Mobilizing Private Capital for Sustainable Development Through Sustainable Bonds: Case Studies from Indonesia and Thailand

Bridging Southeast Asia's Climate-Resilient Financing Gaps

Southeast Asia has vulnerability to environmental disruptions above the global average and significant greenhouse gas emissions relative to other developing market regions. Four Association of Southeast Asian Nations (ASEAN) member countries—Indonesia, Malaysia, Thailand, and Viet Nam—are among the world's top emitters and each is also at high risk of suffering climate-related disasters.[1] This region's vulnerability is intensified by rapid population growth and a significant reliance on environmentally sensitive sectors like agriculture. Projections under the high-emissions scenario outlined by the Intergovernmental Panel on Climate Change suggest that by 2100 climate change could lead to gross domestic product (GDP) reductions of 24% in developing Asia and 30% in Southeast Asia (Figure 1).[2]

In 2018–2019, economies in Asia and the Pacific mobilized USD519.9 billion in climate financing, with the majority concentrated in East Asia. ASEAN member countries allocated only USD28.0 billion, approximately 5% of Asia and the Pacific's total climate finance during this period. Public finance accounted for USD18.0 billion of ASEAN's climate finance spending, while the remaining USD10.0 billion, or about 35%, came from private sources, corporations, and financial institutions.[3] The Asian Development Bank (ADB) estimates that ASEAN member countries will need to invest USD210 billion annually between 2016 and 2030—equivalent to 5.7% of the region's GDP—in climate-resilient infrastructure.[4] The current level of investment, largely reliant on public sources, falls well short of what is required.

ASEAN's sustainable bond market has significant potential to attract more private capital and help bridge the region's climate financing gap. Despite ongoing efforts to develop sustainable bond markets in ASEAN member countries, issuance remains relatively low compared to new issuances in their broader bond markets. This indicates substantial opportunities to expand sustainable bond markets across the region, though both the public and private sectors must strengthen their efforts to realize this potential.

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1 J.L. Smith and W. Nichols. 2024. Brazil, India, Saudi Arabia among Largest Emitters with Most to Lose from Climate Change. *The Trendline*. 8 May. https://www.maplecroft.com/products-and-solutions/climate-and-environment/insights/brazil-india-saudi-arabia-among-largest-emitters-with-most-to-lose-from-climate-change/.

2 ADB. 2023. Thematic Report: Asia in the Global Transition to Net Zero. *Asian Development Outlook 2023*. https://www.adb.org/sites/default/files/publication/876891/ado-2023-thematic-report.pdf.

3 ADB. 2023. *Climate Finance Landscape of Asia and the Pacific*. https://www.adb.org/publications/ado-2023-thematic-report.

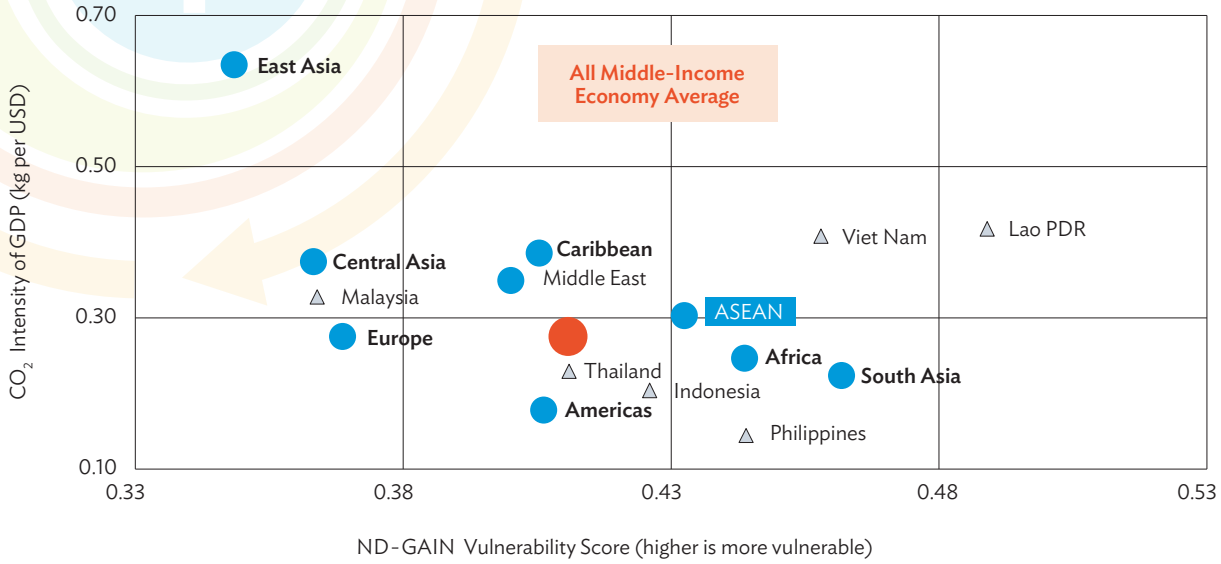
4 ADB. 2022. *ADB Southeast Asia Innovation Hub: Catalyzing Green and Innovative Finance*. https://www.adb.org/publications/adb-southeast-asia-green-finance-hub.

ACGF
ASEAN CATALYTIC GREEN FINANCE FACILITY

PRC FUND
POVERTY REDUCTION AND REGIONAL COOPERATION FUND

ADB

Figure 1: ASEAN Middle-Income Economies Have Above-Average Climate Vulnerability and Economic GHG Intensity



ASEAN = Association of Southeast Asian Nations, CO_2 = carbon dioxide, GDP = gross domestic product, GHG = greenhouse gas, kg = kilogram, Lao PDR = Lao People's Democratic Republic, ND-GAIN = Notre Dame Global Adaptation Initiative, USD = United States dollar.
Source: Authors' illustration based on data from ND-GAIN.

This knowledge product provides an overview of the current state of the sustainable bond market in ASEAN, presents recent successful case studies of ADB advisory support, and shares lessons learned on strengthening the role of the capital market in further mobilizing private capital.

