PHP10bn (USD170m) from repeat issuer Acen Finance. Meanwhile, the only SLL was a USD100m transaction issued by SMC Global Power Holdings, the power arm of multinational conglomerate San Miguel Corp.

There have been no green loans nor SLBs from the Philippines yet. Expanding and diversifying the country's market will be an important objective going forward and should be supported by the added visibility and framework of the new sovereign issuances, as well as by the growing efforts of regulators and the central bank observed during 2022. Further, SLB issuance may be spurred by the launch of ASEAN SLB Standards by the ACMF just a few months ago. It will also be interesting to see the impact of the Philippines' different principles-based taxonomy once developed, and whether more technical definitions will follow (which could rely on the regional taxonomy recently developed by the ASEAN Taxonomy Board).

Philippine sovereign drives record year but green bond volume low



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	Ayala Corporation	1,170	-	Bond
	ACEN Finance	570	170	Bond
	BPI	401	-	Bond
S&S	Philippine Government	2,307	2,307	Bond
	Rizal Commercial Banking Corp	1,737	289	Bond
	BDO Unibank Inc	1,029	1,029	Bond

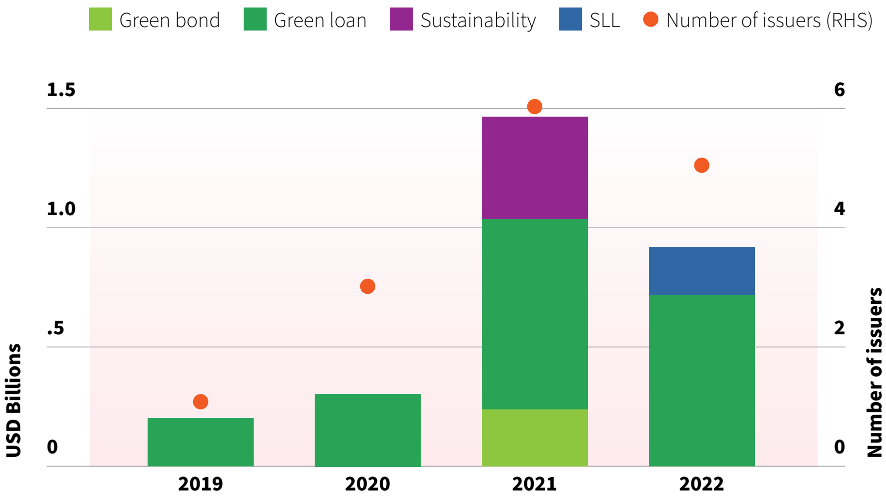
Vietnam

Vietnam's thematic debt market remains the smallest from the ASEAN-6 group, but the last two years have brought increasing diversification with the first green bonds (previously only green loans), sustainability bonds and SLLs. SLB instruments remain untapped, but this may change given the ACMF's recent launch of ASEAN SLB Standards.

Only loans (green and sustainability-linked) were issued during 2022, with five deals all from different issuers. The largest was a USD500m green loan from automotive company Vinfast Trading and Production, a subsidiary of the larger conglomerate Vingroup JSC, as it expands its electric vehicle production. This represents Vinfast's second transaction following a USD400m green loan in 2021. Another Vingroup subsidiary, Vinpearl JSC, had also come to market with a USD425m sustainability bond in 2021, the only one from Vietnam so far.

Whilst the Vietnamese green taxonomy is currently being developed and has yet to be released, the ASEAN-wide taxonomy published may provide a good base of eligible activities that can be used and/or adapted in Vietnam.[64] In addition, and building on the JETP (which will see an initial USD15.5bn of financing to transition the country's energy sector and which could stimulate added thematic debt issuance), local policymakers can implement more supportive policies to grow a credible sustainable finance market, including by drawing inspiration from other countries in the region.

