SCOPING STUDY

Mobilising Private Sector Involvement in ASEAN Climate-Related Investments

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The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States of the Association are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam. The ASEAN Secretariat is based in Jakarta, Indonesia.

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The ASEAN Secretariat
Jakarta

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LIST OF ABBREVIATIONS

ACCC	ASEAN Center for Climate Change
ACGF	ASEAN Catalytic Green Finance Facility
ACMF	ASEAN Capital Markets Forum
ADB	Asian Development Bank
AFD	Agence Française de Développement
AIF	ASEAN Infrastructure Fund
AMS	ASEAN Member States
AFOLU	Agriculture, Forestry and Other Land Use
ASEAN	Association of Southeast Asian Nations
ASEAN+3	AMS and China, Japan, and the Republic of Korea
ASEAN GBS	ASEAN Green Bond Standards
ASEAN SBS	ASEAN Social Bond Standards
ASEAN SLBS	ASEAN Sustainability-linked Bond Standards
ASEAN SRFS	ASEAN Sustainable and Responsible Funds Standards
ASEAN SUS	ASEAN Sustainability Bond Standards
ASEAN Taxonomy	ASEAN Taxonomy for Sustainable Finance
ASEAN TFG	ASEAN Transition Finance Guidance
ASEC	ASEAN Secretariat
ASOEN	ASEAN Senior Officials for the Environment
ATB	ASEAN Taxonomy Board
AWGCC	ASEAN Working Group on Climate Change
BNCCP	Brunei Darussalam National Climate Change Policy
BNM	Bank Negara Malaysia
CAPEX	Capital Expenditure
CBI	Climate Bonds Initiative
CERF	The Clean Energy Revolving Fund
CGIAR	Consultative Group for International Agricultural Research
CMM	Capital Markets Malaysia
COP	Conference of the Parties
COVID-19	Coronavirus Disease 2019
DG CLIMA	Directorate-General for Climate Action
EDC	Electricite du Cambodge
EDCF	Economic Development Co-operation Fund
EFRAG	European Financial Reporting Advisory Group
EIB	European Investment Bank
E-READI	Enhanced Regional EU-ASEAN Dialogue Instrument
ESG	Environmental, Social and Governance
ETM	Energy Transition Mechanism
EU	European Union
EUGBS	European Green Bond Standard
EUTSA	EU Taxonomy for Sustainable Activities
FELICITY	Financing Energy for Low-Carbon Investment – Cities Advisory Facility

FI	Financial Institution
FiNZ	Finance for Net Zero
G20	Group of Twenty
G20 SFWG	G20 Sustainable Finance Working Group
GCD	Green Claims Directive
GCF	Green Climate Fund
GDP	Gross Domestic Product
GFANZ	Glasgow Financial Alliance for Net Zero
GHG	Greenhouse Gas
GIZ	German International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
GSS	Green, Social and Sustainability
IFI	International Finance Institution
IPSF	International Platform on Sustainable Finance
JC3	Joint Committee on Climate Change
JETP	Just Energy Transition Partnership
KfW	Kreditanstalt für Wiederaufbau
KJWA	Koronivia Joint Work on Agriculture
MAS	Monetary Authority of Singapore
MDB	Multilateral Development Bank
MoU	Memorandum of Understanding
MRV	Monitoring, reporting and verification
MW	Megawatt
NBF	Needs-based Finance
NDC	Nationally Determined Contribution
O&M	Operations and Maintenance
OECD	Organization for Economic Co-operation and Development
OJK	Otoritas Jasa Keuangan
PDR	People's Democratic Republic
PIC	Private, Commercial and Institutional
PT SMI	PT Sarana Multi Infrastruktur
RCC	Regional Collaboration Centres
SCM	Securities Commission Malaysia
SDGs	Sustainable Development Goals
SIO	SDGs Indonesia One
SME	Small and Medium-sized Enterprise
SPV	Special Purpose Vehicle
SRI	Sustainable and Responsible Investment
TCFD	Task Force on Climate-related Financial Disclosures
TFG	(ASEAN) Transition Finance Guidance
TSC	Technical Screening Criteria
UN	United Nations
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

Achieving the goals of the Paris Agreement requires private finance to be mobilised on an unprecedented scale.[1] The demand for additional green investment in the Association of Southeast Asian Nations (ASEAN) region between 2016 and 2030 has been estimated at US $ 3 trillion. Whereas the current annual flow of green finance to the region stands at US $ 40 billion, average demand will need to rise to roughly US $ 200 billion per year between 2016 and 2030.[2] Approximately 75% of current flows come from public finance and 25% from private finance, mainly in the form of commercial loans, meaning that private green finance flows will need to scale up by a factor of more than ten.[3] Moreover, in response to the combined challenges of the Coronavirus Disease 2019 (COVID-19) pandemic and climate crisis, financial flows will need to support a green and resilient recovery as well as a just transition – finance will be the key to achieving a recovery compatible with the Paris Agreement goals.[4] In the face of high upfront investment costs for green technologies, additional incentives for private actors are necessary.[5] Recent studies have indicated that private sector actors in ASEAN Member States (AMS) still face significant barriers, such as an insufficiently enabling policy environment, restricted availability of technologies and limited access to funding.[6]

At the same time, the European Union (EU) and its Member States, as well as ASEAN and its Member States (AMS), have taken progressive steps towards creating regional and national policy frameworks for promoting sustainable finance. Particular highlights include the adoption of the **EU Taxonomy for Sustainable Activities** (**EUTSA**) and the development of the **ASEAN Taxonomy for Sustainable Finance** (**ASEAN Taxonomy**)**,** both of which will serve as overarching guides and common language to identify and classify sustainable projects and economic activities in the respective regions. The development of the **European Green Bond Standard** (**EUGBS**)**,** as well as the adoption of the **ASEAN Green Bond Standards** (**ASEAN GBS**), the **ASEAN Social Bond Standards** (**ASEAN SBS**), the **ASEAN Sustainability Bond Standards** (**ASEAN SUS**), the **ASEAN Sustainability-linked Bond Standards** (**ASEAN SLBS**), the **ASEAN Sustainable and Responsible Fund Standards** (**ASEAN SRFS**)**,** and the **ASEAN Transition Finance Guidance** (**ASEAN TFG**) are further important frameworks. These efforts represent significant progress towards creating an effective framework for climate-related financial disclosures and collaborating with development finance institutions to leverage private sector finance.

In this context, the study describes and analyses the status quo and outlines future prospects for mobilising private sector involvement in ASEAN climate-related investments, both within AMS and at the ASEAN regional level. It aims to increase the private sector engagement in ASEAN climate-related finance to implement mitigation and adaptation action in line with the goals of the Paris Agreement.

The study points towards two major driving forces for sustainable finance in AMS so far, namely large, primarily international companies and the banking sector. Small and medium-sized enterprises (SMEs) are less prominent actors in the realm of sustainable finance despite their relevance for ASEAN economies. SMEs comprise 69% of employment and 41% of ASEAN's gross domestic product (GDP).[7] One of the main challenges is thus **to bring the sustainability initiatives down to smaller enterprises.** In this context, the study identifies three main clusters of challenges:

1. The study finds that **bankability and the need for economically attractive projects with attractive risk-return profiles** are the biggest challenges for private investors in scaling up climate finance flows in ASEAN.[8] Sustainable projects often have higher up-front costs than conventional alternatives and are based on relatively new technologies. Moreover, revenue streams are often influenced by broader questions of affordability and are dependent on public policies and regulations, which can increase the risk profiles of such projects, especially if coupled with more expensive technologies or financing costs.

1- Anbumozhi et al., 2020.
2- DBS and UN Environment Inquiry, 2017.
3- Ibid.
4- ASEAN Secretariat, 2021.
5- Ibid.
6- Anbumozhi et al., 2020.
7- ASEAN Taxonomy Board, 2021.
8- Questionnaire received from the Asian Development Bank.

In addition, developers often lack access to long-term capital, and exchange rate volatility hinders overseas investment.[9]

2. Another challenge identified by the study is "**greenwashing**" **and the difficulty in assessing how** "**green**" **projects and products are in practice**, particularly because of the lack of common sustainability definitions and the limited transparency on where exactly the money flows.[10] This challenge is already being addressed by the development of the ASEAN Taxonomy for Sustainable Finance, the ASEAN TFG and disclosure requirements by national authorities; but the actual adoption and compliance with the taxonomy on the ground will be crucial to its success.

3. The third larger complex of challenges identified is related to the **capacities of smaller private companies and local financial institutions in AMS**: SMEs often lack the additional resources and personnel with relevant expertise to manage sustainability-oriented projects.[11] Assessing the reliability of the sustainability performance ratings issued to projects by local financial institutions is also challenging, given that review procedures are often not transparent and the banks do not have sufficient resources and expertise to do the sustainability reviews properly.[12]

Furthermore, the study provides insights into **sectoral developments in private-sector climate finance flows**. Concerning climate change mitigation, many sustainability-related projects are already underway in the area of **energy generation**, whereas it remains more challenging to structure projects in the areas of **energy transmission and distribution**. Further, there remains a lack of projects and a strong need for investment in **infrastructure**, **agriculture, forestry and other land use** (**AFOLU**), **green mobility and buildings** and **waste management and adaptation**. The Asian Development Bank (ADB) estimates that Southeast Asia will require US $ 210 billion per year between 2016 and 2030 to support investment in climate-compatible infrastructure.[13]

Based on the research and the interviews conducted, the study makes ten recommendations to ASEAN and AMS governments to further mobilise private sector climate finance in AMS and the region for the implementation of mitigation and adaptation action in line with the goals of the Paris Agreement:

1. The challenge of the availability and bankability of climate projects can be addressed, for example, by establishing and implementing **catalysing blended finance facilities**[14] (and replicating existing facilities such as the **ASEAN Catalytic Green Finance Facility** or **ACGF**[15]) that provide technical assistance and project preparation support. Such facilities blend various funding sources, offer a range of financial instruments (public lending, commercial lending, guarantees, equities, grants) and ensure project monitoring and supervision on the ground and replicability after the donors phase out. They can successfully showcase projects across various sectors, showing they are bankable and attractive for the private sector and provide additional motivation for currency swaps through improved counterparty credit risk ratings.[16]

2. Similar to blended finance facilities, establish and implement more **de-risking funds** (an example that could be replicated is the Shandong Green Development Fund in China[17]) that provide finance for the development of numerous projects simultaneously and lower the initial risk profile of climate-friendly projects to leverage additional financing from private, institutional and commercial sources.[18] There is a need for AMS governments to better understand how to manage and implement such funds.[19]

9- Questionnaire received from the Asian Development Bank.
10- Interviews with EUROCHAM representatives in Malaysia and Indonesia.
11- Interviews with EUROCHAM representatives in Malaysia and with Sustainable Finance Institute Asia.
12- Interview with EUROCHAM representatives in Malaysia.
13- Questionnaire received from the Asian Development Bank.
14- Interview with European Investment Bank and Asian Development Bank representatives.
15- Asian Development Bank, 2023 (1).
16- Interview with European Investment Bank representatives.
17- Asian Development Bank, 2020 (3).
18- Asian Development Bank, 2020 (3).
19- Interview with Asian Development Bank representatives.

3. **Revolving funds** established by the public or private sectors are promising instruments as they provide initial capital to fund projects and can be replenished with revenues.

4. Developing **one's capacities and domestic capital markets is crucial to reducing** reliance on international donors and concessional funding in the long term.[20] **Domestic development finance institutions** (government-owned, such as such as PT Sarana Multi Infrastruktur in Indonesia) can serve as targeted financial intermediates to fund green projects and can provide an excellent platform for showcasing projects with good returns and creating portfolio investment vehicles.[21]

5. **Enabling renewable energy developers to have a "buyer of last resort"** (for example, a governmental or inter-governmental fund) that would guarantee the purchase of electricity produced from renewable sources over a more extended period at cost plus minimal investor return tariffs would be an effective stimulus for private investment.[22]

6. Initiating and developing **large-scale renewable energy projects** supported by initial funding from multilateral development banks and other donors, and based on long-term power purchase agreements, can be a bankable and attractive opportunity for the private sector.

7. **Robust long-term policy frameworks** supporting green / sustainable finance growth (such as roadmaps, action plans, green bond and loan support schemes and frameworks, etc.) raise awareness within the private sector and motivate private sector actors to invest in sustainable projects, products and services.

8. **Adopting and implementing taxonomies, disclosure regimes and transition frameworks for sustainable finance** can effectively counter greenwashing by providing a common framework and single guidance for investors, companies and financial institutions.[23] At the same time, the taxonomy needs to be proportionate to enable a just and affordable transition and not overburden smaller companies.[24]

9. **Targeted capacity development projects and programmes** (like SMART Textile & Garments was in Myanmar and the imSME platform in Malaysia run by the country's credit guarantee corporation) that offer workshops and trainings to help local financial institutions develop, benefit from and market green financial products, while additionally support local SMEs in applying for green finance, prove useful for scaling up sustainable practices.

10. Profitable climate investment opportunities for businesses need to be better marketed. This can be done by enabling enhanced social networking, raising awareness on sustainable finance topics, **educating the market and actively showcasing the profitability of sustainable technologies and practices**.[25] Emphasizing the risks of companies being pushed out of global supply chains, if they do not adopt sustainable practices, can also be a major driver for action by the private sector.[26]

20- Interview with European Investment Bank representatives.
21- Interview with Asian Development Bank representatives.
22- Interview with EUROCHAM representatives in Indonesia.
23- Interview with Sustainable Finance Institute Asia.
24- Ibid.
25- Interview with EUROCHAM representatives in Cambodia; Interview with EUROCHAM representatives in Thailand.
26- Interview with Sustainable Finance Institute Asia.

1. Introduction

1.1. Background

E-READI is a cooperation programme facilitating dialogues between the EU and ASEAN on policy areas across all three ASEAN Community pillars. It responds to the needs and priorities of ASEAN and aligns with the mutually identified EU-ASEAN priorities. On 8 July 2019, ASEAN and the EU launched the High-Level Dialogue on Environment and Climate Change to facilitate and further enhance the European Commission and ASEAN dialogue. Action lines of mutual interest to be addressed under the Climate Action Dialogue (as agreed in the Consultative Working Meeting between the EU and ASEAN Working Group for Climate Change (AWGCC) on 29 April 2019 in Jakarta, Indonesia) include, inter alia, Action Line II "Best practices on climate change finance management in the region" (Brunei Darussalam) complemented by the ongoing project of the ASEAN Climate Finance Strategy under the United Nations (UN) Framework Convention on Climate Change (UNFCCC) Needs-based Finance (NBF) Project. This study is a part of the implementation of the activities under this Action Line and also reflects the European Commission's priorities focusing on concrete EU and ASEAN sustainable finance initiatives that already exist or are in the pipeline. This study, alongside the published Technical Assessment of Climate Finance Flows and Needs in Southeast Asia (published in January 2022)[27] and the Climate Finance Guidebook for ASEAN (published in February 2023)[28] under the NBF project, compliments Core Theme 6 of the Revised AWGCC Action Plan (2019-2025) in facilitating and enhancing climate finance in the region.