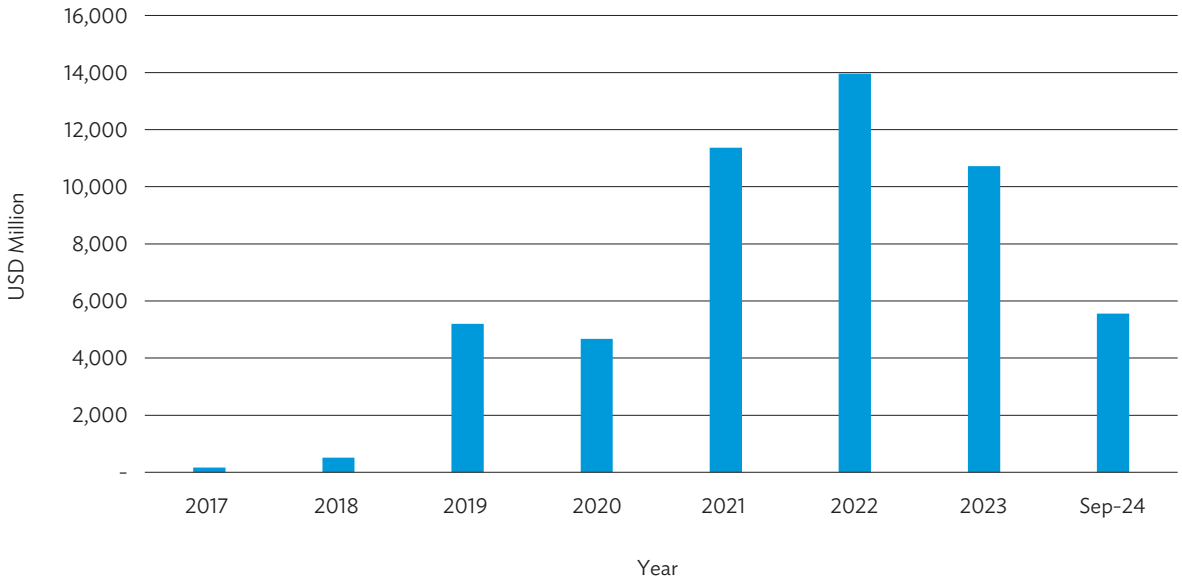
Current State of the Green, Social, Sustainable, and Other Labeled Bonds Market in ASEAN

Introduction of ASEAN Green, Social, Sustainable, and Other Labeled (GSS+) Bonds Standards. The sustainable bond market in ASEAN began to develop following the introduction of the ASEAN Green (2017), Social (2018), Sustainability (2018), and Sustainability-Linked (2021) Bonds Standards—a set of labels collectively referred to as GSS+ Bonds by the ASEAN Capital Markets Forum (ACMF). The ACMF, established in 2004 under the auspices of the ASEAN Finance Ministers Meeting, is a high-level grouping of capital market regulators from all ASEAN jurisdictions that aims to foster a deep, liquid, and integrated regional capital market.

The GSS+ bond market's recent expansion in ASEAN. Cumulatively, over USD50 billion worth of sustainable bonds have been issued in ASEAN member countries under the ASEAN standards (Figure 2). Of these, the majority are sustainability bonds, as this format provides the greatest flexibility for issuers to allocate proceeds to projects that contribute to both environmental and social benefits. While issuance volumes peaked in 2022, the slowdown in 2023 was primarily due to reduced overall corporate issuances, largely attributable to volatility in interest rates. However, as of September 2024, corporate issuances had already surpassed the total amount issued in 2023, indicating a recovery in the market. Thailand leads the region in terms of issuance with more than 40% of all ASEAN-aligned bonds issued, followed by Malaysia and the Philippines (Figure 3).

Local currencies dominate GSS+ bond issuance in ASEAN-5 markets. The local currency bond markets of Indonesia, Malaysia, the Philippines, Singapore, and Thailand—collectively referred to as ASEAN-5—play a critical role in the development of the region's sustainable bond market. As of June 2024, approximately 71% of GSS+ bonds outstanding in ASEAN-5 markets

Figure 2: Sustainable Bond Issuance Under the ASEAN Standards by Year

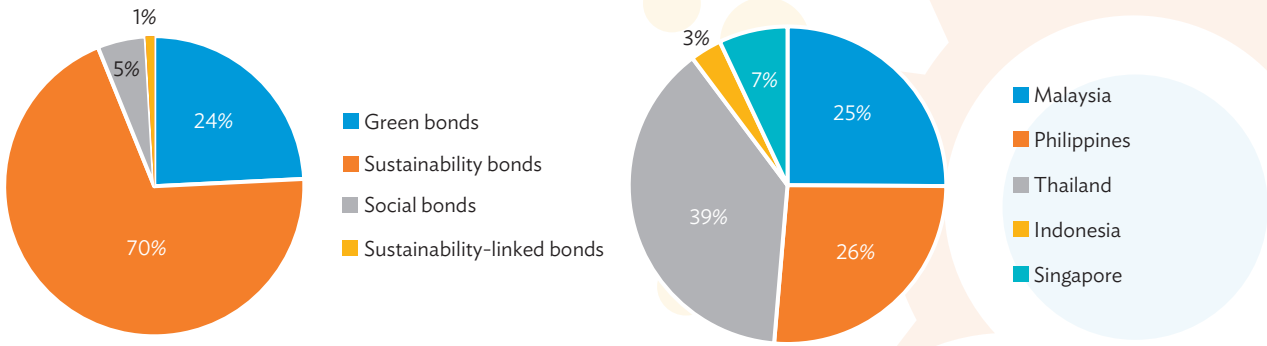


ASEAN = Association of Southeast Asian Nations, USD = United States dollar.

Note: ASEAN-aligned bonds are those reported to the ACMF Secretariat for inclusion in the database by the relevant capital market regulators.

Source: ACMF.

Figure 3: Proportion of Labeled ASEAN Green, Social, Sustainability, and Sustainability-Linked Bond Issuance by Bond Type and Market



ASEAN = Association of Southeast Asian Nations.

Source: ACMF.

were denominated in local currencies. According to *AsianBondsOnline*, Thailand leads in local currency GSS+ bond issuance, with over 99% of domestically issued GSS+ bonds outstanding denominated in Thai baht, followed by Malaysia at 82% and Singapore at 78% (Figure 4).

Long-term tenors dominate GSS+ bonds in ASEAN-5. As of June 2024, over 65% of GSS+ bonds issued in ASEAN-5 markets had a tenor exceeding 5 years, significantly higher than the 21% observed in selected non-ASEAN economies (Figure 5). Consequently, the size-weighted average tenor in ASEAN-5 markets stood at 11.2 years, compared to just 3.7 years for non-ASEAN economies. The long maturity profile is bolstered by active participation from domestic investors and increasing public sector awareness of the benefits of sustainable bond investments.