Small but increasingly diversified GSS+ market



Source: Climate Bonds Initiative

Largest issuers in each theme, ranked by cumulative amount issued

Theme / Segment	Issuer	Total amount issued (USDm)	2022 amount issued (USDm)	Format
Green	Vingroup JSC	900	500	Loan
	Vietcombank	200	-	Loan
	BIM Land	200	-	Bond
S&S	Vingroup JSC	425	-	Bond
SLL	BIM Land	107	-	Loan
	Chailease Holding Co Ltd	90	-	Loan

Endnotes

1. Statista, GDP of the ASEAN Countries 2017-2027, 2023.
2. Bangko Sentral ng Pilipinas, 602: The JPY/PHP Swap Facility under the CBLA between the Bangko Sentral and the BOJ, 2016.
3. Climate Bonds Initiative, ASEAN Sustainable Finance State of the Market 2021, June 2022.
4. Climate Bonds Initiative, Green Bond Database Methodology, July 2022.
5. Climate Bonds Initiative, Climate Bonds Taxonomy, 2022.
6. Climate Bonds Initiative, Climate Investment Opportunities: Climate-Aligned Bonds & Issuers, July 2021.
7. China Construction Bank, Annual Report on China Construction Bank's 2021 Transition Bond, 2022.
8. World Bank Group, Unleashing Sustainable Finance in Southeast Asia, November 2022.
9. World Inequality Database, Singapore.
10. Bangko Sentral ng Pilipinas, 602: The JPY/PHP Swap Facility under the CBLA between the Bangko Sentral and the BOJ, 2016.
11. ACMF, Roadmap for ASEAN Sustainable Capital Markets, January 2023.
12. ACMF, ASEAN WC-CMD, Report on Promoting Sustainable Finance in ASEAN, April 2020.
13. WC-CMD and ACMF were established in 2003 and 2004 respectively to support the integration of financial markets, ensuring the liberalisation of financial services and the sustainable development of capital markets.
14. SC Malaysia, Sustainable and Responsible Investment Roadmap for the Malaysian Capital Market, November 2019.
15. MAS, Green Finance Industry Taskforce.
16. Sustainable Finance Indonesia, Indonesia Green Taxonomy Edition 1.0 – 2022, January 2022.
17. Bank of Thailand, Sustainable Finance Initiatives for Thailand.
18. USDA FAS, Vietnam Issues Green Growth Strategy 2021-2030 Vision to 2050, November 2021.
19. Bangko Sentral ng Pilipinas, Circular Letter No. CL-2022-011: Philippine Sustainable Finance Roadmap and Guiding Principles, February 2022.
20. BNM, Climate Change and Principle-based Taxonomy, April 2021.
21. SC Malaysia, SC unveils Principles-Based Sustainable and Responsible Investment Taxonomy for the Malaysian Capital Market, December 2022.
22. Sustainable Finance Indonesia, Indonesia Green Taxonomy Edition 1.0 – 2022, January 2022.
23. ASEAN, ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy Board), November 2021.
24. SC Malasyia, Principles-Based Sustainable and Responsible Investment Taxonomy for the Malaysian Capital Market, December 2022.
25. BNM, Joint Statement by BNM and SC Malaysia: Updates at the 9th Joint Committee on Climate Change (JC3) Meeting, December 2022.
26. MAS, Industry Taskforce launches Third Consultation on Green and Transition Taxonomy, February 2023.
27. Bank of Thailand, Thailand Taxonomy Working Group welcomes opinions on the draft standards for grouping economic activities that take into account the environment (Thailand Taxonomy), December 2022.
28. Gizmacro, Green Taxonomy for Green Credit and Green Bond (Vietnam), August 2022.
29. Climate Bonds Initiative, Climate Bonds Taxonomy, 2022.
30. Climate Bonds Initiative, Climate Bonds Taxonomy, 2022.
31. Climate Bonds Initiative, ASEAN Economies' Exposure to Climate Transition Risks, April 2022.
32. Climate Bonds Initiative, Global Green Taxonomy Development, Alignment and Implementation, February 2022.
33. Climate Bonds Initiative, ASEAN Economies' Exposure to Climate Transition Risks, April 2022.