1.2. Relevance

The achievement of the goals of the Paris Agreement requires an unprecedented mobilisation of private finance.[29] The demand for additional ASEAN green investment between 2016 and 2030 is estimated at US $ 3 trillion, whereas the current annual ASEAN flow of green finance supply was estimated at US $ 40 billion against an average annual demand of roughly US $ 200 billion between 2016 and 2030.[30] Approximately 75% of current flows come from public finance and 25% from private finance, mainly in the form of commercial loans, meaning that private green finance flows will need to scale up by a factor of over ten.[31] Moreover, in response to the COVID-19 pandemic and climate crisis, financial flows will need to support a green and resilient recovery as well as just transition; finance will be the key to achieving a recovery compatible with the Paris Agreement goals for adaptation and mitigation, by enabling technology development and diffusion as well as human capacity building for development and climate change interventions.[32] In the face of high upfront investment costs for green technologies, additional incentives for private actors are necessary. There are various instruments for alternative funding opportunities to support a shift in paradigm, such as the issuance of green bonds, the proceeds from which can be used for funding new projects in priority sectors.[33] Currently, private sector actors still face significant barriers such as insufficient enabling policy environment, restricted availability of technologies and access to funding.[34]

27- https://unfccc.int/documents/424106
28- https://www.undp.org/sites/g/files/zskgke326/files/2023-03/J0008_UNFCCC_NBF_ASEAN_Guidebook_FINAL_AW_digital.pdf
29- Anbumozhi et al., 2020.
30- DBS and UN Environment Inquiry, 2017.
31- Ibid.
32- ASEAN Secretariat, 2021.
33- Ibid.
34- Anbumozhi et al., 2020.

1.3. Objective

The study describes and analyses the status quo and outlines future prospects for mobilising private sector involvement in ASEAN climate-related investments – capital flows from the private sector into climate-related areas like sustainable energy and transport, green infrastructure and climate-resilient agriculture, both within AMS and at the ASEAN regional level. It aims to increase the engagement of the private sector in ASEAN climate-related finance for the implementation of priority mitigation and adaptation actions based on the needs identified by ASEAN countries in their Nationally Determined Contributions (NDC) and Long-term Low-emission Development Strategies under the Paris Agreement as well as other national climate policy documents.

1.4. Structure

Following the introductory chapter 1, the study has three main structural components. Chapter 2 has a descriptive nature and focuses on the current approaches to promote private sector climate finance in EU and ASEAN, including high-level policy frameworks for promoting sustainable finance; policy enabling instruments like taxonomies, standards and labels; climate-related financial disclosures; international Initiatives with a focus on sustainable finance as well as instruments offered by financial institutions such as bilateral and multilateral development banks. Chapter 3 takes a closer look at ASEAN, highlighting the trends and challenges of private sector engagement in ASEAN climate investments and summarising good practice examples from AMS. Finally, chapter 4 is forward-looking and outlines future prospects and opportunities for mobilising private sector climate finance in ASEAN. The study is concluded by chapter 5, which briefly summarises the identified elements for guiding stronger private sector engagement in ASEAN.

1.5. Approach and methodology

The study is based on two key methodological approaches:

1. Desk research (stocktaking and analysis of EU and ASEAN frameworks and activities to mobilise private sector climate finance; identifying market failures / challenges, the roles of public and international organisations in leveraging climate finance and potential entry points for support); and

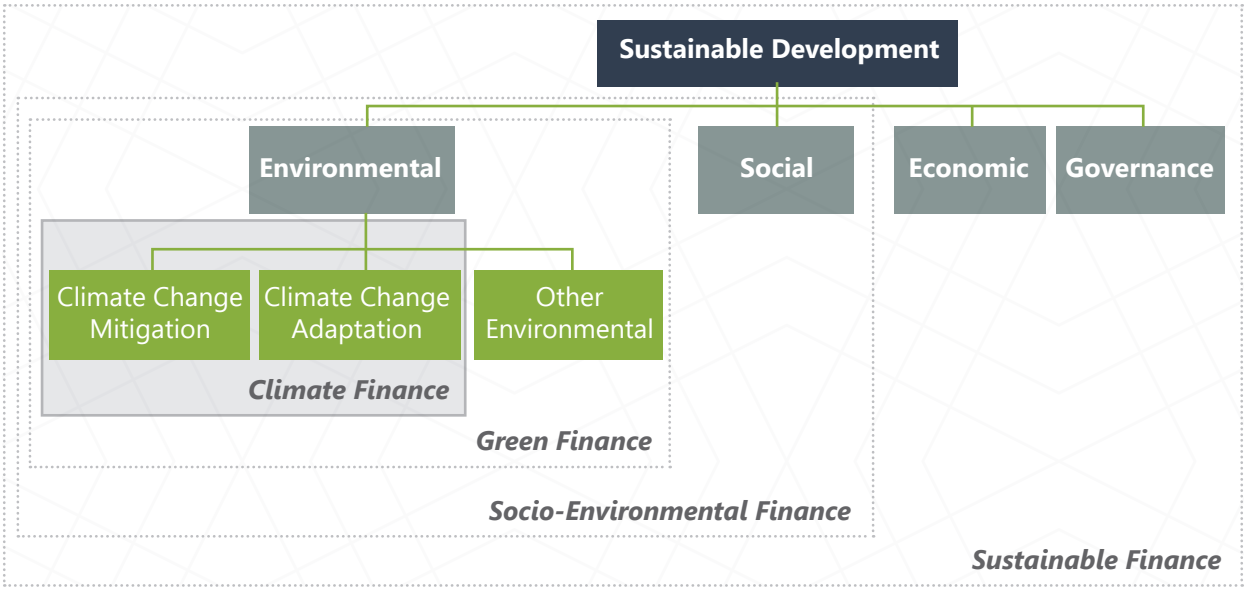
2. Conducting 12 in-depth interviews and acquiring additional written input through questionnaires circulated among the representatives of various AMS, in particular from the banking sector (ADB and European Investment Bank or EIB), business circles (members of European Chambers of Commerce in various AMS) and academia / policy consulting (Sustainable Finance Institute Asia). The interview partners intentionally excluded governmental representatives and focussed on the private sector's views, especially regarding the challenges and opportunities they see in the context of sustainable investment.

2. Current approaches to promote private sector climate finance in EU and ASEAN

2.1. Frameworks for sustainable finance in the EU and ASEAN

"Climate finance" is generally regarded as one part of broader sustainable finance flows (see overview below). The term "sustainable finance" comprises green finance (climate and environmental protection finance) as well as economic and social aspects of finance (an "ESG approach" that integrates Environmental, Social and Governance aspects).[35] Sustainable finance implies that sustainability-related issues are considered in decisions made by public- and private-sector financial market participants.[36] Both the EU and ASEAN have made progressive steps towards creating regional political frameworks for promoting sustainable finance.

Figure 1: Interrelation between climate, green and sustainable finance



Source: based on UNEP, 2016.

European Union

In March 2018, the European Commission adopted the **Action plan on sustainable finance.**[37] The plan sets out a comprehensive strategy to further connect finance with sustainability. It includes ten key actions classified into three categories: (1) Reorienting capital flows towards a more sustainable economy (in particular, by establishing the clear and detailed EUTSA, creating the EUGBS and labels for green financial products, fostering investment in sustainable projects, etc.); (2) Mainstreaming sustainability into risk management (for example, by better integrating sustainability in ratings and market research); and (3) Fostering transparency and long-termism (for instance, by strengthening sustainability disclosure and accounting rule-making and fostering sustainable corporate governance).

35- The Federal Government of Germany, 2021.
36- Ibid.
37- European Commission, 2018.

In 2019, **the European Green Deal** – a growth strategy aiming to make Europe a climate-neutral continent by 2050 – particularly emphasised the role of sustainable finance in delivering on the EU domestic and international policy objectives.[38] In 2020, as part of the Green Deal, the European Commission (Commission) presented the **European Green Deal Investment Plan**, which will mobilise at least €1 trillion of sustainable public and private investments over the next decade.[39] In the framework of the European Green Deal, the Commission also announced a **renewed sustainable finance strategy**, which aims to provide the policy tools to ensure that the financial system genuinely supports the transition of businesses towards sustainability in a context of recovery from the impact of the COVID-19 outbreak.[40]

Moreover, in 2021, the Commission also adopted a new **Strategy for financing the transition to a sustainable economy**, which proposed action in four areas: transition finance, inclusiveness, resilience and contribution of the financial system and global ambition.[41] The strategy considers extending the EU taxonomy framework and sustainable finance standards and labels to recognise transition efforts, highlights the necessity for the financial system to become more resilient to the risks posed by climate change and the steps needed to achieve this, and advocates for an international approach, including work on global convergence on standard setting, such as on taxonomy and disclosures.[42] To deliver on the enhanced 2030 EU climate and energy targets, the EU has to invest approximately €350 billion more annually during the 2021-30 decade than it did during the previous decade.[43] The EU is already putting a lot of effort into helping attract the required investments, for example, through the **European Fund for Strategic Investments** and other initiatives. The financing framework **Neighbourhood, Development and International Cooperation Instrument** – "Global Europe" for the period 2021-2027, which builds on the EU External Investment Plan, unifies grants, blending and guarantees, which will allow the EU to promote public and private investment worldwide in support of sustainable development.[44] To prevent greenwashing and strengthen investor confidence in sustainable markets, the EU proposed a Green Claims Directive (GCD) in March 2023 as part of its broader strategy to ensure credible and verifiable environmental claims. The directive seeks to regulate how businesses substantiate and communicate environmental claims, requiring them to be clear, scientifically substantiated, independently verified, and transparently disclosed. Once enacted, the GCD is expected to have significant implications for businesses exporting to the EU, as they will need to comply with stricter sustainability disclosure and verification requirements. This aligns with ASEAN's efforts under the ASEAN Taxonomy for Sustainable Finance and other regional sustainability initiatives to enhance transparency, prevent misleading and **unsubstantiated** environmental claims, and support credible and **feasible** green investments.

ASEAN

ASEAN has also undertaken important steps towards establishing a robust framework for promoting sustainable finance at the regional and AMS levels. Most importantly, ASEAN has developed a regional taxonomy for sustainable finance, which is under its 3rd version (see more details below) and the capital markets have adopted the ASEAN Capital Markets Forum's **Roadmap for ASEAN Sustainable Capital Markets** (Roadmap)[45] and the ASEAN Working Committee on Capital Market Development's **Report on Promoting Sustainable Finance in ASEAN** (Report). The Roadmap identifies four major priority areas: (1) strengthening foundations (for example, by promoting corporate sustainability and institutional investor disclosures, working on the taxonomy, etc.); (2) catalysing products and enabling access to under-served areas (for instance, sustainable fund standards, market access for sustainable products, ESG indices); (3) raising awareness and capacity building (by enhancing technical competence, promoting knowledge transfer); and (4) increasing connectivity (such as by developing a public database of sustainable projects, products and investors or coordinating efforts with the public and financial sectors)[46]. The Report has identified four pillars to promote sustainable finance in AMS capital markets: (1) policy; (2) coordination; (3) awareness and education; and (4) building demand and supply and creating a virtuous cycle; from which recommendations to drive the sustainable finance agenda have been based. Furthermore, ASEAN, with support from the UNFCCC Regional Collaboration Centres (RCC), has developed the Technical Assessment of Climate Finance in Southeast Asia, and has finalised the **ASEAN Climate Finance Mobilisation and**

38- European Commission, 2019.
39- European Commission, 2020 (2).
40- European Commission, 2020 (1).
41- European Commission, 2021 (1).
42- European Commission, 2021 (3).
43- Ibid.
44- European Commission, 2021 (2).
45- ASEAN Capital Markets Forum, 2020; Sustainable Finance Institute Asia, 2023.
46- ASEAN Capital Markets Forum, 2020.

Access Strategy.[47] The **ASEAN Comprehensive Recovery Framework**[48] and its **Implementation Plan**[49] particularly emphasise the promotion of sustainable finance as one key pillar of the COVID-19 recovery strategy. At the AMS level, there has also been significant progress in establishing policy frameworks for promoting sustainable finance. All AMS have taken steps to formalise their sustainable finance efforts by introducing policies, roadmaps or action plans (examples are included in Chapter 3).[50]

2.2. Policy enabling instruments for sustainable finance in EU and ASEAN

Under policy enabling instruments, this study includes taxonomies for sustainable activities as well as standards, labels and principles for sustainability. Such instruments are crucial for providing a common language and clear definitions of what is "sustainable" to direct investments towards sustainable projects and activities, and thus create security for investors, protect private investors from greenwashing, help companies to become more climate-friendly, mitigate market fragmentation and help shift investments where they are most needed.[51]

Taxonomies

Taxonomies (or classification systems for sustainable activities) provide frameworks for identifying sustainable investments and eligible sectors for making such investments. In particular, the **EUTSA** (comprising the Taxonomy Regulation[52] published in 2020 and related implementing and delegated acts published in 2021, 2022 and 2023) aims to provide companies, investors and policymakers with appropriate common definitions for which economic activities can be considered environmentally sustainable.[53] The Taxonomy Regulation establishes a general framework that is being further refined by adopting delegated acts specifying the technical criteria for an economic activity to be included in the taxonomy. The taxonomy defines technical screening criteria for economic activities with regard to six environmental objectives (climate change mitigation and adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems).[54]

The **first delegated acts on sustainable activities for climate change adaptation and mitigation objectives, as well as on disclosure obligations,** were approved in April and December 2021 and formally adopted for scrutiny by the co-legislators shortly afterwards.[55] In parallel, the Commission launched in-depth work to assess whether nuclear energy should be included in the EU taxonomy. In March 2022, the Commission adopted the Complementary Climate Delegated Act, which included, under strict conditions, specific nuclear and gas energy activities in the list of economic activities covered by the EU taxonomy. The publication has been accompanied by a broad public debate about whether the criteria for these activities align with EU climate and environmental objectives and help accelerate the shift from solid or liquid fossil fuels, including coal, towards a climate-neutral future. In April 2023, the EU Commission launched a draft of a new set of EU taxonomy criteria for economic activities on the remaining four non-climate environmental objectives, namely: (a) sustainable use and protection of water and marine resources, (b) transition to a circular economy, (c) pollution prevention and control and (d) protection and restoration of biodiversity and ecosystems. This Environmental Delegated Act was officially adopted in June 2023.

ASEAN has also been working on common "green" definitions since 2016, and the Joint Statement of the 7th ASEAN Finance Ministers and Central Bank Governors Meeting announced that an initiative has been set up to develop the **ASEAN Taxonomy** which serves as an overarching guide and common language used to identify and classify sustainable projects and economic activities in ASEAN.[56] The ASEAN Taxonomy Board (ATB) is a dedicated body formed under the auspices of the ASEAN Finance Ministers and Central Bank

47- UNFCCC Secretariat, 2019; UNFCCC Secretariat, 2022.
48- ASEAN Secretariat, 2020 (1).
49- ASEAN Secretariat, 2020 (2).
50- ASEAN Working Committee on Capital Market Development, 2020.
51- European Commission, 2023 (2).
52- Regulation (EU) 2020/852 of June 18, 2020.
53- European Commission, 2023 (2); (3)
54- Regulation (EU) 2020/852 of June 18, 2020.
55- European Commission, 2023 (2).
56- ASEAN Secretariat, 2021; Interview with Sustainable Finance Institute Asia.