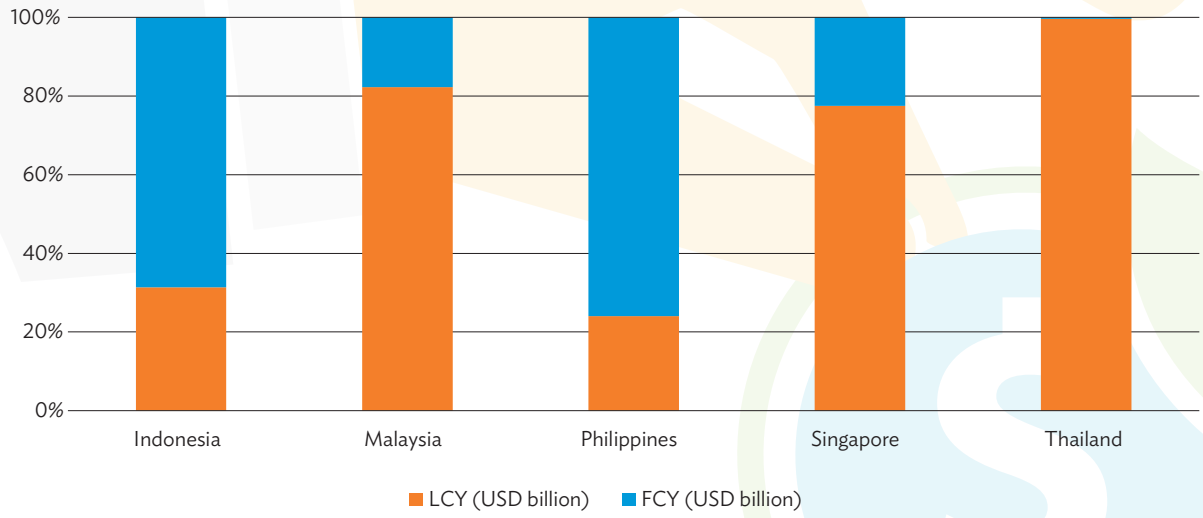
Despite recent remarkable developments in ASEAN GSS+ market, more concerted and collaborative efforts from all relevant stakeholders are necessary to further address ASEAN's financing gap and reduce the region's vulnerability to climate-related risks.

Shares of GSS+ bonds in ASEAN's general bond market remain small but are expanding rapidly. While the proportion of sustainable bonds to total bonds outstanding ranges from 2% to 7% in ASEAN-5 economies, averaging only about 4% as of June 2024 (Figure 6), the market is expanding significantly. From January to September 2024, the share of GSS+ bond issuance among ASEAN-5 economies was nearly 14%, surpassing the corresponding share of GSS+ bond issuance from other regions (Figure 7).

The majority of GSS+ bond issuance in ASEAN-5 is driven by governments and financial sector issuers. In the first half of 2024, financial institutions accounted for over 30% of ASEAN's sustainable bond issuance (Figure 8). These institutions play a pivotal role in mobilizing private capital to support the green transition of small- and medium-sized enterprises (SMEs), helping countries achieve their climate targets and addressing social needs.

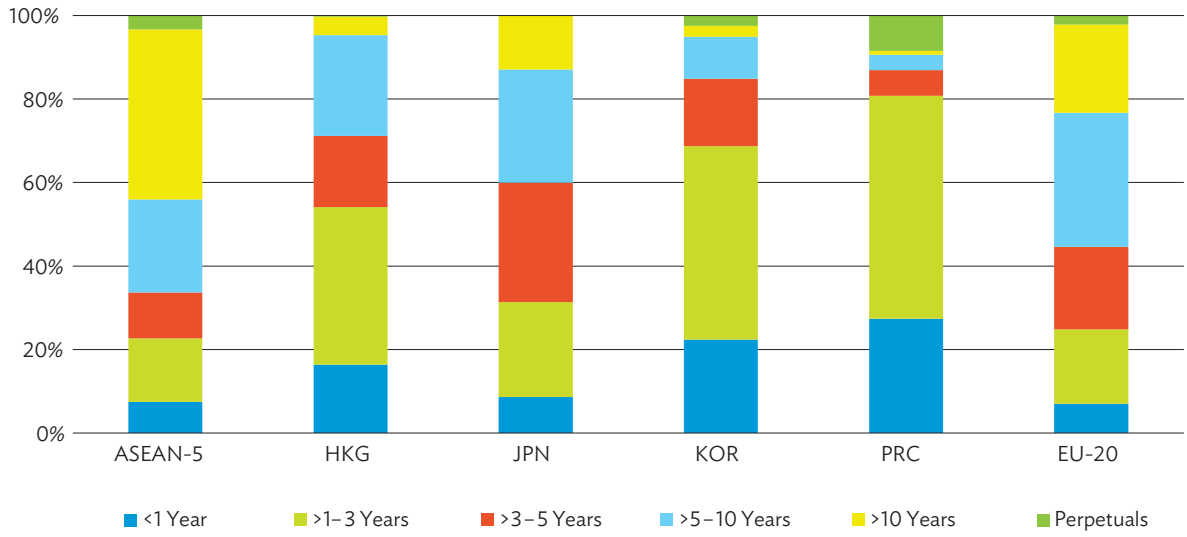
Furthermore, transitioning to a climate-resilient and environmentally sustainable pathway in the ASEAN region requires significant investment at the city and municipal levels. Municipalities are essential to the climate transition due to the combined challenges of climate change, rapid population growth, and urbanization. With their granular understanding of local needs and potential solutions, municipalities are uniquely positioned to drive the development of sustainable infrastructure and implement community-focused solutions.

Figure 4: Consolidated Sustainable Bonds Outstanding by Currency Type



FCY = foreign currency, LCY = local currency, USD = United States dollar.
Note: Data are as of the end of June 2024 and include both local currency and foreign currency issues.
Source: *AsianBondsOnline*.