34. Climate Bonds Initiative, Embedding Sustainability into the Covid Recovery, May 2021.
35. UN ESCAP, ‹Advanced Draft› of Green and Sustainable Financial Market Analysis: Financing Cambodia›s Future, March 2023.
36. Phnom Penh Post, Central Bank pushes Green Finance, July 2022.
37. Bangko Sentral ng Pilipinas, Circular Letter No. CL-2022-011: Philippine Sustainable Finance Roadmap and Guiding Principles, February 2022.
38. Climate Bonds Initiative, Building Resilience in the Age of Volatility, November 2022.
39. Climate Bonds Initiative, Transition Finance for Transforming Companies, 2022.
40. Climate Bonds Initiative, Report: ASEAN Companies Must Be More Transparent on Transition Plans, January 2023.
41. ACMF, ASEAN Sustainability-linked Bond Standards, February 2023.
42. Climate Bonds Initiative, Transition.
43. PTSMi, Indonesia Launches ETM Country Platform to Accelerate Just and Affordable Energy Transition, November 2022.
44. Climate Bonds Initiative, How to Finance a Credible Coal Transition, November 2022.
45. GFANZ, Asia-Pacific Network.
46. Climate Bonds Initiative, Sector Criteria now available in Thai: Agriculture, Bioenergy, Electric Grids, Hydropower and Transition, March 2023.
47. Climate Bonds Initiative, Financing Credible Transitions (Whitepaper), 2020.
48. Climate Bonds Initiative, Transition Finance for Transforming Companies, 2022.
49. Climate Bonds Initiative, Driving Green Investment – Climate Bonds 2023 Transition Programme, January 2023.
50. Climate Bonds Initiative, Climate Bonds Standard V4.0.
51. ACMF, ASEAN Capital Markets Forum: Addressing the Challenges Related to Sustainable Development, Inclusivity and Resiliency for the Benefit of the Member States, October 2022.
52. Bank Indonesia, Financial Stability Review 38, March 2022.
53. PTSMi, Indonesia Launches ETM Country Platform to Accelerate Just and Affordable Energy Transition, November 2022.
54. Indonesia Ministry of Finance, Grabbing Opportunity towards Green and Sustainable Investment: Ministry of Finance Launches the ESG Framework and Manual, November 2022.
55. European Commission, International Agreement to support Viet Nam's ambitious climate and energy goals, December 2022.
56. Thu Vien Phap Luat, State Bank of Vietnam Circular No. 17/2022/TT-NHNN: Providing Guidelines on Environmental Risk Management in Credit Extension by Credit Institutions and Foreign Bank Branches, December 2022.
57. ADB, ADB Supporting Cambodia's Energy Transition Program, December 2022.
58. ACMF, Roadmap for ASEAN Sustainable Capital Markets, January 2023.
59. ACMF, ASEAN WC-CMD, Report on Promoting Sustainable Finance in ASEAN, April 2020.
60. Climate Bonds Initiative, Post-Issuance Reporting in the Green Bond Market 2021, May 2021.
61. Climate Bonds Initiative, 101 Sustainable Finance Policies for 1.5°C, October 2022.
62. Climate Bonds Initiative, Media Release: Climate Bonds Releases Policy Guide to Sustainable Finance Opportunities, October 2022.
63. Climate Bonds Initiative, 101 Sustainable Finance Policies for 1.5°C, October 2022.
64. Hanoi Times, Vietnam's Green, Social and Sustainability Debts total US$1.5 billion in 2021, June 2022.

Supported by

Prepared by Climate Bonds Initiative.

Authors: Miguel Almeida and Chi Xiang Wong

The authors thank Richard Lim (HSBC) for his valuable comments.

Editorial support: Caroline Harrison

Design: Godfrey Design, Joel Milstead

Suggested citation: Almeida, M., Wong, C.X., *ASEAN Sustainable Finance State of the Market 2022*, Climate Bonds Initiative, 2023.

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