Governors Meeting in March 2021 to develop, maintain and promote an ASEAN Taxonomy that meets the needs of ASEAN. This includes fostering an orderly transition towards a low-carbon and environmentally sustainable future. Given the various economic structures and stages of development across the region, which result in different starting points and pathways, there is a need for a taxonomy that is customised to ASEAN's context to serve as a common reference on green and transition activities throughout the region and facilitate investments and financing for ASEAN's sustainability agenda.[57] The ASEAN Taxonomy initial version 3 was released in February 2024 and is currently undergoing a stakeholder consultation process. It is expected that further versions will be released in the future.[58]

The environmental objectives of the ASEAN Taxonomy include climate change mitigation and adaptation, the protection of healthy ecosystems and biodiversity, the promotion of resource resilience, and the transition to a circular economy.[59] In conjunction with the UNFCCC Conference of the Parties (COP) 26, the first milestone in this work was presented, namely the first version of the ASEAN Taxonomy, which laid out the Foundation Framework and Plus Standard for stakeholder consultation.[60] The second and third versions of the ASEAN Taxonomy were released by the ATB in March 2023 and February 2024, respectively, and include further important elements (i.e. the EU taxonomy and other international taxonomies where relevant) for a holistic and powerful taxonomy to enable an orderly and just transition towards sustainable finance adoption in ASEAN countries.[61] Building on the first version, the second version took a multi-level approach to definitions and criteria, allowing for different levels of adoption based on individual readiness to facilitate AMS involvement.[62] The more generalised, principles-based "Foundation Framework" methodology was expanded and completed in version 2 to include developed and ready-for-rollout guiding questions, decision trees and use cases covering all environmental objectives and essential criteria to classify economic activities according to a traffic light system.[63] Version 2 underscored the importance of social aspects by including them as a third essential criterion in the ASEAN Taxonomy, alongside "Do No Significant Harm" and "Remedial Measures to Transition".[64] In addition, in version 2 under the more specific "Plus Standard" methodology, a set of Technical Screening Criteria (TSC) was developed for the energy sector (electricity, gas, steam and air conditioning supply). In version 3, TSCs for two more focus sectors (transportation & storage and construction & real estate) are being developed. In future versions of the ASEAN Taxonomy, additional sectors will be added.

Standards and labels

Standards and labels provide a basis for evaluating a project's social and environmental impacts while enabling investors to select and screen out projects with unacceptable impacts.[65] In July 2021, the European Commission proposed a Regulation on a voluntary **EUGBS** to demonstrate how companies and public authorities can use green bonds to raise funds on capital markets to finance investments, while meeting sustainability requirements and protecting investors from greenwashing. On 28 February 2023, the co-legislators reached a provisional agreement after inter-institutional negotiations. On 22 November 2023, it was confirmed by the Council and the European Parliament. The standard foresees that all the funds raised by EU Green Bonds must be invested in economic activities that comply with the EU taxonomy, provided that the sectors concerned are already covered by it. In sectors not yet covered by the EU taxonomy regulation and for certain specific activities, issuers of bonds will have a flexibility pocket of 15%.[66]

The ASEAN Capital Markets Forum (ACMF), a high-level grouping of capital market regulators from all ten AMS,[67] launched the **ASEAN GBS** in 2017, and both the **ASEAN SBS** and the **ASEAN SUS** were established in 2018.[68] Furthermore, the **ASEAN SLBS** and the **ASEAN SRFS** were both launched in 2022. In addition, the **ASEAN TFG** version 1 was issued on 17 October 2023. All the standards are based on the International Capital Market Association's corresponding principles and guidelines and aim to provide more specific guidance for their consistent application across ASEAN. The standards foster greater transparency and consistency across ASEAN for sustainable issuances and reduce due diligence costs for investors.[69]

57- Sustainable Finance Institute Asia, 2023.
58- ASEAN Taxonomy Board, 2021; 2023; 2024.
59- ASEAN Taxonomy Board, 2021.
60- Ibid.
61- ASEAN Taxonomy Board, 2023 2024.
62- Ibid.
63- Ibid.
64- ASEAN Taxonomy Board, 2023.
65- Interview with Asian Development Bank representatives.
66- European Parliament, 2023.
67- ACMF was established in 2004 under the auspices of the ASEAN Finance Ministers. The primary responsibility of the ACMF is to develop a deep, liquid and integrated regional capital market.
68- ASEAN Capital Markets Forum, 2020.
69- ASEAN Working Committee on Capital Market Development, 2020.

ASEAN's green, social and sustainability issuance has been growing since 2016. The ASEAN issuance of green, social and sustainable bonds, as well as green and sustainability-linked loans (loans being the majority of sustainable financing structures), reached US $ 128.8 billion as of the end of 2022. As of July 2024, the overall ASEAN cumulative issuance of green, social, sustainability and sustainability-linked bonds stood at US $ 50.4 billion. Of this amount, green bonds represented 25%, social bonds represented 5%, and sustainability bonds were the majority at 70% (see figure below for more information).[70] Over the whole sustainable finance landscape, as well as in the dominant green loans and sustainability-linked loans market spaces, Thailand was the largest issuance country in ASEAN, followed by the Philippines and Malaysia. Indonesia was the region's largest cumulative green bond / Islamic "sukuk" issuer. If "sukuk" issuers are excluded, Singapore was the largest green bond issuer, according to the CBI 2022 report. Most of the ASEAN green bond proceeds have been used for green buildings and energy. The private sector notably drove issuance from ASEAN in 2022. Despite a 32% decrease in 2022 from a very strong 2021, corporates dominated the green bond market in the region. Among them, non-financial corporates were the most active issuer type. Building and energy project categories dominated the regional green loan market, accounting for almost 80% of allocations.

Figure 2: ASEAN green, social and sustainability issuance

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).

Source: Climate Bonds Initiative, 2022

70- Climate Bonds Initiative, 2023.

Some AMS (Malaysia and Singapore) have introduced various incentive mechanisms (such as tax deductions and exemptions, grant schemes, etc.) for green bond issuances.[71] In 2020, the public authorities of the ASEAN+3 and the (ADB introduced a technical assistance programme to create the framework for green local currency bonds for infrastructure development in ASEAN+3. One of the objectives is to promote the use of the ASEAN+3 Multi-Currency Bond Issuance Framework, a common regional bond issuance programme that allows the issuing of bonds in multiple jurisdictions through universal procedures.[72] The ASEAN TFG is also working to smooth sustainable finance transitioning.

2.3. Climate-related financial disclosures

Transparency and disclosure are crucial for investors' confidence, including the private sector.[73] At the global level, various initiatives and international organisations contribute to the development and increased alignment of ESG disclosure measures, such as the Financial Stability Board, the International Sustainability Standards Board, the International Organisation of Securities Commissions, the International Financial Reporting Standards Foundation, the TCFD, the Network of Central Banks and Supervisors for Greening the Financial System or – at the EU level – the European Financial Reporting Advisory Group.[74]

In 2021, the EU Commission adopted a proposal for a **Corporate Sustainability Reporting Directive**. It came into force on 5 January 2023 and modernises and strengthens the existing requirements for reporting on social and environmental information. Almost 50,000 companies will now be subject to sustainability reporting requirements (all large companies and all listed small and medium-sized enterprises (SMEs). The new regulations apply in fiscal year 2024 for reports published in 2025.[75] In 2019, the European Commission published **guidelines on reporting climate-related information**. They are not mandatory, and companies may decide to use international, European or national guidelines according to their own characteristics or business environment.[76] Moreover, the European Financial Reporting Advisory Group (EFRAG) developed the **EU Sustainability Reporting Standards**. EFRAG submitted the first draft to the European Commission on 22 November 2022.[77] EU bodies and Member States were consulted on the draft standards before adopting the final standards as delegated acts on 31 July 2023. To avoid a disproportional burden on SMEs, simplified reporting standards will be developed for them, and they are given a minimum of two additional years before the regulations become effective.[78] The EU also has a specific Regulation 2019/2088 on **sustainability-related disclosures in the financial services sector** in place.[79]

In ASEAN, there are requirements for sustainability reporting and disclosure in **more than half of the AMS**. However, reporting and disclosure standards and frameworks used in AMS are not unified across ASEAN.[80] To provide some examples, in Indonesia Regulation NO. 51/POJK.03/2017 requires issuers of a public offering to report on multiple sustainability aspects. Furthermore, limited liability companies that utilise or impact natural resources are required to disclose environmental and social issues. There are special obligations for state-owned enterprises and corporate governance guidelines. In Singapore, the Singapore Exchange listing rules require disclosure from listed companies on ESG matters on a "comply or explain" basis. Climate-related disclosures are mandatory for listed companies operating in certain high climate-risk industries. Furthermore, there are guidelines in place for financial institutions to report on environmental risk management and proposed guidelines on transition plans. There are plans to mandate climate-related disclosures for listed companies and large non-listed companies, including financial institutions.[81] Similarly, in Malaysia, all banks, insurers and "takaful" operators are mandated to adopt TCFD-aligned disclosures starting in 2024, while the same requirements apply to publicly-listed companies in 2025.

71- International Platform on Sustainable Finance, 2020.
72- Ibid.
73- ASEAN Working Committee on Capital Market Development (2020).
74- International Platform on Sustainable Finance, 2021.
75- Ibid.
76- European Commission, 2023 (1).
77- EFRAG, 2022.
78- International Platform on Sustainable Finance, 2021.
79- Ibid.
80- ASEAN Working Committee on Capital Market Development (2020).
81- International Platform on Sustainable Finance, 2021.

2.4. International initiatives

The **International Platform on Sustainable Finance** (**IPSF**) was launched in 2019 by the European Union, Argentina, Canada, Chile, China, India, Kenya and Morocco. Currently, the platform has 19 members, including Australia, the Hong Kong Special Administrative Region of the People's Republic of China, Indonesia, Japan, Malaysia, New Zealand, Norway, Senegal, Singapore, Switzerland and the United Kingdom. The ultimate objective of the IPSF is to scale up the mobilisation of private capital towards environmentally sustainable investments. IPSF facilitates international cooperation in developing globally comparable and interoperable sustainability approaches and tools to identify, verify and align investments with sustainability goals, including definitions and taxonomies. For example, in 2023, the work of the IPSF particularly focused on three policy areas – social finance, transition finance and comparison of taxonomies.[82]

In 2021, the G20 Sustainable Finance Working Group (SFWG) was mandated by G20 Finance Ministers and Central Bank Governors to develop, in a collaborative manner, an initial evidence-based and climate-focused **G20 Sustainable Finance Roadmap**, improving sustainability reporting, identifying sustainable investments and aligning international financial institutions' efforts with the Paris Agreement.[83] The SFWG publishes annual reports summarising the work of the SFWG and knowledge partners during each year and reporting on the progress of the SFWG and other G20 working groups as well as other international working groups in implementing the roadmap priorities and actions to accelerate Sustainable Development Goals (SDG) driven finance.[84]

The **Glasgow Financial Alliance for Net Zero** (**GFANZ**)[85] was founded during the COP 26 Climate Conference in Glasgow in 2021 by UN Special Envoy on Climate Action and Finance (Mark Carney) and the COP26 presidency, in partnership with the UNFCCC "Race to Zero" campaign. Its objective is to coordinate efforts across all sectors of the financial system to accelerate the transition to a net-zero global economy. So far, eight independent net-zero financial alliances are part of the global coalition offering them a collaboration platform. The currently more than 550 alliance members in more than 50 countries include banks, insurers, asset owners, asset managers, financial service providers and investment consultants. GFANZ's work currently focuses on developing net-zero transition plans, mobilising capital for emerging markets and developing economies, and driving public policies that support, incentivise, and enable the net-zero transition. During COP 28 in Dubai, GFANZ and the **Voluntary Carbon Markets Integrity Initiative** committed to working with businesses and other stakeholders to grow high-integrity demand in voluntary carbon markets.

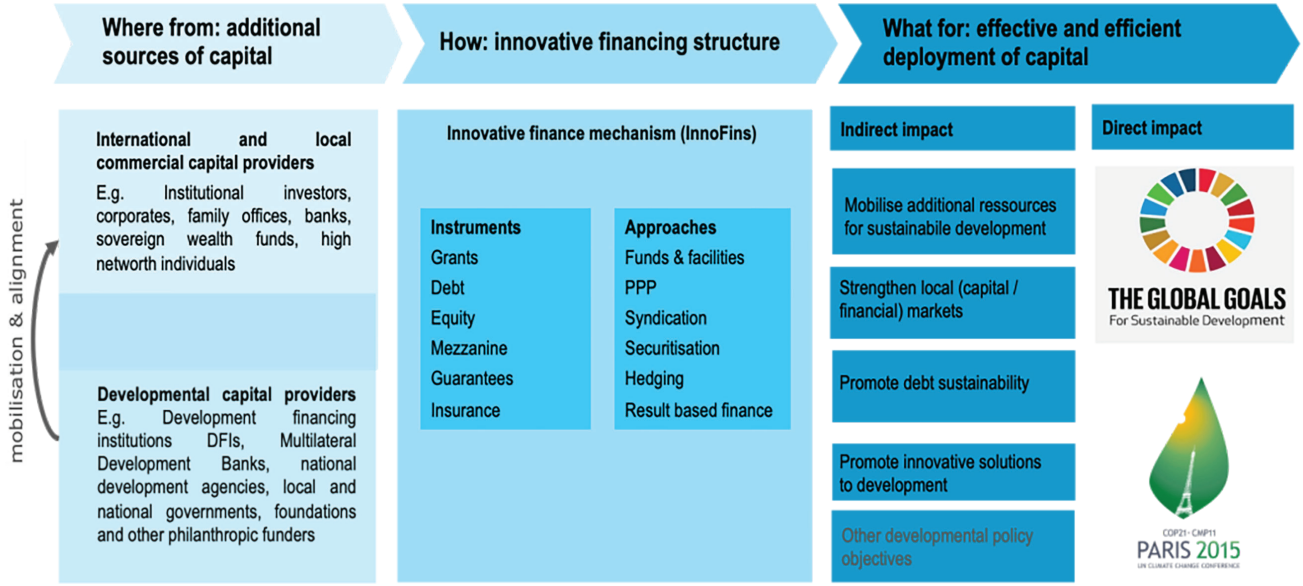
Climate Bonds Initiative (**CBI**)[86] is an international non-profit organisation working to mobilise global capital for climate action. To do so, the initiative has developed a certification scheme for sustainable debt under the Climate Bonds Standard, provides regular green bond data and market analysis for global fund managers and almost all green bond indices, gives advice on green capital markets development and advocates for ambitious changes in the financial industry. In addition, CBI provides technical assistance for the development of taxonomies.

2.5. Instruments offered by financial institutions

Bilateral, multilateral development banks and other development finance institutions active in the EU and ASEAN (ADB, EIB, KfW Development Bank (KfW), Agence Française de Développement (AFD), etc.) have developed **broad portfolios of financial instruments** to mobilise additional private capital, cover the political and economic risks private investors often face, facilitate private investments by improving framework conditions and increase the attractiveness of projects for private investors.[87] In addition to "traditional" financing instruments offered in development interventions, a lot of attention in recent years has been put on the deployment of **innovative financing solutions** (see examples of the latter in the overview below), comprising both new mechanisms and approaches, and the replication and upscaling of existing successful innovations that help to mobilise additional private finance and deploy capital more effectively and efficiently.[88]

82- European Commission, 2023 (5).
83- G20 Sustainable Finance Working Group, 2023.
84- G20 Sustainable Finance Working Group, 2021.
85- Glasgow Financial Alliance for Net Zero, 2023.
86- Climate Bonds Initiative, 2023.
87- KfW Development Bank, 2020.
88- Ibid.