Figure 5: Maturity Profiles of Green, Social, Sustainable, and Other Labeled Bonds Outstanding

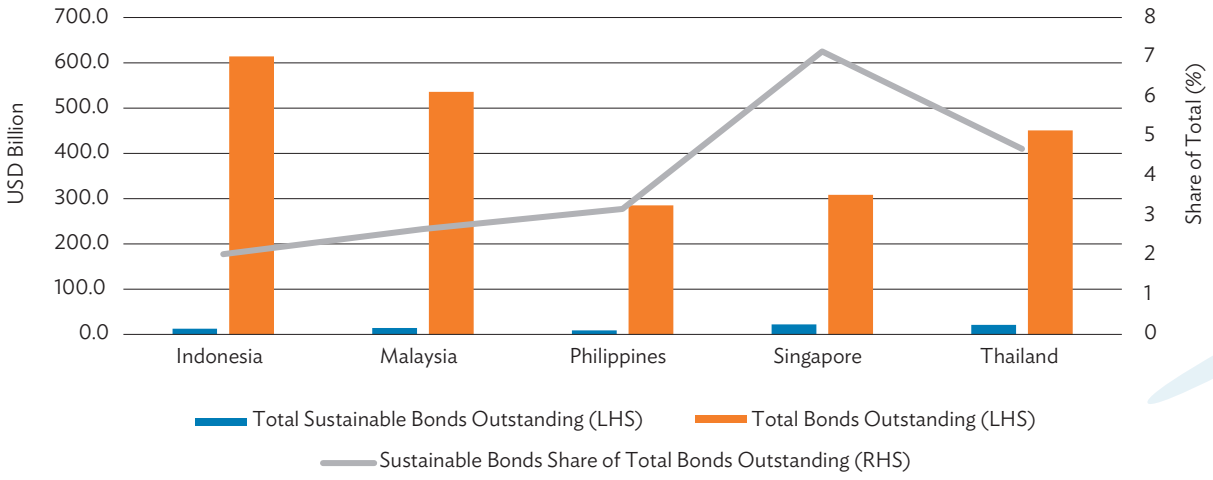


ASEAN = Association of Southeast Asian Nations; PRC = People's Republic of China; EU-20 = European Union 20; HKG = Hong Kong, China; JPN = Japan; KOR = Republic of Korea.

Notes:
1. ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
2. EU-20 includes EU member markets Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain.
3. Data include both local currency and foreign currency issues.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Figure 6: Sustainable Bonds Outstanding and Share of the Total Bond Outstanding

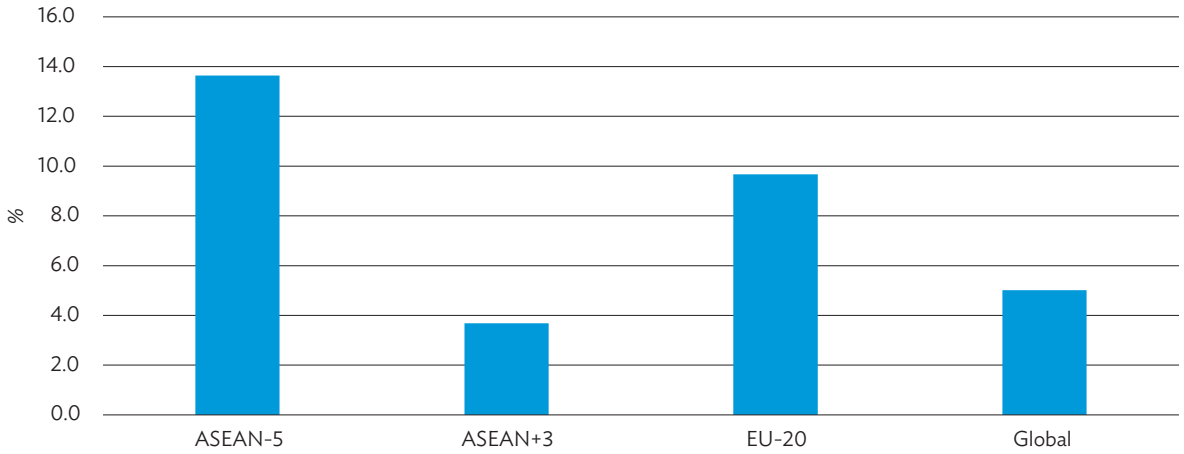


LHS = left-hand side, RHS = right-hand side, USD = United States dollar.

Note: Data are as of the end of June 2024 and include both local currency and foreign currency issues.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Figure 7: Sustainable Bond Issuance as Share of Total Bond Issuance



ASEAN = Association of Southeast Asian Nations, EU-20 = European Union 20.

Notes:

1. ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand. ASEAN+3 comprises ASEAN-5 plus the People's Republic of China, Japan, and the Republic of Korea.
2. Data include both local currency and foreign currency issues.
3. Data from January to September 2024.

Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

Greening Value Chain Program

At COP27 in 2022, Bank Negara Malaysia, in partnership with financial institutions and strategic partners, introduced the Greening Value Chain Program to assist Malaysian SMEs in transitioning to greener operations. The program provides technical guidance and on-site consulting services from participating organizations and transition financing through the Low Carbon Transition Facility.

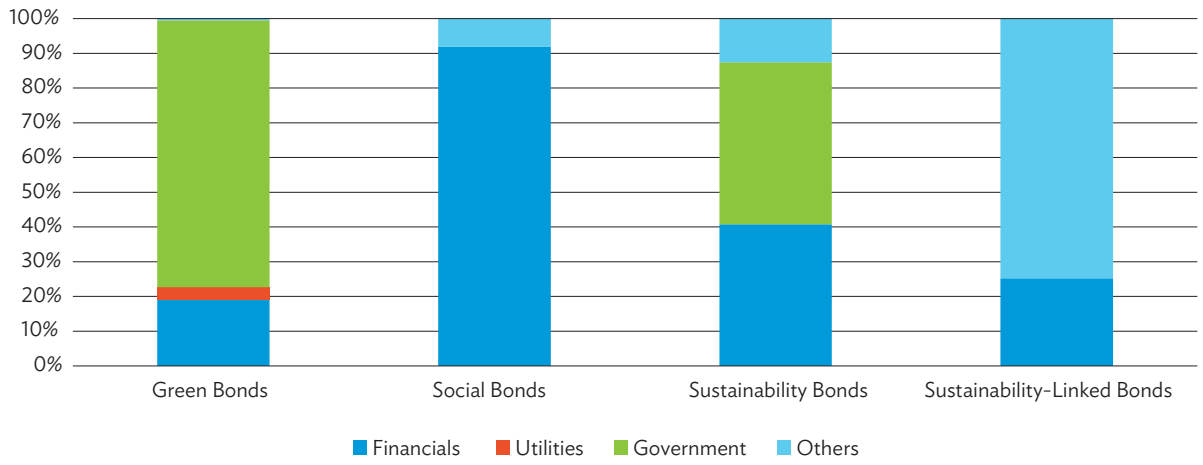
Participating SMEs will have the opportunity to measure, manage, and disclose their carbon emissions, while also accessing low-cost financing through the Low Carbon Transition Facility. Corporate buyers and banks will be able to measure, track, and manage Scope 3 greenhouse gas emissions[a] from supply chain or financed emissions, thereby preparing for environmental-related disclosure and regulations. The program will support banks in monitoring the climate performance of their sustainable financing activities and establishing credible and measurable key performance indicators for sustainability-linked financing.