Figure 3: Innovative finance instruments



Source: KfW Development Bank, 2020

The EU approach towards leveraging international financial flows to incentivise climate-resilient and low-carbon investments in developing countries is twofold, comprising the provision of grant funding directly to the poorest and most vulnerable countries, and using grant funding to mobilise private investment by combining grants with loans and equity from public and private sources, including bilateral and multilateral development banks.[89] For example, the EU and its Member States have established several **regional and, more recently, thematic investment facilities**.[90] Blending is the combination of EU grants with loans or equity from public and private financiers. EU grants can take different forms, including investment grants and interest rate subsidies, technical assistance, risk capital and guarantees.[91]

Table 1: Examples of funds and facilities supported by EU development banks

The InsuResilience Solutions Fund is one of the implementing programmes of the InsuResilience Global Partnership. The fund is a project development facility established by KfW on behalf of the German Federal Ministry for Economic Cooperation and Development. It aims to support innovative solutions to mitigate the negative impacts of extreme weather events linked to climate change (such as floods, storms and droughts). The fund provides grant-based co-funding to partnerships consisting of public and/or private organisations, thereby supporting the development of innovative, needs-based, and financially sustainable climate risk insurance products in developing countries, and thereby increasing local populations' resilience against extreme weather events.	Financing Energy for Low-Carbon Investment–Cities Advisory Facility (FELICITY) is a project preparation facility to advise cities on the preparation, funding and implementation of green investment projects. The facility, commissioned by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, is a cooperation project between German International Cooperation (GIZ) and EIB. The facility helps to prepare mitigation projects in cities that are eligible for EIB funding by supporting the pre-selection of projects, the development of their technical, financial and economic feasibility, the tendering processes and management of environmental and social risks. It also promotes capacities and resources for project preparation. In addition, FELICITY facilitates access to funding in local administrations and from any financial intermediaries such as development banks and government actors. Activities are implemented in Brazil, Indonesia, Ecuador and Mexico.

Sources: KfW Development Bank, 2020; GIZ 2021

89- European Commission, 2023 (4).
90- European Investment Bank, 2023.
91- European Union, 2016.

The **ACGF** is a regional green finance vehicle under the ASEAN Infrastructure Fund (AIF) owned by all AMS and the ADB that was established to support governments in Southeast Asia to prepare and finance infrastructure projects that promote environmental sustainability and contribute to climate goals.[92] In particular, the facility provides:

- support for the origination of project pipelines;
- policy support and capacity building for green and innovative finance approaches;
- project financial structuring support to create bankable projects; and
- an innovative use of concessional funds to de-risk projects.[93]

In contrast to a single project, ACGF facilitates the development of a portfolio of projects with common criteria and themes, as well as efficiency in financing administration, decreasing both the cost of capital and the cost of projects.[94] Major benefits of the facility include the fact that it helps to identify and structure projects, finds the sources of funding for the projects and has specific indicators for mobilising private capital and green indicators that need to be fulfilled by the projects. It also provides technical assistance and helps develop governmental enabling policies like taxonomies.[95]

The facility offers a two-step pricing approach, with lower interest rates for the initial period of the project and higher rates afterwards. Blended concessional funding from various funders (concessional lenders, philanthropy organisations, etc.) is used. ACGF activities benefit from financial and in-kind contributions from: AFD, Cassa Depositi e Prestiti, EIB, EU, Green Climate Fund (GCF), Government of the Republic of Korea (Economic Development Co-operation Fund) and e-Asia and Knowledge Partnership Fund), KfW, Government of the United Kingdom (Foreign Commonwealth and Development Office), CBI, Global Green Growth Initiative, Infrastructure Asia and the Organisation for Economic Co-operation and Development. Altogether, the ACGF provides ASEAN countries access to nearly US $ 3 billion in financing from AIF and co-financing partners. At COP 26 in Glasgow, ACGF launched a Green Recovery Platform that aims to mobilise an additional US $ 7 billion for low-carbon and climate-resilient infrastructure projects in Southeast Asia.[96]

About 30 green infrastructure projects are already in the ACGF pipeline. Investment Principles and Eligibility Criteria, developed jointly by ACGF, the EU and EIB, include the principles and criteria that guide the selection of projects to be supported by the facility and inter alia a taxonomy of eligible sectors and green indicators for setting targets, such as a reduction in greenhouse gas (GHG) emissions and other environmental indicators.[97]

92- Asian Development Bank, 2021 (1).
93- Questionnaire received from the Asian Development Bank.
94- Questionnaire received from the Asian Development Bank; Interview with Asian Development Bank representatives.
95- Interview with Asian Development Bank representatives.
96- Asian Development Bank, 2021 (2).
97- Asian Development Bank, 2020 (2).

3. Trends, challenges and good practice examples of private sector engagement in ASEAN climate investments

The information summarised in this chapter was collected through questionnaires and in-depth interviews with the members of the European Chambers of Commerce in various ASEAN Member States who expressed their interest in participating in the survey on mobilising private sector climate finance in ASEAN. Additionally, interviews were conducted with the ADB, the EIB, and the Sustainable Finance Institute Asia representatives.

3.1. Current trends in private sector climate finance in ASEAN

The private sector is not a homogenous group but consists of different types of private entities with different capacities and climate finance readiness. Those include, for example, small-scale local companies, entrepreneurs and farmers; larger companies, including those active in multiple countries; private associations, cooperatives and multipliers; financial institutions such as banks and investors; and insurance companies.[98]

The interviews emphasise two major driving forces for sustainable finance in AMS so far – large corporates (primarily international companies) and the banking sector, whereas SMEs are less prominent actors in the realm of sustainable finance so far despite their relevance for ASEAN economies:

- Currently, the sustainable finance agenda in AMS is mainly driven by large corporates.[99] Currently, mostly larger companies have capacities to participate in sustainability discussions. Furthermore, international companies must mostly adhere to their headquarters' (global) policy to reduce GHG emissions and thus need to adopt more sustainable practices.[100] For example, many large businesses are willing to install renewable energy.[101] The interviews also demonstrate that commercial and policy-oriented banks are increasingly interested in sustainability topics.[102]

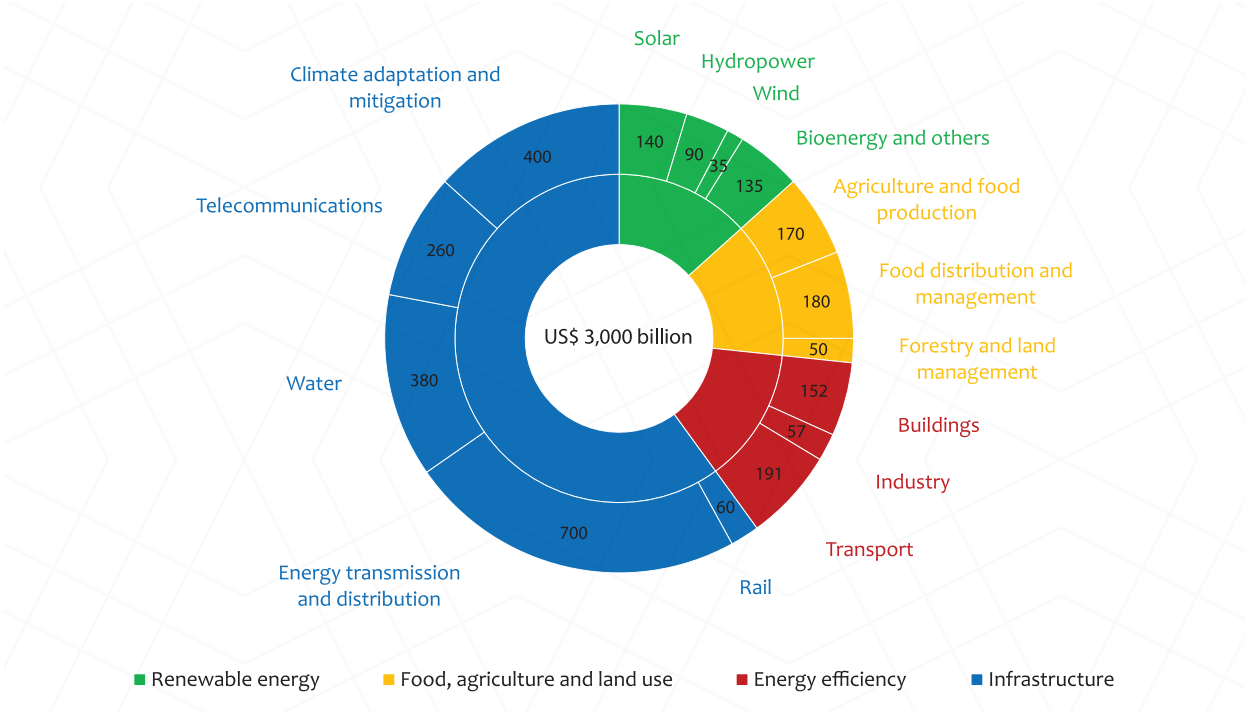
- On the contrary, small and medium-sized enterprises (SMEs) have limited capacities, time and expertise to drive the sustainability agenda forward.[103] Notably, **SMEs are the backbone of the ASEAN economy, making up 69% of employment and 41% of GDP in ASEAN**.[104] Thus, the main challenge is bringing sustainability initiatives down to start-ups and small enterprises.[105]

Concerning **the sectoral financial investment needs**, the Development Bank of Singapore and the UN Environment Inquiry estimated that the demand for additional ASEAN green investment from 2016 to 2030 is US $ 3 trillion (see graph below), spread across **four sectors: infrastructure (US $ 1,800 billion), renewable energy (US $ 400 billion), energy efficiency (US $ 400 billion) and AFOLU (US $ 400 billion)**.[106] This distribution suggests a stronger focus on mitigation than on adaptation as a priority of green investment. Compared to other AMS, Indonesia will require the largest volume of green finance.

98- Cochu et al., 2019.
99- Interview with EUROCHAM representatives in Thailand.
100- Interview with EUROCHAM representatives in Myanmar.
101- Interview with EUROCHAM representatives in Indonesia.
102- Interview with European Investment Bank representatives.
103- Interview with EUROCHAM representatives in Cambodia.
104- ASEAN Taxonomy Board, 2021.
105- Interview with EUROCHAM representatives in Singapore.
106- DBS and UN Environment Inquiry, 2017.

Substantial investment opportunities also exist in Thailand and Viet Nam. The current annual ASEAN flow of green finance supply was estimated at **US $ 40 billion against an average annual demand of roughly US $ 200 billion between 2016 and 2030**. This implies the need for total annual green finance to increase by 400% to meet ASEAN green investment opportunities by 2030. Approximately 75% of the current flows come from public finance and 25% from private finance, largely in the form of commercial loans, whereas in the future, the share of private finance is expected to increase to 60%. This will require private green finance flows to scale up by a factor of over ten.[107]

Figure 4: ASEAN green finance opportunities 2016-2030 – sectoral breakdown (US $ billion)



Source: DBS and UN Environment Inquiry, 2017

At the same time, interviews indicate that renewable energy is currently the key sector in AMS, where climate and sustainable finance streams from the private sector are directed. But also, the waste sector and AFOLU increasingly attract private sector financial flows:

- **Renewable energy** production, distribution and transmission are the main financial focus of the private sector, with solar being the key sub-sector (in particular, solar rooftops for commercial and industrial consumers, onshore and offshore wind utility, renewable energy with battery storage systems – at utility scale and for commercial and industrial buildings and captive mini solar & wind for on-site consumption);[108]
- Another attractive sector for investments is the **waste sector** (waste in industry, waste-to-energy incineration plants and biogas from waste);[109] the private sector is increasingly interested in supporting sustainability-related municipal programmes (e.g. piloting innovative small-scale projects in waste management, recycling and reduction of plastics);[110]
- In the **AFOLU sector**, areas currently most interesting to the private sector include monitoring deforestation, sustainable forest management and stress-tolerant varieties of seeds (maize, rice) – tolerating drought, increased salinity, flooding and smart farming technologies.[111]

107- DBS and UN Environment Inquiry, 2017.
108- Interviews with EUROCHAM representatives in Cambodia, Indonesia, Malaysia, Myanmar, Thailand; and with European Investment Bank representatives; Questionnaire received from EUROCHAM in Viet Nam.
109- Interview with EUROCHAM representatives in Cambodia, Thailand and European Investment Bank representatives.
110- Interview with European Investment Bank representatives.
111- Interview with EUROCHAM representatives in Thailand; Interview with EUROCHAM representatives in Cambodia; Report from the ASEAN Climate Resilience Network.

- **Other sectors and areas** where sustainable finance is already flowing include energy efficiency, cleaner production, more efficient use of resources, efficient productivity, sustainability services (such as insurance), protection against climate and natural hazards, air quality / haze, smart cities (including air quality monitoring, noise protection, etc.), green buildings, construction, infrastructure, real estate, urbanisation ways, banking sector, research & development and innovative technology (low-carbon technologies).[112]

Southeast Asia, including the ten AMS, East Timor, and Papua New Guinea, is one of the most at-risk regions in the world regarding climate change. Six of the twenty countries in the world most vulnerable to climate change worldwide are Indonesia, Thailand, Myanmar, Malaysia, Viet Nam and the Philippines. Geographical and demographic factors, as well as dependence on the agricultural sector, natural resources, and forestry for growth, make the region a hot spot for climate change.[113] **At the same time, the interviews have not particularly emphasised increased financial flows from the private sector towards addressing adaptation needs.** This indicates a potential need for additional action to mobilise private sector finance for adaptation purposes.

During the interviews, the following aspects have particularly been highlighted related to the state of play and trends in mobilising climate and sustainable private sector finance in AMS to date:

- Whereas domestic resource mobilisation, for example, through tax revenues, is very challenging in many AMS, **raising money in capital markets (green, social and sustainability (GSS) bonds issuance)** is becoming a much more effective way to leverage finance. GSS issuance has grown significantly between 2019 and 2024, but from the global perspective, ASEAN still remains a small market (23% of global issuance in 2020) with a much larger potential to be realised.[114] The green bond market has the biggest potential for middle and upper-middle countries in the region, such as Indonesia, Malaysia, Philippines and Thailand.[115] At the same time, renewable energy projects implemented in AMS are often not big enough to go to the bond market. Additionally, most investors prefer loans because there are a lot more criteria to fulfil for bonds.[116]

- The bond market in ASEAN is more developed than the **stock (equity) market**.[117] However, equity funds are increasingly playing a more important role. In lower-income AMS like Myanmar, the pick-up of equity funding has slowed because family businesses remain the main economic structure. However, the understanding of equity funding has been increasing in recent years.[118] Lower-income AMS are still at the setup stage of their financial systems, with banking services being nascent. The culture of borrowing is underdeveloped because of the dominant use of own funds by family businesses.[119]

- The developments around the **taxonomy for sustainable activities are rather new**, and SMEs may face more difficulties adopting it than larger / international companies. It is, therefore, vital not to make the rules too complicated for compliance, given the fact that the current focus is on growth, especially in the context of the recent COVID-19 burden.[120]

Sustainability reporting in many AMS is still mainly at the infant stage, but the trend is towards increased reporting:

- The reporting process is starting, largely driven by big companies (for example, reporting on GHG emissions) such as big plantations or international companies that need to comply with the policy of their headquarters or follow corporate social responsibility objectives.[121]

112- Interview with EUROCHAM representatives in Cambodia; Interview with EUROCHAM representatives in Singapore; Interview with EUROCHAM representatives in Thailand; Interview with European Investment Bank representatives.
113- British Chamber of Commerce Singapore, 2021.
114- Climate Bonds Initiative, 2021; Interview with Asian Development Bank representatives.
115- Interview with European Investment Bank representatives.
116- Interview with EUROCHAM representatives in Malaysia.
117- Interview with EUROCHAM representatives in Singapore.
118- Interview with EUROCHAM representatives in Myanmar.
119- Ibid.
120- Interview with EUROCHAM representatives in Singapore.
121- Interview with EUROCHAM representatives in Indonesia; Interview with EUROCHAM representatives in Malaysia.