SMEs = small and medium-sized enterprises.

[a] Scope 3 emissions refer to all other indirect emissions that occur in the upstream and downstream activities within an organization's value chain. These indirect emissions are not included in Scope 2, which covers indirect emissions from the generation of purchased energy, such as electricity, steam, heating, or cooling.

Source: Bank Negara Malaysia.

Figure 8: Sustainable Bond Issuance in ASEAN-5 by Industry Sector



ASEAN = Association of Southeast Asian Nations.

Notes:
1. ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
2. Data are from January to June 2024 and include both local currency and foreign currency issues.

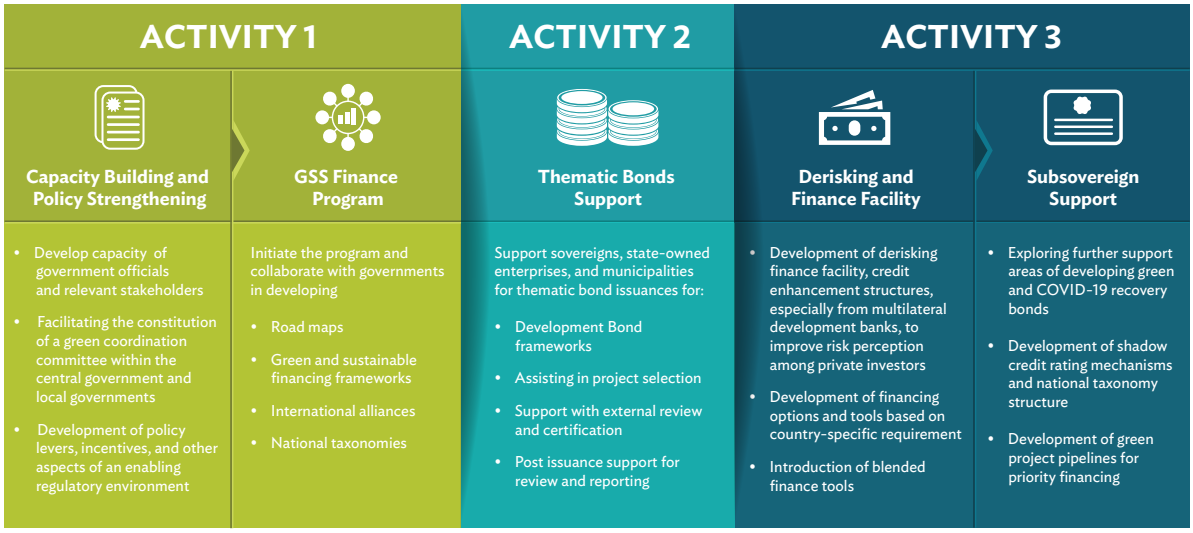
Source: *AsianBondsOnline* calculations based on Bloomberg LP data.

The Green, Social, Sustainable, and Other Labeled Bonds Initiative for Southeast Asia

To address the region's financing gaps and strengthen the role the capital market can play in catalyzing private investments in green and sustainable activities, ADB introduced the Green, Social, Sustainable, and Other Labeled (GSS+) Bonds Initiative for Southeast Asia, a program being implemented jointly by the ASEAN+3 Asian Bond Markets Initiative (through the People's Republic of China's Poverty Reduction and Regional Cooperation Fund) and the ASEAN Catalytic Green Finance Facility to catalyze GSS+ bond issuance and develop a sustainable finance ecosystem across the region (Figure 9).

Since the program's launch in 2020, the GSS+ Bonds Initiative has supported more than 15 issuers, has catalyzed more than USD3 billion in GSS+ bond issuances, and has helped issuers raise more than USD13 billion from local capital markets (Figure 10).

Figure 9: Areas of Support Under the GSS+ Bonds Initiative



COVID-19 = coronavirus disease; GSS = Green, Social, Sustainable; GSS+ = Green, Social, Sustainable, and Other Labeled.

Source: Asian Development Bank.

Figure 10: Advisory Support for Issuers Under the GSS+ Bonds Initiative[a]

ASEAN = Association of Southeast Asian Nations; CAM = Cambodia; GSS+ = Green, Social, Sustainable, and Other Labeled; INO = Indonesia, PHI = Philippines, THA = Thailand.

[a] Local currency equivalent, information as of November 2024.

Source: Asian Development Bank.

CASE STUDIES

This paper highlights several case studies supported by the GSS+ Bonds Initiative. It summarizes lessons learned for the benefit of policymakers and other interested entities in developing member countries.

CASE STUDY 1: Export–Import Bank of Thailand's Green and Blue Bonds

Thailand's development bank. Established in 1993 as a state-owned specialized financial institution supporting international trade and investment, the Export–Import Bank of Thailand (Exim Thailand) aims to become the "Sustainable Development Bank of Thailand" and foster responsible corporate management that aligns with sustainable banking principles. This objective aligns with the policies of the Ministry of Finance and the Bank of Thailand and contributes to achievement of the Sustainable Development Goals (SDGs) set by the United Nations (UN).

Aspiration to become Thailand's Green Development Bank. Exim Thailand also strives to become the country's "Green Development Bank" by applying the green development model across all of its operations. Exim Thailand aims to increase green and sustainability-themed loans to 50% of its loan portfolio by 2028, up from 35% in 2023.[5] With the support of the GSS+ Bonds Initiative, the bank issued more than THB8.5 billion (USD240 million) worth of green bonds in 2022 and 2023.[6] These bonds were sold to Thai institutional and high-net-worth investors, contributing to the development of a sustainable bond market in Thailand.

From green to blue. Exim Thailand issued the Sustainable Finance Framework Version 2 in May 2024 by expanding the use of proceeds to include blue projects, taking into consideration *Bonds to Finance the Sustainable Blue Economy*, a practitioner's guide published jointly in 2023 by ADB, International Capital Market Association, International Finance Corporation, UN Environment Programme, and UN Global Compact. On 27 June 2024, Exim Thailand issued the country's first THB-denominated blue bond to local institutional investors: a 3-year THB3 billion (USD90 million) blue bond that was oversubscribed 2.5 times. The bond's proceeds are supporting healthy oceans and a blue economy in priority sectors (e.g., hotels and marine tourism, fishing and aquaculture, and waste management), allowing Exim Thailand to play a critical role in providing financing support to clients helping the country achieve its SDGs (Table 1).

Table 1: Alignment of the Export–Import Bank of Thailand's Green and Blue Development Agenda with the United Nations Sustainable Development Goals

Eligible Category	Sample of Eligible Projects	SDG Alignment
Renewable energy	Finance or refinance projects related to development, construction, management, operation, or maintenance of renewable energy projects, including solar photovoltaic and solar thermal and onshore wind	
Energy efficiency	Finance or refinance projects related to the installation of systems or products that optimize energy performance in all buildings and factories	
Waste management and resources efficiency	Finance or refinance circular projects related to the development, construction, management, operation, or maintenance of facilities, equipment, and value chains, including reduction of air emissions and waste recycling	
Environmentally sustainable management of living natural resources and land use	Finance or refinance projects related to environmentally sustainable agriculture, animal husbandry, including climate-smart farming, forestry (including afforestation or reforestation), and natural landscape preservation or restoration	

continued on next page

[5] Export–Import Bank of Thailand (Exim Thailand). 2023. Green Wishes. News release. 20 December. Press-EXIM-Green-Wishes-T-20122023.pdf.aspx.

[6] ADB. 2022. "ADB Supports Export–Import Bank of Thailand's First Green Bond Issuance." *News from Country Offices*. 21 September. https://www.adb.org/news/adb-supports-export-import-bank-thailand-first-green-bond-issuance.

Table continued

Eligible Category	Sample of Eligible Projects	SDG Alignment
Water supply and infrastructure	Finance or refinance projects related to clean and/or drinking water infrastructure, wastewater treatment, sustainable urban drainage systems, river training, and other forms of flooding mitigation	
Clean transportation	Finance or refinance projects related to the production, installation, and operation of a clean transportation system, such as the installation of electric vehicle charging stations and the purchase of electric vehicles	
Marine renewable energy	Finance or refinance projects related to development, construction, management, operation, or maintenance of renewable energy projects, including offshore wind	
Wastewater management	Finance or refinance wastewater management, located within 100 kilometers of the coast, including the construction and improvement of wastewater treatment systems	
Sustainable fisheries, aquaculture, and marine value chain	Finance or refinance sustainable fisheries, aquaculture operations, and marine value chain projects, including ecosystem-based fisheries management and cold storage, processing and certification scheme enhancements	
Sustainable marine transportation	Finance or refinance projects related to environmental and sustainability performance improvement of marine transportation, including purchase new vessels or retrofit existing vessels that meet the technical criteria in the ASEAN or Thailand Taxonomy for Sustainable Finance	
Sustainable ports	Finance or refinance projects related to port management improvement, including construction or improvement of renewable energy systems and improvement of oil spill prevention	
Sustainable coastal and marine tourism	Finance or refinance projects located within 100 kilometers of the coast to improve environmental and sustainability management of coastal and marine tourism, including construction and operation of coastal hotels and resorts with sustainability standards	

ASEAN = Association of Southeast Asian Nations, SDG = Sustainable Development Goal.

Source: Export–Import Bank of Thailand (Exim Thailand). 2024. *Exim Thailand Sustainable Finance Framework*. Bangkok.

Impacts. As of 31 December 2023, the three tranches of its green bonds, totaling THB8.5 billion, were fully allocated to solar power projects (90%) and wind power projects (10%). Of these funds, 91.5% of the proceeds were used to refinance existing loans and 8.5% was directed toward new loan support for solar power projects. The total installed capacity was 280.73 megawatts for solar power in Japan, Malaysia, Thailand, and Viet Nam, and 32.5 megawatts for wind power in Viet Nam.[7]

[7] Exim Thailand. 2023. *Exim Thailand Sustainability Report 2022.* Bangkok.

CASE STUDY 2: Thailand's Provincial Electricity Authority's Sustainability Bond

Operator of the smart grid in provincial areas. Established in 1960, the Provincial Electricity Authority's (PEA) core business is procuring and distributing electricity to consumers across 74 provinces in Thailand, reaching all of the country's provinces, including underserved areas, except Bangkok, Nonthaburi, and Samut Prakan. The PEA procures electricity from power producers, including the Electricity Generating Authority of Thailand and very small power producers. Consistent with its overarching mandate, the PEA's strategic vision for 2024–2028 emphasizes the digitalization, modernization, and greening of the grid. Concurrently, the PEA is developing a road map to attain carbon neutrality and net zero emissions, positioning itself as the infrastructure linchpin of a low-carbon economy and championing the proliferation of renewable electricity.

Ambitions to deliver clean energy, improved access, and climate resilience. The sustainability finance framework was developed to support the PEA's commitments to provide energy access to rural areas, decarbonize its distribution network, provide solutions for greenhouse gas emissions reductions, and promote climate adaptation (Table 2). Developed in alignment with the ASEAN Taxonomy for Sustainable Finance, the

Draft Power Development Plan 2024

Released for public consultation on 12 June 2024, the Draft Power Development Plan (PDP), 2024 serves as Thailand's long-term strategic plan for electricity production. The PDP aims to achieve carbon neutrality by 2050 and net zero emissions by 2065, guided by the energy trilemma: security, economy, and sustainability. It targets an increase in renewable energy's share in the energy mix to 51% by 2037, up from the 36% target set in the PDP 2018 Revision 1.[a] Contributions will include solar, wind, biomass and biogas, waste-to-energy, hydropower, and geothermal energy sources.

[a] K. Punisa. 2024. Ministry of Energy Organizes Public Hearing on Draft PDP 2024, Increases Renewable Energy Share to 51%. Exri Asia. 12 June. https://www.exri.co.th/post/ministry-of-energy-organizes-public-hearing-on-draft-pdp-2024-increases-renewable-energy-share-to-5

Source: EPPO. 2024. public hearing document for PDP 2024 and Gas Plan 2024 (available in Thai only).