- Still, sustainability reporting is largely voluntary for the private sector with few exceptions (for example, the obligation of financial institutions to publish their sustainability plans – non-quantified sustainability reporting, including incoming taxonomy regulations).[122]

- The compliance with existing sustainability regulations (for example, energy audits) is evaluated as insufficient, largely because of weak enforcement procedures, limited verification as well as limited expertise of the private sector.[123]

Private Sector Climate Finance in ASEAN – Sectoral Insights

Example of climate finance in the AFOLU sector[124]

Climate finance provided to the AFOLU sector is predominantly concessional and developmental, meaning that it has more generous terms than market ones, and is primarily aimed at economic development (89 %). Climate finance flows to other sectors rely less on this financing type (71 %), which might indicate that they are more capable of attracting diverse types of climate finance flows that are not concessional and not primarily developmental.

Despite calls for diversification, Development Assistance Committee members are still the main providers of climate finance. So far, the **allocations from the private sector have been marginal** and were mainly directed to global and regional projects.

2010 marked the first year of reported allocations to climate change adaptation in the AFOLU sector globally. There was an overall decrease in allocations to mitigation in the AFOLU sector (allocations to climate mitigation were dominant only in Europe) and a strong preference to allocate to projects with a cross-cutting objective. In the assessed period, Asia attracted more diverse types of financial flows (including non-concessional and from multilateral development banks or MDB) compared to other regions. Loans were the dominant financial instrument for climate finance allocations in the AFOLU sector in Asia as opposed to grants in Africa.

An example of a multi-country proposal that will produce agriculture investment plans to attract private sector financing and partnership is the **agriculture sector's readiness for enhanced climate finance and implementing Koronivia Joint Work on Agriculture (KJWA) priorities in Southeast Asia.** Six AMS submitted this proposal to the Readiness Fund of the GCF to prepare the agriculture sector for engaging with climate finance and the private sector. The proposal was approved with a US $ 2.7 million budget and an end date of January 2026. Its mission statement reads as follows:

***IF** Southeast Asian countries have agriculture development plans reflecting KJWA regional priorities and are consistent with national climate change policy frameworks, **THEN** they can effectively attract necessary investments that will scale up identified climate-smart practices **BECAUSE** countries will be better positioned to coordinate with the GCF and other climate finance mechanisms to access funds with improved investment plans and pipelines of proposals.*

Guided by climate scenarios, the project produces agriculture investment roadmaps and packages to target public and private sector financing.

122- Interview with EUROCHAM representatives in Indonesia; Interview with EUROCHAM representatives in Malaysia.
123- Interview with EUROCHAM representatives in Indonesia; Interview with EUROCHAM representatives in Malaysia.
124- FAO, 2021.

3.2. Challenges for sustainable investments in ASEAN

General challenges that were most commonly referred to in the interviews are related to the availability and bankability of green projects as well as the remaining absence of common definitions related to climate and green projects and products:

- The region's biggest challenge is the **lack of green and bankable project pipelines**.[125] Project development is difficult; getting power purchase agreements signed is time-consuming, and implementing projects is complicated.[126] While sustainability-related goals and aspirations of the governments often already exist, concrete **implementation** (creating favourable conditions) is not happening.[127] This challenge is starting to be addressed, for example, by the establishment and implementation of **blended finance facilities such as ACGF that, at the same time, provide technical assistance and project preparation support**.

- **Greenwashing and difficulty in assessing how "green" projects and products are in practice:** Ensuring that green projects and products are really green is challenging. Common sustainability definitions are lacking.[128] Regarding green bonds and sukuk, verifying the assets is currently a major challenge (limited transparency of where exactly the money flows). Another example is the lack of a sustainability guarantee for green electricity (it is unclear from which sources exactly the electricity comes).[129] This challenge is already being addressed by the **ASEAN TSF,** but major success factors will be the actual adoption and compliance with the taxonomy on the ground.

The table below contains a more detailed overview of the challenges identified in the interviews.

Table 2: Challenges for sustainable investments in ASEAN

Type	Challenges
Economic / financial	· **Bankability / lack of economically attractive projects** remains one of the biggest challenges for private investors to enable the scale up of climate finance flows.[130] Greater private investment in the region is hindered by a **lack of commercially bankable projects with attractive risk-return profiles**. The main reasons for that are: Projects often entail **higher up-front costs than conventional alternatives** and are based on **technologies which are relatively new** to many ministries and regulators. **Revenue streams**, especially for utilities, are often influenced by broader questions of affordability and are dependent on public policies and regulations. This can **increase the risk profiles** of such projects, especially if coupled with more expensive technologies or financing costs. Project developers **lack access to long-term capital** and **exchange rate volatility** hinders overseas investment.[131] · Still missing **financial attractiveness and economic feasibility of renewable energy technologies** as a related issue.[132] · Renewable energy price is not guaranteed and not favourable for producers. **Without external guarantees**, it is not possible to secure project funding.[133] · Incorporating green targets to be met in infrastructure projects are most often **perceived as additional costs** as compared to a business-as-usual project in at least three ways: (i) through requiring more advanced technology; (ii) through requiring optimisation (during implementation) of the scarcest natural resources; and (iii) through better management quality and systems to attain, monitor and report on green targets. At the same time, the context of most infrastructure projects in developing countries precludes major increases in end user tariffs and are **limited by local affordability considerations**.[134]

125- Interview with Asian Development Bank representatives.
126- Interview with EUROCHAM representatives in Indonesia.
127- Ibid.
128- Interviews with EUROCHAM representatives in Malaysia and Indonesia.
129- Interview with EUROCHAM representatives in Indonesia.
130- Ibid.
131- Interview with Asian Development Bank representatives.
132- Interview with EUROCHAM representatives in Cambodia.
133- Interview with EUROCHAM representatives in Indonesia.
134- Questionnaire received from the Asian Development Bank.

Type	Challenges
	· **Difficulty to assess project risks** is another challenge.[135] **Perceived degree of risk** of projects is sometimes even a bigger challenge than the actual risk level.[136] · The lack of experience of many public sector authorities has meant **an inability to structure sophisticated life cycle-based financial models for green projects with leveraged financing plans** (aimed at catalysing finance from private or institutional investors, or risk-adjusted returns and end user demands) from which revenue calculations and refinancing plans could be reasonably based.[137] · Local bank finance dominates the market and is characterised by **high costs and disadvantageous terms to borrowers**.[138]
Capacity-related	· **Capacities of private companies:** Private sector companies need knowledgeable personnel to manage sustainability-oriented projects, which is often lacking.[139] Requirements for projects to be aligned with taxonomies or other sustainability frameworks or standards often lead to limited appetite of the private sector to engage in the preparation and implementation of such projects.[140]SMEs are not well-equipped for sustainable investments due to the lack of resources.[141] · **Capacities of financial institutions:** Normally, projects are reviewed by local financial institutions who need to also rate their sustainability aspects. This is challenging because the review procedures are often not transparent, and the banks do not have sufficient resources and expertise to do the sustainability review properly.[142]
Policy-related / regulatory	· Investments in renewable energy are slowed down due to the **control over the grid by the grid operators** as well as the remaining prevalence of coal, gas and large hydro in the grid.[143] Electricity authorities in some cases do not or only very restrictedly allow renewables to feed into a grid, and there exist limitations on solar-produced energy set by the energy utility.[144] The electricity utility, if it is a monopolistic power purchasing company, is responsible for contracts with renewable energy providers, which are often possible only on unfavourable conditions including "capacity charges" for power producers.[145] The offtake of renewables is often difficult because of the imperfect **design and functioning of the tariff systems**: The systems of bidding are often associated with complicated processes, and the implementation is very slow.[146] · **Renewable energy targets** in some AMS need to be clearer formulated to give a strong political signal for private investment.[150] **Uncertain political environmen**t, where stability and assurance of a continued green growth agenda might be absent.[151] Subsidies and tariff settings continue to **favour environment-unfriendly practices** (for instance, subsidies for coal producers).[152] Certain sectors or sub-sectors are still not sufficiently regulated and much-needed reforms have been blocked, preventing legally-binding regulations sending clear signals to industries, consumers and financial markets. **State-owned institutions continue to dominate** e.g. the infrastructure sector, making the entrance of other actors into the market difficult. In other cases, such entry is prevented by **regulatory barriers limiting the scope and type** of instruments or projects to invest in.[153]

135- Interview with EUROCHAM representatives in Malaysia.
136- Interview with European Investment Bank representatives.
137- Questionnaire received from the Asian Development Bank.
138- Questionnaire received from EUROCHAM in Viet Nam.
139- Interview with EUROCHAM representatives in Malaysia.
140- Interview with European Investment Bank representatives.
141- Interview with Sustainable Finance Institute Asia.
142- Interview with EUROCHAM representatives in Malaysia.
143- Ibid.
144- Interview with EUROCHAM representatives in Cambodia.
145- Interview with EUROCHAM representatives in Indonesia.
146- Interview with EUROCHAM representatives in Malaysia.
147- Ibid.
148- Ibid.
149- Questionnaire received from the Asian Development Bank.
150- Interview with EUROCHAM representatives in Thailand.
151- Questionnaire received from the Asian Development Bank.
152- Interview with EUROCHAM representatives in Indonesia.
153- Questionnaire received from the Asian Development Bank.

Type	Challenges
Technology-related	· Green technologies mostly need to **come from abroad – limited knowledge of technologies; limited technical expertise.**[154] · Green projects are often not easily structured and require much scrutiny and coordination. This can also lead to a more challenging execution. Deployment of green technology in the early stages of development requires **more thorough assessment and qualification**.[155]
Legal	· Availability of **land space to acquire** for renewable energy production, **high costs of land acquisition** and the **slow pace of land acquisition** processes; slow social and environmental clearances.[156] Licensing and land clearance processes are too complex, timescales can extend immensely and gate-keepers can block approval.[157] Green large-scale projects (hydro, water treatment plants) – question of land ownership and land concession (less a problem in Lao People's Democratic Republic (PDR), Cambodia).[158] · Specific cases in some AMS: standard clean energy power purchase agreement **blocks any non-recourse project finance by international banks**. Only local banks will lend against the local power purchase agreement but the cost of capital to the developer is therefore much higher.[159] · Regulative system is restrictive: In some AMS, **no loans will be granted without collateral**, meaning in practice very restricted ways for SMEs to get finance (however, for newly established green companies no collateral requirement). [160]
Other	· **Limited awareness and understanding:** In the public discourse, the topic of climate finance is not really present, although awareness at the governmental / policy level is already there.[162] There is a need for simplification of information for banks and private companies. Furthermore, there is a lack of understanding of the costs of finance, the basics of business processes, no proper bookkeeping within smaller companies and difficulty of calculating the costs of production. Companies hesitate to take loans, and clients are averse to go to banks (for example, perception that banks will steal the business idea). [162] · **Pre-completion period risk:** The construction period and the initial first three years of operations are often considered the riskiest investment period for private finance, associated with delays and uncertainties. With often unclear technical baselines used for setting green targets e.g. linked to performance payments, this risk would likely be amplified in a green infrastructure project.[163] · **A lack of exit routes:** Without a highly liquid capital market and efficient tax structures, institutional investors are constrained to invest in green projects where the ability to exit is lacking.[164] · **Currency fluctuations** are a challenge (most investments are made in local currencies).[165]

154- Interview with EUROCHAM representatives in Malaysia.
155- Questionnaire received from the Asian Development Bank.
156- Interview with EUROCHAM representatives in Indonesia; Interview with EUROCHAM representatives in Malaysia; Questionnaire received from the Asian Development Bank.
157- Questionnaire received from EUROCHAM in Viet Nam.
158- Interview with European Investment Bank representatives.
159- Questionnaire received from EUROCHAM in Viet Nam.
160- Interview with EUROCHAM representatives in Myanmar.
161- Interview with EUROCHAM representatives in Thailand; Interview with Sustainable Finance Institute Asia.
162- Interview with EUROCHAM representatives in Myanmar.
163- Interview with Asian Development Bank representatives.
164- Ibid.
165- Interview with Sustainable Finance Institute Asia.

3.3. Good practice from AMS[166]

Based on the interview outcomes and the information for individual AMS below, the following factors have proven to be successful for mobilising private sector climate finance in AMS

- Large-scale renewable energy projects (solar, wind) supported by initial funding from MDBs and other donors and based on long-term power purchase agreements are bankable and attractive for the private sector to invest in;
- Revolving funds are promising instruments as they provide initial capital to fund projects while the revenues can be used to replenish the fund;
- National de-risking funds (like SDG Indonesia One or SIO) also prove to be successful instruments;
- Robust long-term policy frameworks supporting sustainable and green finance growth (such as sustainable finance roadmaps, national-level taxonomies, green bond and loan support schemes and frameworks, etc.) raise awareness within the private sector and motivate private sector actors to invest in sustainable projects, products and services;
- A dedicated domestic financial institution (such as PT Sarana Multi Infrastruktur (PT SMI) in Indonesia) in charge of supporting the development of green projects and offering other kinds of financial and technical support to the private sector can make a difference in mobilising private sector climate finance; and
- Targeted capacity development projects and programmes (like SMART Textile & Garments was in Myanmar and imSME platforms in Malaysia run by the country's credit guarantee corporation) that offer workshops and trainings to help representatives of local financial institutions to develop, benefit from and market green financial products and local SMEs to apply for green loans prove useful for scaling up successful sustainable practices.

Good practice examples from AMS:

Brunei Darussalam

Brunei Darussalam's **fintech ecosystem** has seen significant progress over the past few years, driven by supportive government initiatives, rising demand for digital financial services and the impact of the COVID-19 pandemic.[167] The country has identified fintech as a key driver in increasing the financial sector's contribution to GDP, from 5.6% in 2020 to 8% by 2035. The establishment of the **Fintech Regulatory Sandbox** in 2017 allowed qualified fintech companies to trial their products within set boundaries. The pandemic's containment and policy support measures have led to an increase in digital payment and e-commerce platforms, resulting in the development of new digital financial products. Fintech can enhance financial development in Brunei Darussalam by driving innovative financial solutions, promoting financial inclusion, and reducing operation and transaction costs. Financial institutions and fintech start-ups in the country can expand the scope and scale of their financial services to a broader range of customers, particularly among the digitally savvy and unbanked population.

166- The good practice list included in the paper is not exhaustive. The paper focuses on several good practice examples particularly highlighted during the interviews. The paper does not include good practice examples from Lao PDR (no respondents from the European Chamber of Commerce in Lao PDR replied to the survey) and Brunei Darussalam (no European Chamber of Commerce in the country).

167- ASEAN+3 Macroeconomic Research Office (AMRO), 2022.

Deputy Minister of Finance and Economy, Dato Seri Paduka Haji Khairuddin bin Haji Abdul Hamid, says that **green fintechs** could transform Brunei's economy and society to be more inclusive, resilient and sustainable.[168] The Deputy Minister states that fintech has the potential to address the pain points in developing green finance, such as the requirement of real-time data, complex risk assessment, documentation and trustworthiness of the "greenness" of projects or investments. One strategic area Brunei is working on is to encourage the development of financing for electric vehicles to incentivise purchase and increase the total share of electric vehicles.[169]

The Brunei Darussalam National Climate Change Policy (BNCCP) was published by the Brunei Darussalam Climate Change Secretariat in 2020 to pave low-carbon and climate-resilient pathways for a sustainable nation. The BNCCP contains six mitigation strategies: reducing emissions from industries, expanding forest coverage, promoting the adoption of electric vehicles, increasing the share of renewable energy in the energy mix, power management and waste management.

The Economic Blueprint for Brunei Darussalam, published by the Ministry of Finance and Economy in 2020, outlines the policy direction for developing the country's economy to be dynamic and sustainable. The Economic Blueprint includes aspirations to develop a blue and green economy while reducing the country's carbon footprint.

During Brunei Darussalam's 2021 ASEAN Chairmanship, it was agreed to establish the ASEAN Center for Climate Change (ACCC) with its headquarters in Brunei Darussalam. At present, seven AMS have signed off on the establishment, with one AMS still in the signing process and two AMS undertaking their national processes. The ACCC will facilitate regional cooperation and coordination on climate change initiatives amongst AMS with relevant national governments as well as regional and international organisations.

Cambodia

The **100 Megawatt (MW) National Solar Park** in Kampong Chhnang Province in Cambodia is structured as a public-private partnership, where Electricite du Cambodge (EDC), Cambodia's national electricity utility, provides the land and transmission access, while the private sector provides power generation capacity based on a long-term power purchase agreement with EDC.[170] The project is a good example of a blended finance approach combining a loan component, climate finance funds (concessional loan and grant) and the mobilisation of private sector capital. The project helped increase private sector investment in solar photovoltaics by demonstrating the ability of large-scale solar parks to improve the electricity supply and their bankability (the lowest bid of US $ 0.04/kWh for a solar project in Southeast Asia was obtained).[171]

The **Clean Energy Revolving Fund (CERF)** programme is a successful example of a revolving fund. CERF provides uncollateralised loans to small agricultural farms in Cambodia for switching to cleaner forms of energy technologies and has already provided 15 loans amounting to US $ 10,000 – 15,000 per loan.[172] The **SME Bank of Cambodia**, launched in 2020, provides better access to financing in order to assist local SMEs (to solve the problem of SMEs not being able to afford the rates or not having collateral for commercial banks). The bank is able to get access to financing at a cheaper cost as it is supported by the Government of Cambodia and other global institutions such as ADB or the World Bank.[173]

168- Borneo Bulletin, 2022.
169- Brunei EV, 2021.
170- Asian Development Bank, 2019.
171- Asian Development Bank, 2021.
172- Ibid.
173- SME Bank of Cambodia, 2023.

Indonesia

The **Indonesian Financial Services Authority (Otoritas Jasa Keuangan or OJK) published the Sustainable Finance Roadmap for Indonesia** in 2014. Phase I of implementing the Sustainable Finance Roadmap (2015 – 2019) focused on enhancing awareness and capacity-building as well as laying out the regulatory foundation for financial institutions. Currently, Phase II (2021-2025) of the Roadmap focuses on creating a comprehensive sustainable finance ecosystem that involves all related parties and promotes cooperation at various levels.[174] Indonesia is currently developing its **green taxonomy**, called the **Indonesian Taxonomy for Sustainable Finance,** with the latest version released on 20 February 2024, and adopted the **Green Bond and Green Sukuk Framework**.[175] Green- and Islamic-labelled sovereign bonds have so far led the development of the green bond market in Indonesia.[176]

Indonesia is also a successful example of a country that has built a domestic governance infrastructure to promote sustainable finance. **PT SMI** is a special financial institution under Indonesia's Ministry of Finance and an accredited member of the GCF. It supports green projects mostly through public-private partnership schemes. It also issues green bonds.[177] The **Sustainable Development Goals Indonesia One or SIO,** under PT SMI, is a multi-sectoral blended finance facility with four pillars: development facility, de-risking facility, financing facility and equity fund.[178] The first pillar encourages the preparation of infrastructure projects at the national and regional levels. The second pillar aims to increase infrastructure projects' bankability to increase the private sector's participation. The third pillar stimulates infrastructure development and participation from commercial banks or private investors. The fourth pillar provides an opportunity for private investors to participate in infrastructure projects. The equity fund can strengthen the capital capacity for new greenfield projects and help recycle assets for already operating brownfield projects.[179]

PT Indonesia Infrastructure Finance is a private non-bank financial institution established under the Indonesian government's Ministry of Finance in cooperation with the World Bank, ADB and other multilateral agencies. It focuses on commercially viable infrastructure projects to advance private sector participation. Its financial instruments include senior loans, mezzanine finance, equity investments and guarantees.[180]

Lao People's Democratic Republic

In September 2022, the **Bank of Lao PDR** signed a memorandum of understanding (MoU) with the **International Finance Corporation** (the largest global development institution focusing on the private sector in emerging markets) to increase funding for climate-friendly projects in the country.[181] The partnership aims to create a **green finance market** which will support Lao PDR's climate goals of achieving net zero emissions by 2050, mitigating the impacts of climate change and promoting carbon-neutral growth. Lao PDR's NDC 2021 estimates that the country will need approximately US $ 4.7 billion in financing by 2030 to address climate change impacts.[182] Given public budget constraints, it is expected that the financing will come mainly from the private sector. The MoU is designed to establish a **green finance policy framework** to enable the country's financial institutions to develop green finance products, create an enabling environment for financing climate-smart businesses and promote **private sector participation in the nation's climate agenda**. The partnership will begin with a market readiness assessment to identify market opportunities for green financing products and to improve the enabling environment for green finance through a development roadmap, regulations and guidelines.

174- Financial Services Authority (Otoritas Jasa Keuangan, OJK), Indonesia, 2020.
175- Financial Services Authority (Otoritas Jasa Keuangan, OJK), Indonesia, 2020; UNDP, 2020.
176- Climate Bonds Initiative, 2021.
177- Asian Development Bank, 2021.
178- Interview with European Investment Bank representatives.
179- PT Sarana Multi Infrastruktur (Persero), 2023.
180- Questionnaire received from the Asian Development Bank.
181- International Finance Corporation, 2022.
182- Lao People´s Democratic Republic, 2021.

Malaysia

Sustainable and responsible investment (SRI) is an important growth area for the Malaysian capital market, given the role that the capital market can play in mobilising private sector investments for sustainability purposes. One of the earliest SRI initiatives was the introduction of the SRI Sukuk Framework in 2014, which aimed to facilitate green, social and sustainability projects. As of 31 December 2022, US $ 4.29 billion (RM 18.92 billion) SRI Sukuk was issued cumulatively since the introduction of the SRI Sukuk Framework in 2014, including the world's first green sukuk issued for renewable energy projects. Out of the total SRI Sukuk issuances, US $ 3.76 billion (RM 16.58 billion) were dually recognised under both the SRI Sukuk Framework and the ASEAN Green, Social and Sustainability Standards. In 2019, the Securities Commission Malaysia (SCM) released the **SRI Roadmap for the Malaysian Capital Market** to create a facilitative, sustainable and responsible investment ecosystem and define the role of the capital market in driving Malaysia's sustainable development. SCM also issued the national **Principles-Based SRI Taxonomy for the Malaysian Capital Market** in December 2022 to provide more clarity and guidance to the capital market participants on aligning economic activities with environmental, social and sustainability objectives. In facilitating Malaysia's needs to transition, a wider financing range that could not be met through the issuances of green, social and sustainability sukuk and bonds is needed. The **SRI-linked Sukuk Framework** was introduced to facilitate such financing needs in June 2022.

Efforts continue to increase the growth of SRI fund management. In February 2023, the **Guidelines on SRI Funds** were revised to enhance disclosure and reporting requirements for SRI funds and facilitate SRI funds to qualify as an ASEAN SRFS. Moreover, the SCM introduced the **SRI Guide for Private Markets** in December 2023, which aims to provide voluntary guidance to venture capital management corporations, private equity management corporations, equity crowdfunding and peer-to-peer financing platform operators on incorporating sustainability considerations in their investment and due diligence processes. The SCM also established the **NaviGate: Capital Market Green Financing Series** in 2021, a capacity-building programme to create greater awareness and connectivity between green companies and the capital market in Malaysia.

The **Malaysian Sustainable Finance Initiative** was established by Capital Markets Malaysia (CMM), an affiliate of the SCM, to support the Malaysian financial sector and provide the necessary impetus for industry stakeholders to facilitate capacity building, upskilling, awareness and thought leadership on sustainable finance.[183] To support SMEs in their sustainability journey, CMM has also introduced the **Simplified ESG Disclosure Guide** (**SEDG**) **for SMEs in Supply Chain** in October 2023 to support SMEs in their adoption of sustainability by providing necessary guidance on a simple and standard set of disclosures to track and report on ESG disclosures. As an implementation example, through the Credit Guarantee Corporation of Malaysia's **imSME** platform[184], capacity building in ESG and sustainable finance is provided to SMEs.

Bank Negara Malaysia (BNM) published Malaysia's national climate-focused sustainability taxonomy for the financial sector, the **Climate Change and Principle-based Taxonomy**, in April 2021.[185] It sets guiding principles and offers a classification system for economic activities that can facilitate and promote the channelling of financial flows to activities that support climate change and environmental objectives, including the transition towards more sustainable practices.[186] SCM also published the **Sustainable and Responsible Investment Taxonomy** in December 2022.

Besides the facilitative frameworks, incentives have been expanded over the past few years to encourage SRI Sukuk and SRI-linked Sukuk issuances. Firstly, the tax deduction for the expenditure incurred on the issuance of SRI Sukuk approved by the SCM has been extended for a period of four years until the year of assessment 2027.

183- Capital Markets Malaysia, 2023.
184- imSME.com.my
185- Bank Negara Malaysia, 2021.
186- Ibid.

A tax deduction is also given on the issuance costs of SRI-linked Sukuk for a period of five years until the year of assessment 2027. Furthermore, Malaysia introduced the **SRI Sukuk and Bond Grant Scheme**, one of the first global examples of incentive structures to support green, social and sustainable sukuk and bond issuances. Malaysia sees a future role as an international center for sustainable Islamic finance and green sukuk and has made significant progress in this direction.[187] The SRI Sukuk and Bond Grant Scheme has now been expanded to cover SRI-linked Sukuk issued under the SCM's SRI-linked Sukuk Framework and the ASEAN SLBS. Additionally, there is a tax exemption on management fee income for managing SRI funds, extended for a period of four years until the year of assessment 2027. In 2019, the SCM and BNM jointly established the regulators-industry **Joint Committee on Climate Change** (**JC3**) platform to collaboratively pursue actions within the financial sector industry aimed at building climate resilience within the Malaysian financial sector. Through the JC3, various green pilot initiatives involving collaborations between the public and private sectors have been introduced to expedite the transition of businesses toward low-carbon practices, including efforts to green supply chains.

Myanmar

The project **SMART Textile & Garments,** funded by the EU and co-funded by private sector partners (brands, retailers and factories), was highlighted in the interviews as an initiative that actively contributed to raising awareness and capacities of Myanmar's private actors to invest in and adopt more sustainable practices.[188] The overall project aimed to improve working conditions and promote labor and environmental standards in the textile & garment industry. SMART informed European consumers about sustainable purchasing practices and production in Myanmar and fostered cooperation among all actors across the value chain in Europe and Myanmar to replicate and scale up successful sustainable practices. Activities included training and advisory support for factory managers and workers on workplace safety, labor law compliance and environmental practices, and dialogue facilitation between the public and private sectors.[189] The project also included activities related to green financing, particularly training and developing the capacities and knowledge of private sector loan managers and loan officers. The project advocated for promoting and facilitating green financial products and services such as reduced interest loan packages for wastewater treatment facilities or reduced interest loans for installing photovoltaic solar panels. To achieve this, SMART Myanmar organised public-private dialogue events and cooperated with the Myanmar central bank to assist the regulator in developing National Green Finance Guidelines. The project's financial services experts conducted workshops and trainings with private banks to help them understand how to develop, benefit from and market green financial products. To bridge knowledge gaps, SMART also worked with local SMEs, training them on applying for bank loans. The goal was to guide SMEs in applying for green loans and to coach banks in offering such loans.[190] The interviews also emphasised the value of support activities and trainings in creating green incentives for Myanmar's banks conducted by KfW and the activities of the **SWITCH-Asia Programme** related to green finance.[191]

187- Climate Bonds Initiative, 2021.
188- Interview with EUROCHAM representatives in Myanmar.
189- SMART Textile and Garments, 2023.
190- SMART Textile and Garments, 2018.
191- Interview with EUROCHAM representatives in Myanmar.

Philippines

In addition to issuing the very first **green bond** in the region, the Philippines also issued the first **CBI-certified** green bond in ASEAN.[192] As of 2020, the Philippines' GSS bond market stood at US $ 4.9 billion, with green bonds making up 65% (US $ 2.9 billion) of the total volume.[193] The central bank (Bangko Sentral ng Pilipinas) has developed a **Sustainable Finance Framework** to promote environmentally and socially responsible business decisions. Several banks have taken the first steps towards integrating and implementing sustainability principles in their business operations, including adopting environmental and social risk management, adherence to sustainability reporting, development of sustainability frameworks and issuance of green, social or sustainability bonds.[194] In October 2021, the Philippines Inter-Agency Technical Working Group for Sustainable Finance released the Philippine Sustainable Finance Roadmap. The efforts to establish a green taxonomy are also underway, led by the Department of Finance. [195] In September 2023, the proposed Philippine Sustainable Finance Taxonomy Guidelines were released for consultation. On 23 February 2024, the taxonomy guidelines were adopted.

The successful use of guarantees as an instrument to mobilise private sector finance was demonstrated, for example, by the **Tiwi Makban Geothermal Project** (first green bonds certified under the CBI's geothermal criteria as a single project bond), which ADB de-risked via a loan and a guarantee to AP Renewables to support a US $ 225 million green bond (credit guarantee: 75% of the principal and interest guaranteed by ADB).[196]

Singapore

The Finance for Net Zero (FiNZ) Action Plan launched by the Monetary Authority of Singapore (MAS) in April 2023 sets out strategies to mobilise financing to catalyse Asia's net zero transition and decarbonisation activities in Singapore and the region. FiNZ expands the scope of MAS' Green Finance Action Plan that was introduced in 2019 to include transition finance and articulates four strategic outcomes – (i) data, definitions and disclosures; (ii) climate resilient financial sector; (iii) credible transition plans; and (iv) green and transition solutions and markets.

MAS convened a Green Finance Industry Taskforce from November 2019 to April 2023, which was succeeded by the Singapore Sustainable Finance Association in 2024, to focus on a few key initiatives, including developing a taxonomy. In December 2023, MAS launched the Singapore-Asia Taxonomy for Sustainable Finance (Singapore-Asia Taxonomy), which sets out detailed thresholds and criteria for defining green and transition activities contributing to climate change mitigation across eight focus sectors.

Singapore is by far the regional champion in green lending in terms of both issuance volumes and deal counts, dominated by green loans in the real estate sector. The cumulative value of green loans from 2017 through 2022 reached about US $ 25 billion while green bonds stood slightly above US $ 10 billion. Social and sustainability bonds were slightly below US $ 2 billion, given Singapore's smaller population and higher standard of living. The government, through the MAS, has implemented core policies and regulatory measures as well as financing solutions such as sustainable bond and loan grant schemes to support decarbonisation efforts and climate risk mitigation.

192- Information received from EUROCHAM representatives in the Philippines.
193- Climate Bonds Initiative, 2021.
194- Information received from EUROCHAM representatives in the Philippines.
195- Climate Bonds Initiative, 2021.
196- Interview with Asian Development Bank representatives.