Table 2: Alignment of Provincial Electricity Authority's Sustainability Bond with the United Nations Sustainable Development Goals

Eligible Category	Sample of Eligible Projects	SDG Alignment
Green Projects		
Renewable energy	Encompass various domains, including production, transmission and distribution, appliances, and product development of renewable energy such as microgrids	7
Climate change adaptation	Enhance resilience and adaptation to climate change impacts, with a focus on sustainable energy solutions and reducing resource vulnerability such as submarine cable extensions to remote islands	3, 7, 11
Social Projects		
Affordable basic infrastructure	Enhance energy accessibility, particularly to areas without access to electricity, and elevate the quality of life for beneficiaries such as extending the electricity grid to agricultural areas and to new rural households	9

SDG = Sustainable Development Goal.

Source: Provincial Electricity Authority. 2024. *PEA Sustainable Finance Framework. Bangkok.*

framework includes the climate adaptation category in which the PEA will allocate proceeds for submarine cable extensions to support energy resilience on remote islands with the objective of increasing energy capacity and security for island systems, aiding in their adaptation to changing policies, and supporting economic growth and the well-being of residents and visitors amid climate change. A more stable electricity supply will support the operation of energy-intensive infrastructure, such as freshwater purification facilities, addressing remote islands' water crises and reducing dependency on fossil fuels for water transportation from the mainland.

CASE STUDY 3: PT Sarana Multigriya Finansial's Social Bond

Indonesia's secondary mortgage corporation. Established in 2005, PT Sarana Multigriya Finansial (PT SMF) is a wholly government-owned entity under the Ministry of Finance with the mandate of fostering the growth of a secondary housing finance market, addressing maturity mismatches, and enhancing overall housing finance capacity in Indonesia.

Social challenges in housing. The coronavirus disease (COVID-19) pandemic highlighted social issues, including housing affordability. A 2019 global survey of 200 cities revealed that 90% were unaffordable to live in.[8] In Indonesia, government statistics show that homeownership among millennials remain low, with financial constraints being a key barrier.[9] Indonesia's mortgage-loan-to-GDP ratio is about 5%, compared to 8% in India and 36% in Malaysia.[10]

One Million Home Program. PT SMF plays a crucial role in the government's One Million Home Program, launched in 2015 to promote homeownership among low-income earners. The program aims to provide affordable, livable housing, improve living standards, and generate employment. It supports housing finance initiatives such as the Housing Financing Liquidity Facility (FLPP), interest gap subsidies, and public savings housing programs. These efforts align with SDG 10 (reducing inequality) and SDG 11 (ensuring access for all to adequate, safe, and affordable housing).

Indonesia's first social bond. In December 2023, PT SMF successfully issued Indonesia's first social bond and *sukuk* (Islamic bond) for affordable housing (Table 3). PT SMF will utilize proceeds to finance or refinance social projects, particularly Affordable Housing for Low-Income Earners, which was developed under the FLPP scheme via KPR Sejahtera.[11] This was also the first social bond issued in Indonesia under the Financial Services Authority Regulation Number 18/2023 concerning the Issuance and Requirements of Sustainability-Related Bond and Sukuk, launched in October 2023. The new regulation allows Indonesian issuers to issue social, sustainability, and sustainability-linked bonds, as well as *sukuk*, to finance or refinance projects that deliver positive impacts to the environment and society.

Table 3: Alignment of PT Sarana Multigriya Finansial's Social Bond with the United Nations Sustainable Development Goals

Eligible Category	Sample of Eligible Projects	SDG Alignment
Affordable housing	Promote the affordable housing for low-income earners program developed under the FLPP scheme through KPR Sejahtera	

FLPP = Housing Financing Liquidity Facility, SDG = Sustainable Development Goal.

Source: PT Sarana Multigriya Finansial. 2023. *PT SMF Social Funding Framework. Jakarta.*

[8] World Finance—Solving the Global Housing Crisis. https://www.worldfinance.com/infrastructure-investment/solving-the-global-housing-crisis.

[9] Jakarta Globe. 2023. 81 Million Indonesian Millennials Do Not Own a House: Gov't. 13 April. https://jakartaglobe.id/lifestyle/81-million-indonesian-millennials-do-not-own-house-govt.

[10] H.T. Zuna. 2023. Indonesia Green Affordable Housing Program. Presentation at the World Bank Group's 9th Global Affordable Housing Conference in Washington, DC. 31 May. https://thedocs.worldbank.org/en/doc/fff83f483c76eef814d7488b25689a10-0430012023/related/3-HerryTZ-DGIF-3rd-session-WB-Group-s-Global-Affordable-Housing-Conference-ed-250523-final.pdf.

[11] KPR Sejahtera is a homeownership loan program through the FLPP, designed to offer decent housing, particularly to low-income earners, through executing banks. The scheme was initiated by the Ministry of Public Works and Public Housing. The FLPP provides 75% of the funds via BP Tapera, the government operator managing the FLPP funds, while the remaining 25% is supplied by the executing banks.

For these transactions, ADB supported the issuances by providing technical support on project selection, ensuring that the proposed project categories align with international and regional principles and standards, and exploring innovative solutions for sustainable financing through capital markets. Additionally, ADB worked closely with Exim Thailand, the PEA, PT SMF, and other entities supported by the GSS+ Bonds Initiative to develop the sustainable finance framework and facilitated an external review and obtained a second-party opinion.

Lessons Learned

This section highlights key lessons from ADB's experience in supporting the development of GSS+ bond markets across the ASEAN region. These insights are intended to benefit not only stakeholders within Southeast Asia but also other developing member countries. While these lessons are general, they reflect broader themes applicable across multiple issuers.

1. **Establish a clear understanding of sustainable finance and its relation to funding strategy.** The initiative for GSS+ bond issuance often originates from the senior management or treasury (finance) team of the issuer. This process involves identifying eligible project categories, creating a development pipeline, and establishing practical methodologies to monitor the allocation of funds and assess the environmental and social impacts of bond proceeds. Importantly, the bond's use of proceeds should align with the issuer's core activities or support public mission of agency issuers. A strong alignment ensures a consistent flow of deals, signaling strategic commitment to sustainability rather than treating the bond as a one-off transaction.

2. **Strengthen internal collaboration and data sharing to prepare for GSS+ issuance.** Issuing GSS+ bonds requires developing strong collaboration among relevant departments, as the proceeds from these bonds must be allocated to eligible projects and tracked with impact reporting over the lifetime of the bond. Issuing GSS+ bonds differs from issuing conventional bonds because it requires issuers to establish communication between various traditionally siloed business lines. To be effective, different groups need to share information, particularly regarding project pipelines and data on environmental and social impacts. Many GSS+ issuers comment that such internal collaboration can help the organization uncover new insights, reduce costs, and promote better transparency and corporate governance.