Thailand

Thailand established a Working Group on Sustainable Finance and developed a **Sustainable Finance Roadmap** for the national capital market.[197] In June 2023, Thailand issued its Phase 1 taxonomy covering the energy and transportation sectors. Its forthcoming Phase 2 taxonomy will include the manufacturing, agriculture, real estate, construction and waste management sectors. Thailand's **Energy Efficiency Revolving Fund**, initiated in 2013, is a successful example of a revolving fund that utilises revenues from a petroleum tax and facilitates the participation of 11 commercial banks for subsequent investment in energy efficiency projects. Almost 300 energy efficiency projects have been funded, realising savings of 0.98 $MtCO_2$/year and successfully leveraging private sector investment in energy efficiency projects with a 3:1 ratio.[198]

As of June 2024, there were 137 **GSS bonds** issued by Thailand, with the US $ 20 billion proceeds from GSS bonds used for a broad range of projects, including carbon capture, solar and wind energy and low carbon transportation.[199] 2020 saw the first sovereign issuance – a sustainability bond, the proceeds of which were used to finance green infrastructure in Bangkok's Mass Rapid Transit Orange Line (East) Project, which was certified against CBI standards under its low carbon transport sector criteria.[200]

Viet Nam

Viet Nam adopted the **Financial Sector Action Plan on the National Green Growth Strategy for 2020** and the **Bond Market Development Roadmap** during 2017-2020 with a Vision Toward 2030, which sets the framework for green finance growth in the country.[201] In addition, Viet Nam established the **Just Energy Transition Partnership (JETP)** in December 2022, an international partner collaboration with a resource mobilisation plan of US $ 15.5 billion. As of 2020, US $ 27 million worth of green bonds have been issued in Viet Nam; and two green loans were granted.[202] In 2020, ADB and Phu Yen TTP Joint Stock Company of Viet Nam signed a loan to develop and operate a 257 MW solar power plant in Hoa Hoi, Phu Yen Province, Viet Nam. The funding consists of loans funded by ADB, commercial banks, and the Leading Asia's Private Sector Infrastructure Fund. This was Viet Nam's first CBI-certified green loan.

197- ASEAN Working Committee on Capital Market Development, 2020.
198- Asian Development Bank, 2021.
199- Climate Bonds Initiative, 2021.
200- Asian Development Bank, 2020 (1).
201- ASEAN Working Committee on Capital Market Development, 2020.
202- Climate Bonds Initiative, 2021.

4. Future prospects and opportunities for mobilising private sector climate finance in ASEAN

It can be distinguished between (1) sectors and areas for investment with attractive business opportunities for the private sector where the AMS governments are already putting effort and (2) sectors and areas where there is a strong need for investment but hardly any efforts or projects for investment so far. [203]

Sectors and areas where AMS governments are already putting substantial effort include the energy sector, including energy for industrial needs:

- Whereas in the area of energy generation, where sustainability-related projects are already underway, it is more difficult to structure projects in the areas of **energy transmission and distribution**. At the same time, financial flows are much needed in the face of energy losses and the necessary upgrades of required energy networks.[204]

- One of the areas with big potential for financing through private actors, which is still underexplored, is **energy for industrial needs** (in particular, for the manufacturing and garment industries).[205] For example, there is an increasing need to replace old energy generators with new ones, whereby solar is so far the most attractive option.[206]

- Additionally, multilateral initiatives lead the way and offer opportunities for private sector actors to engage in **bankable projects**, as showcased by the examples below. However, these initiatives are currently still mostly regarded as enablers of flagship projects in a transition period. In reality, companies face challenges due to a complex landscape of regulations and policies, costly access to financing and the lack of enabling ecosystems. Blended finance models are needed to foster innovations and reduce risks associated with climate-related projects to make such projects attractive for private sector actors.[207] In this context, the ASEAN Taxonomy[208] endeavours to act as a common language on green and transition activities that can facilitate collective investments and financing. Similarly, both the ASEAN Taxonomy and the Financing the Transition to a Net-Zero Future Initiative[209] are also seen as endeavours to harmonise language and guide borrowers and investors.

    - The **European Green Deal**[210] also sets numerous requirements. To fulfil these, investments in the required areas in AMS that are part of the supply chain are recommendable: for example, the requirements on deforestation- and forest degradation-free supply chains require investments in sustainable supply chains. The requirements regarding a circular economy offer new business opportunities and new services to emerge. To avoid additional costs concerning the Carbon Border Adjustment Mechanism, which started in 2023, profitable investments in the decarbonisation of the supply chain are needed more and more.

203- Interview with Asian Development Bank representatives.
204- Ibid.
205- Interview with EUROCHAM representatives in Cambodia.
206- Interview with EUROCHAM representatives in Cambodia and Myanmar.
207- World Economic Forum, 2021.
208- Imperial College London, 2023.
209- Financing the Transition to a Net-Zero Future Initiative, 2023.
210- European Commission, 2023 (6).

- The **Energy Transition Mechanism (ETM)**[211] is a scalable, collaborative initiative developed by the ADB to leverage a market-based approach to accelerate the transition from fossil fuels to clean energy. Coal power assets will retire earlier due to public and private investments that finance country-specific ETM funds. ETM hopes to unlock private investment in cost-effective renewable generation and support and enable clean technologies.

- The G7-led **JETP**[212] offers similar opportunities. The goal is to drive forward the global phase-out of coal and expand renewable energies. Within the partnerships, political reform processes necessary for transformation are supported and public, private and philanthropic financial resources needed for transformation are mobilised. So far, JETPs exist with Indonesia, Viet Nam, South Africa and Senegal.

- In the textile area, a well-known programme and investment opportunity was the **SMART Factories Programme**, funded by the EU and co-funded by private sector partners (retailers and factories). SMART built capacity across the industry to improve working conditions, promote better labor and environmental standards and reduce labor rights abuses in Myanmar's textile, apparel and footwear industries. The programme thus helped meet European supply chain and taxonomy requirements.

Sectors and areas regarded as a "wish list" for investment (where there is a strong need for investment projects and currently a lack of them) include the infrastructure and AFOLU sectors and several other subsectors:

- **Infrastructure** is one of the key growth areas for investment in the ASEAN region. The main sub-sectors under infrastructure include healthcare, renewable energy infrastructure and water / water-related infrastructure (sanitation, solid waste management, river-based pollution, food and agriculture-related infrastructures). The ADB estimates that Southeast Asia will require US $ 210 billion per year between 2016 and 2030 to support investment in climate-compatible infrastructure. Even before the COVID-19 pandemic, infrastructure investment, particularly from private capital sources, was far below the levels needed, with the infrastructure investment gap estimated at between 3.8% of GDP to 4.1% of GDP (when taking climate change into account) between 2016-2020 in some AMS.[213]

- In the **AFOLU sector**, areas with high potential include: agricultural technologies, smart farming, production and distribution (raising productivity); renewable energy in agriculture; low-emissions livestock, bio-waste management-black soldier flies; stress-tolerant seeds, climate information services; food processing (raising productivity) and food supply; water management; and carbon sinks creation – e.g. mangroves as carbon sinks, afforestation, nature-based solutions.[214] Larger agricultural companies can more easily adopt sustainable practices than smaller ones.[215] At the same time, the interviews highlight some **constraints for private sector finance in the agriculture / water sector** in some AMS: Irrigation schemes are less often financed through private funds. However, smaller loans for SMEs could still be an option to attract private funds here (currently, SMEs face the challenges of collateral funding requirements and high costs, which could be solved through guarantees).[216]

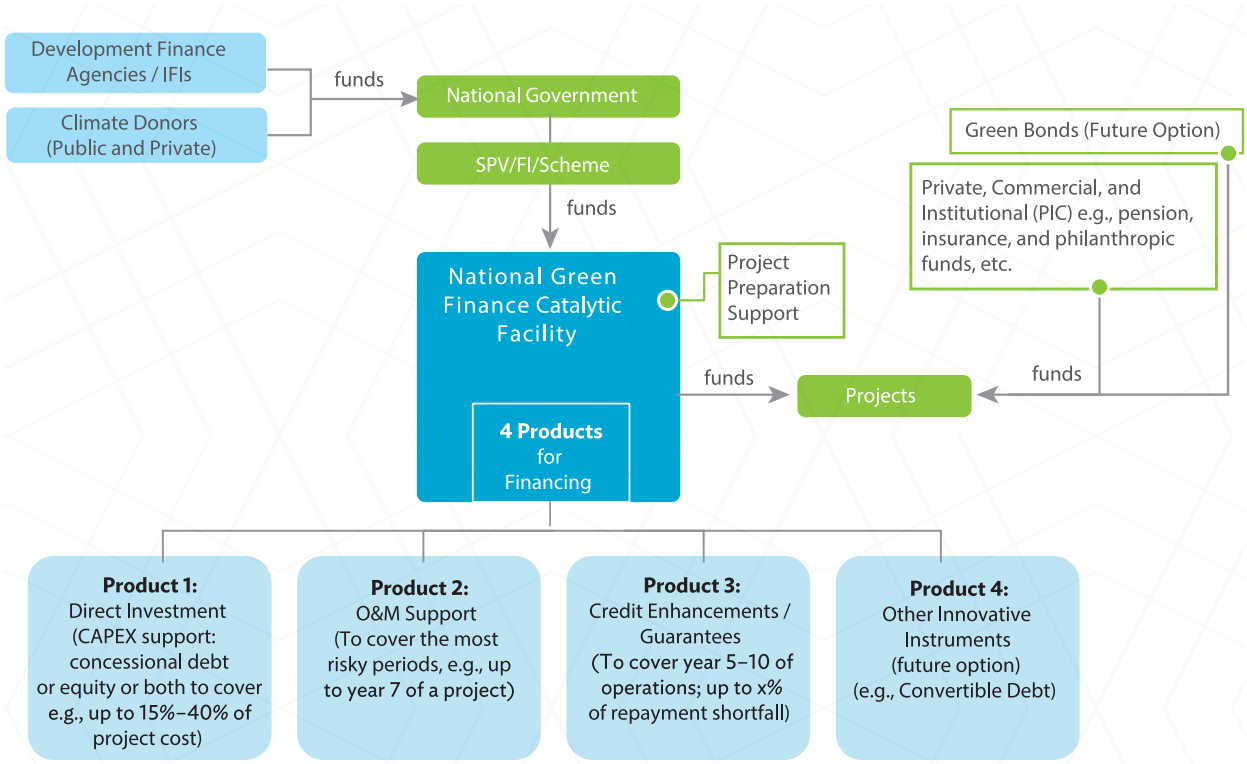
- **Other sectors and sub-sectors with high potential include electric vehicles** ("need for more wheels, not more financial instruments" in this area – improvement of infrastructure and regulations for electric vehicles is needed to unlock further investment opportunities).[217] **Green buildings** is another area with high potential that could be mobilised further by adopting and implementing sustainability and reporting standards and requirements in the building sector set by the governments.[218] Other areas with funding potential include **waste management** (for example, waste-to-energy) and **adaptation** (for example, coastline protection).[219]

211- Asian Development Bank, 2023 (2).
212- International Institute for Sustainable Development, 2022.
213- Questionnaire received from the Asian Development Bank.
214- Identified by the ASEAN Climate Resilience Network; Interview with EUROCHAM representatives in Indonesia; Interview with EUROCHAM representatives in Thailand; Interview with Sustainable Finance Institute Asia.
215- Interview with EUROCHAM representatives in Cambodia.
216- Interview with EUROCHAM representatives in Myanmar.
217- Interview with EUROCHAM representatives in Singapore.
218- Interview with EUROCHAM representatives in Malaysia.
219- Interview with EUROCHAM representatives in Cambodia; Interview with Sustainable Finance Institute Asia.

Based on the interviews, the following specific opportunities for ASEAN governments can be highlighted to catalyse additional climate and sustainable private sector investments in the ASEAN region (more information on the opportunities mentioned is included in the table below):

- **Promote catalytic blended finance facilities** (see exemplary structure of such a facility in the figure below) that can help projects **overcome the bankability gap** and hence attract private finance, are much needed. The ACGF that provides support for the origination of project pipelines, capacity building for green and innovative finance approaches, project financial structuring support and innovative use of concessional funds to de-risk projects can be regarded as a good practice example of successful joint blended finance efforts by ASEAN, AMS governments and development finance agencies / institutions that can be replicated.[220]

Figure 5: Exemplary composition of a national catalytic finance facility



CAPEX = capital expenditure, FI = financial institution, IFI = international financial institution, O&M = operation and maintenance, SPV = special purpose vehicle.

Source: Asian Development Bank, 2020 (4)

- **Increase implementation of de-risking funds** that provide supportive finance for developing many projects simultaneously. There is a need for AMS governments to increase their understanding of how to manage and implement such funds:[221]

  - An example that could be replicated is the **Shandong Green Development Fund** in China, which provides a funding contribution of up to 50% of the project cost to qualifying projects for the first 5 to 10 years, lowering the risk profile of the climate-friendly projects in order to raise the remaining financing from private, institutional, and commercial sources;[222]

  - Funds that define time-bound umbrella climate change indicators in line with the GCF investment framework and sector-specific indicators and develop a pipeline of bankable climate-friendly projects, going beyond renewable power generation and including urban transport, water supply, sanitation, sponge cities and drainage, solid waste recycling and waste-to-energy and information

220- Questionnaire received from the Asian Development Bank.
221- Interview with Asian Development Bank representatives.
222- Asian Development Bank, 2020 (3).

and communication technology for smart cities to reduce water and carbon footprints and addressing the water–food–energy nexus; [223]

- Funds that also establish a financing framework to incentivise such climate-friendly projects to explicitly crowd in private, institutional and commercial finance as well as advanced technology to maximise environmental impacts and benefits to the population and create integrated monitoring, evaluation, reporting and verification systems on both agreed climate and financial indicators based on climate investment eligibility criteria to measure climate impacts, and safeguards monitoring systems. [224]

- To develop and implement such de-risking funds effectively, **AMS governments should work collaboratively** with relevant stakeholders and development partners, including the private sector, civil society organisations and international organisations, to (a) provide capacity building, trainings and information data centers / repositories; (b) define climate change indicators in line with the ASEAN Taxonomy; (c) establish a financing framework to incentivise climate-friendly projects that crowd in private, institutional, and commercial finance to maximise environmental impacts; and (d) establish integrated monitoring, evaluation, reporting, and verification systems on climate and financial indicators to measure climate impacts and safeguard monitoring systems.

- **Enable renewable energy developers to have a "buyer of last resort"** (for example, a governmental or inter-governmental fund founded by ASEAN or a single AMS) that would guarantee the purchase of electricity produced from renewable sources over a longer period to a certain minimal tariff (higher than the production costs) and which could then sell this electricity at market value.[225]

- **Use financial and support instruments** that have proven effective for attracting private sector climate finance in ASEAN. These include **policy-enabling instruments like taxonomies and standards; financial instruments like climate, green and sustainability loans and bonds, equity**, **guarantees, and grants funds as well as technical assistance support**.[226] AMS must create an enabling environment of financial and support instruments that attract private sector climate finance. ASEAN´s climate finance bodies can be key in orchestrating regional efforts. Aspects that were particularly emphasised concerning some of these instruments:

  - **Green, climate and sustainability loans** are regarded as an effective instrument in Southeast Asia since the ASEAN sustainable finance market maintains rapid growth. The key challenges that need to be considered in the context of green loans are the projects' pricing and readiness to be supported to undertake the corresponding due diligence.[227]

  - **Equity:** Convertible debt is one of the effective products for mobilising private sector finance. This is a low-cost debt provided to a project that can be converted into equity once certain financial indicators of a project are achieved. The conversion into equity could also be linked to options for project sponsors or institutional investors to purchase such equity at values that would be attractive for the facility and allow funds to be deployed elsewhere once recouped.[228]

  - **Guarantees:** Revenue payments / guarantees, or completion guarantees, are a possible product suited to reducing government spending upfront and defraying costs to annual payments over a 5- to 10-year period, which could help bring in more private capital for capital expenditure. This could also be provided as a guarantee and help insulate private capital providers from uncertainty around revenues.[229]

- National or regional awards for start-ups: One key challenge is to bring sustainability initiatives down to start-ups, small enterprises, and new companies entering the market. One possible way to address this challenge is to introduce sustainability awards for start-ups.[230]

223- Ibid.
224- Ibid.
225- Interview with EUROCHAM representatives in Indonesia.
226- Questionnaire received from the Asian Development Bank.
227- Ibid.
228- Ibid.
229- Ibid.
230- Interview with EUROCHAM representatives in Singapore.

- Develop a pipeline of green and sustainable finance talent through training and development. For example, the Singapore Green Finance Centre offers various courses across various levels – undergraduate, post-graduate, continuing and professional education – for financial actors and business representatives, and develops sustainable finance research tailored to the Asian context.[231] The market of sustainable start-ups is already showing potential in some AMS (for example, start-ups in microgrids, electrification and transportation in Cambodia), which offers a good opportunity to build on this development further.[232] AMS can either function as an initiator for such awards or as a patron while civil organisations run the award organisation.
- **Promote better marketing** of profitable investment opportunities for businesses. This can be done by enabling more enhanced social networking, raising awareness on sustainable finance topics and **educating the market and actively demonstrating the profitability** of sustainable technologies and practices.[233] The Indonesia National Plastic Action Partnership, which, among others, pursues the objective of increasing investment in the reduction of plastic waste, can be regarded as a successful example of bringing together businesses, experts, and policymakers for developing and undertaking concrete next steps and raising awareness about sustainable finance.[234] Such marketing campaigns can be developed by a single AMS or as a joint effort by ASEAN. The introduction of the ASEAN Taxonomy is a good opportunity to showcase the recent market developments and the increasing attractiveness of green, climate and sustainability finance to the private sector.
- Establishing a **dedicated institution responsible for the sustainable finance agenda** in AMS (which can, for example, be a financial institution like PT SMI in Indonesia) could be a good way to support project preparation activities and provide knowledge and assistance for private companies.[235]

Table 3: Opportunities for mobilising private sector climate finance in ASEAN

Ways forward	Specific suggestions
How can existing instruments be improved?	• Putting in place stronger **control mechanisms to avoid greenwashing**:[236] - Green bonds: more effective control, tracking and review procedures need to be set up by ASEAN and AMS financial authorities to ensure that the funds are used for the correct purpose (Indonesia's "Green Bond & Green Sukuk Framework" can be regarded as a good practice example to be replicated); - Require use of taxonomies and standards with verification; and - Need for qualified experts to help governments in selecting the "right" projects – building the talent pool (courses, training, education). • More intensive use of **guarantees and other risk-mitigation mechanisms** as very helpful financial instruments for managing high risks that private investors cannot accept and reducing the collateral barrier for newer and smaller companies[237] The risks can be shared by establishing public-private-partnerships for example between the governments and national banks or private funding institutions.[238] • Climate finance support schemes and initiatives must increasingly be established **within the private sector**, shifting the focus away from donor-led support schemes and reliance on fiscal budgets.[239]

231- Monetary Authority of Singapore, 2020.
232- Interview with EUROCHAM representatives in Cambodia.
233- Interview with EUROCHAM representatives in Cambodia; Interview with EUROCHAM representatives in Thailand.
234- World Resources Institute Indonesia, 2023.
235- Interview with EUROCHAM representatives in Cambodia.
236- Interview with EUROCHAM representatives in Indonesia.
237- Interview with EUROCHAM representatives in Indonesia and Myanmar.
238- World Bank, 2023.
239- Questionnaire received from EUROCHAM in Viet Nam.

Ways forward	Specific suggestions
Which new instruments are needed?	• **Catalytic facilities** (such as the ACGF[240]) that can help projects **overcome the bankability gap** and hence attract private finance are much needed.[241] • Better implementation and use of **de-risking funds**: AMS governments need to show that they effectively use de-risking instruments (such as risk insurance funds for the private sector).[242] • Clear **regulations and policies for carbon pricing** can be a very good incentive for the private sector to invest more in climate-related areas.[243] • **Finance-for-nature swaps** – reduction of debt payments and thus decreasing the level of indebtedness of a government on the condition that the "savings" are used for explicit green or "nature-based solutions" projects which requires careful observation of green frameworks for project selection.[244] • Suggestion articulated specifically for Viet Nam: International banks would benefit from a **partial guarantee on lending that recognises and mitigates the "state-side" risks** (e.g. cancellation of purchase power agreements, curtailment of power offtake without compensation) that have prevented any non-recourse project finance in Viet Nam.[245]
How can project proponents' capacity for project preparation be supported?	• **Capacity enhancement programmes and collaborative partnerships**, pushed by the AMS´ governments, to develop human resources, information technology and operational capacities for implementing green principles and fostering collaboration between the different actors.[246] • Capacity building through **multi-stakeholder consultation processes** (the example of the National Plastics Initiative in Indonesia could be replicated in other AMS).[247] • In some AMS like Viet Nam, there are already several donor-funded **early-stage support and advisory activities** for private companies which could potentially be replicated in other AMS.[248]
How can policy / governance frameworks be improved?	• **More consistent adoption and clearer communication of national climate policy commitments**, codes and standards (also providing more information on sustainability instruments like green bonds, etc.) would lead to more private companies involved in complying with those regulations and being more interested to invest.[249] Early notice of any changes to regulation and support mechanisms and long-term nature of the commitments are desired from companies´ perspectives[250] (taking a participative approach in the further development of the ASEAN Taxonomy by the ATB (similar to the possibility of open feedback on the EU taxonomy) could help the private sector shape the process and prepare for upcoming regulations). • **An independent body** to manage climate or sustainability-linked initiatives could be effective.[251] • New market structures such as power purchase agreement auctions need to be **developed in cooperation with the representatives of private sector organisations** (for example, currently only the government and MDBs operating in Viet Nam participate in this process).[252] • **Aligning different investment guidelines** such as in safeguards, procurement, anticorruption, and good governance regulations and procedures as well as **harmonised modes of reporting, monitoring and evaluation**.[253]

240- Asian Development Bank, 2023 (1).
241- Questionnaire received from the Asian Development Bank.
242- Interview with Asian Development Bank representatives.
243- Interview with EUROCHAM representatives in Indonesia.
244- Asian Development Bank, 2020 (4); Interview with Asian Development Bank representatives.
245- Questionnaire received from EUROCHAM in Viet Nam.
246- Questionnaire received from the Asian Development Bank.
247- Interview with European Investment Bank representatives.
248- Questionnaire received from EUROCHAM in Viet Nam.
249- Interview with EUROCHAM representatives in Cambodia, Malaysia, Thailand and Viet Nam.
250- Questionnaire received from EUROCHAM in Viet Nam.
251- Interview with EUROCHAM representatives in Malaysia.
252- Questionnaire received from EUROCHAM in Viet Nam.
253- Questionnaire received from the Asian Development Bank.

Ways forward	Specific suggestions
How can economic, legal and other regulations be improved?	• Ensuring **legal predictability through legally-binding environmental standards** is needed for investment predictability.[254] • Suggestions articulated specifically **for Viet Nam: Land clearance needs to be streamlined** to remove the risk of flaws in the process stopping project development. A single agency of government has to lead on licensing, land and approvals for multi-billion-dollar offshore wind projects. Behind-the-meter power plants **need to be relieved from the same approval and licensing process** that a nuclear power plant has to complete. No master-planning obstacle and a simple default license issued for own consumption solar and wind that operate onsite and off grid.[255s] • Suggestion articulated **for Malaysia**: Allowing bigger projects to be operational (e.g. 10 MW-50 MW solar projects) – **larger portfolios are more attractive** to invest in.[256]
Other suggestions	• Introducing more **rewarding schemes for consumers to switch to sustainable products and technologies** – the target should be the change of consumer behaviour.[257] • As the lack of understanding of what sustainable finance means on both the borrower and the lending side prevails, **education of the market actors** on sustainability is much needed.[258] In AMS like Myanmar, many companies hesitate to take loans, and the clients are averse to go to banks. Hence there is a need for **showcasing successful business examples, explaining business cases** (e.g. how much money can be saved with the help of financial instruments) and **showcasing technologies**.[259] **Raising awareness of sustainable technologies and changing the perception** that they are always more expensive, riskier and more complicated to invest in.[260] • Using the **support of MDBs and international financial institutions in developing project pipelines** and enhancing capacities to attract private capital flows.[261] • **Bidding** infrastructure projects out **to the private sector**.[262] • Sharing EU knowledge and experience regarding **EU Green Deal funds: business-to-business dialogues** between EU and ASEAN and within ASEAN (transferring sustainable business expertise to smaller companies).[263]

254- Interview with EUROCHAM representatives in Thailand.
255- Questionnaire received from EUROCHAM in Viet Nam.
256- Interview with EUROCHAM representatives in Malaysia.
257- Interview with EUROCHAM representatives in Singapore.
258- Interview with EUROCHAM representatives in Indonesia.
259- Interview with EUROCHAM representatives in Myanmar.
260- Interview with European Investment Bank representatives.
261- Interview with Asian Development Bank representatives.
262- Ibid.
263- Interview with EUROCHAM representatives in Myanmar.

5. Conclusions – suggestions for guiding stronger private sector engagement in ASEAN

The sustainable finance agenda in the EU and ASEAN has developed substantially in the recent decade, but in many AMS, this area is still nascent. The study described and analysed the status quo and outlined future prospects for mobilising private sector involvement in ASEAN climate-related investments within AMS and at the ASEAN regional level.

The study pointed towards two major driving forces for sustainable finance in AMS so far, which are large, primarily international companies and the banking sector, whereas SMEs have so far been less prominent actors in the realm of sustainable finance despite their relevance for the ASEAN economies.[264] One of the main challenges is thus **to bring the sustainability initiatives down to smaller enterprises**. Against this background, the study identified three main clusters of challenges:

1. The study finds that **bankability and the lack of economically-attractive projects with risk-return profiles** are the biggest challenges for private investors in scaling up climate finance flows in ASEAN.[265] This happens because sustainable projects often have higher up-front costs than conventional alternatives and are based on relatively new technologies. Moreover, revenue streams are often influenced by broader questions of affordability and are dependent on public policies and regulations, which can increase the risk profiles of such projects, especially if coupled with more expensive technologies and / or financing costs. In addition, developers often lack access to long-term capital and exchange rate volatility hinders overseas investment. [266]

2. Another challenge identified by the study is **greenwashing and the difficulty in assessing how "green" projects and products are in practice**, particularly because of the lack of common sustainability definitions and limited transparency about where exactly the money flows.[267] This challenge is already being addressed by the three versions of the ASEAN Taxonomy for Sustainable Finance, but major success factors will be the actual adoption and compliance with the taxonomy on the ground.

3. The third larger complex of challenges identified is related to the **capacities of smaller private companies and local financial institutions in AMS**: SMEs need knowledgeable personnel and additional resources to manage sustainability-oriented projects, which is often lacking.[268] Assessing the reliability of the sustainability performance ratings issued to projects by local financial institutions is also challenging, given that review procedures are often not transparent and the banks do not have sufficient resources and expertise to do the sustainability review properly. [269]

264 ASEAN Taxonomy Board, 2021.0
265 Questionnaire received from the Asian Development Bank.
266 Ibid.
267 Interviews with EUROCHAM representatives in Malaysia and Indonesia.
268 Interviews with EUROCHAM representatives in Malaysia and with Sustainable Finance Institute Asia.
269 Interview with EUROCHAM representatives in Malaysia.

Based on the research and the interviews conducted, the study puts forward the following ten suggestions for ASEAN and AMS governments to further mobilise private sector climate finance in AMS and the region for the implementation of mitigation and adaptation action in line with the goals of the Paris Agreement:

1. The challenge of the availability and bankability of climate projects can be addressed, for example, by establishing and implementing **catalysing blended finance facilities** (and replicating existing facilities such as the ASEAN Catalytic Green Finance Facility) that provide technical assistance and project preparation support.[270] Such facilities blend various funding sources and offer a range of financial instruments (public lending, commercial lending, guarantees, equities, grants) and ensure project monitoring and supervision on the ground and replicability after donors phase out. They can successfully showcase that projects in various sectors are bankable and attractive for the private sector and provide additional motivation for risk-hedging currency swaps.[271]

2. Establish and implement more **de-risking funds** (an example that could be replicated is the Shandong Green Development Fund in China) that provide finance for the development of many projects simultaneously and lower the initial risk profile of climate-friendly projects in order to leverage additional financing from private, institutional and commercial sources.[272] There is a need for AMS governments to understand how to manage and implement such funds.[273]

3. **Revolving funds** established by either the public or private sectors are promising instruments as they provide initial capital to fund projects while the revenues can be used to replenish the fund.

4. Developing **own AMS capacities and own AMS capital markets** is crucial to reducing reliance on international donors and concessional funding over the long term. **Domestic development finance institutions** (government-owned such as PT Sarana Multi Infrastructure in Indonesia) can serve as targeted financial intermediates to fund green projects and can provide an excellent platform for showcasing projects with good returns and creating portfolio investment vehicles.[274]

5. **Enabling renewable energy developers to have a "buyer of last resort"** (for example, a governmental or inter-governmental fund) that would guarantee the purchase of electricity produced from renewable sources over a longer period to a certain minimal tariff exceeding developers' costs would be an effective stimulus for private investment.[275]

6. Initiating and developing **large-scale renewable energy projects** supported by initial funding from multilateral development banks and other donors and based on long-term power purchase agreements can be a bankable and attractive opportunity for the private sector.

7. Develop **robust long-term policy frameworks** to support climate, green and sustainable finance growth (such as roadmaps, action plans, climate bond and loan support schemes and frameworks, etc.), which raise awareness within the private sector and motivate private sector actors to invest in sustainable projects, products and services.

8. **Adopting and implementing taxonomies for sustainable finance** can effectively counter "greenwashing" by providing a common framework and single guidance for investors, companies and financial institutions.[276] At the same time, the taxonomy needs to be multi-tiered to enable a just and affordable transition without overburdening smaller companies.[277]

270 Interview with European Investment Bank and Asian Development Bank representatives.
271- Interview with European Investment Bank representatives.
272- Asian Development Bank, 2020 (3).
273- Interview with Asian Development Bank representatives.
274- Interview with Asian Development Bank representatives; Interview with European Investment Bank representatives.
275- Interview with EUROCHAM representatives in Indonesia.
276- Interview with Sustainable Finance Institute Asia.
277- Ibid.

9. **Targeted capacity development projects and programmes** (like SMART Textile & Garments was in Myanmar and the imSME platform in Malaysia, run by the country's credit guarantee corporation) that offer workshops and training to help local financial institutions develop, benefit from, and market green financial products while additionally supporting local SMEs in applying for green finance have proved useful for scaling up sustainable practices.

10. **Profitable climate investment opportunities for businesses** need to be better marketed. This can be done by enabling more enhanced social networking, raising awareness on sustainable finance topics and **educating the market and actively showcasing the profitability** of sustainable technologies and practices.[278] Also, emphasising on the risks for companies of being pushed out of global supply chains if they do not adopt sustainable practices can be a major driver for the private sector to act.[279]

278- Interview with EUROCHAM representatives in Cambodia; Interview with EUROCHAM representatives in Thailand.
279- Interview with Sustainable Finance Institute Asia.

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