3. **Get creative to find the angle for green issuance even in the face of constraints.** As part of the GSS+ bond issuance process, it is important for issuers to identify existing project pipelines or future investment plans that align with relevant international or national principles, standards, and taxonomies. However, some issuers may have limitations in finding suitable projects or operate in sectors that are not typically seen as "green." In such cases, it is important to promote internal brainstorming and collaboration, as stated in the previous section. For example, the PEA has limited control over energy sources, which limits its ability to influence the clean energy mix. Investments in the transmission and distribution of electricity can be considered green if they are connected to renewable energy sources or if at least 67% of the new generation capacity in the system is green over a rolling 5-year period.[12] This further constrains the PEA's ability to raise funds through green bond issuances for network expansion, although such expansion may allow the PEA to increase the distribution of renewable energy through its network in the future.

   In this case, the PEA has chosen to align its use of proceeds with Environmental Objective 2 (climate adaptation) of the ASEAN Taxonomy for Sustainable Finance. The funds raised from the bond will be allocated to submarine cables that support climate adaptation in island areas facing water crises, which are worsened by severe weather linked to climate change and rising demand from growing populations and increased tourism. By deploying reliable electricity through submarine cables, the PEA will facilitate the development of improved facilities for freshwater desalination, purification, and distribution, helping to prevent a shortage of freshwater amid the uncertainty of precipitation patterns. These energy-intensive facilities will operate more efficiently, contributing to the

[12] According to ASEAN Taxonomy Version 3 and Thailand Taxonomy Phase 1.

alleviation of water scarcity and reducing reliance on the fossil fuels needed to transport water from the mainland.

4. **Leverage regulatory support and development bank assistance for sustainable bond issuance.** A regulatory framework to facilitate the issuance of GSS+ bonds is important to encourage their issuance. Furthermore, support from relevant regulators—either through the publication of an issuance handbook, capacity-building support, or setting a clear policy for sustainable debt capital market development—can send a strong signal to potential issuers. For example, while Indonesia was the first country in ASEAN to introduce a green bond regulation in early 2017, a regulation for social bonds and other labeled bonds was recently enacted in October 2023.[13] While the new regulation was being developed, the Indonesian Financial Services Authority and ADB worked with PT SMF to develop the social finance framework and undergo the external review process. This partnership was crucial in successfully issuing social bonds and *sukuk*, which could further stimulate the GSS+ bond market and serve as a model for other potential issuers.

5. **Consider social development impact along with green investments.** The COVID-19 pandemic, underscored the importance of addressing social issues alongside environmental ones. While green and transition finance often takes center stage, social finance, including social bonds and sustainability bonds, can strengthen an issuers social license to operate and address broader risks. For example, Central Pattana Plc., a real estate developer in Thailand, has incorporated the provision of free spaces for farmers, small businesses, and community groups as a key performance indicator in its sustainability-linked framework, emphasizing community development.

ADB's Role in Scaling GSS+ Bonds

As a development bank for Asia and the Pacific, ADB plays an important role in scaling up GSS+ bond issuance, not only in Southeast Asia but across all of its developing member countries. Through the GSS+ Bonds Initiative, ADB offers comprehensive support that includes project selection, framework development, external reviews, and capacity building and training programs for issuers and stakeholders. By replicating and sharing these lessons, ADB aims to expand the GSS+ bond market, catalyze private investment, and foster sustainable development across the region.

The Way Forward

The sustainable finance market in the ASEAN region continues to grow and evolve despite global interest rate volatility and economic uncertainty. While new financing instruments are emerging, there is a critical need to broaden the issuer base, particularly among financial institutions supporting SMEs' in their green transitions and municipalities addressing local investment needs. Financial institutions, beyond serving as financial partners, can act as sustainability knowledge partners, assisting SME clients in transitioning to greener operations while maintaining their competitiveness in global supply chains. Given Southeast Asia's vulnerability to the adverse effects of climate change, transitioning to a sustainable and resilient economy remains a regional priority.

As the "Climate Bank for Asia and the Pacific," ADB serves as a key knowledge partner by providing a range of comprehensive range of technical support to public and private sector clients issuing bonds. This support includes initial discovery and scoping thematic bond opportunities; designing and reviewing thematic bond frameworks; developing project selection and governance processes; ensuring alignment with international best practices and standards for green, social, and sustainability bonds; coordinating with external reviewers and supporting third-party certification; assisting with post-issuance reporting, including allocation and impact reporting; offering derisking and credit enhancement mechanisms; and embedding bond transactions within broader sustainable finance strategies.

ADB is also collaborating with governments and financial institutions to explore practical approaches to expand their sustainable lending portfolios, allowing them to efficiently provide funding support to clients in priority sectors that align with their mandates and the government's objectives. This includes but is not limited to the development of sustainable finance taxonomies, sustainability disclosures, and other innovative financing structures, including green finance facilities in ASEAN.

[13] Financial Services Authority Regulation Number 18/2023 concerning the Issuance and Requirements of Sustainability-Related Bond and Sukuk.

Acknowledgments

This publication was prepared by Kosintr Puongsophol, senior financial sector specialist, with support from Fonthip Yuthaseree, sustainable finance expert, Economic Research and Development Impact Department (ERDI), Asian Development Bank; Pitchaya Sirivunnabood, sustainable finance expert; and Sree Kartha, knowledge management specialist, ASEAN Catalytic Green Finance Facility. Christine Engstrom, senior director of the Finance Sector Group; Scott Roberts, head of the Southeast Asia Green Finance Hub; Satoru Yamadera, advisor to the ERDI; and Anouj Mehta, country director, Thailand Resident Mission provided guidance and technical advice for this publication.

The authors would like to acknowledge the support and inputs provided by Jason Mortimer, head of sustainable investment and fixed income and senior portfolio manager at Nomura Asset Management; Shu Tian, principal economist; and Russ Jason Lo and Roselyn Regalado, AsianBondsOnline consultants. Richard Supangan, senior economics officer; and Oth Marulou M. Gagni, senior operations assistant, served as the production coordinator. Kevin Donahue provided editorial assistance. Joseph Manglicmot did the typesetting and layout.

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Publication Stock No. ARM240616-2 pubsmarketing@adb.org
DOI: http://dx.doi.org/10.22617/ARM240616-2