Domestic Capital Mobilization for Climate Finance in Southeast Asia

Improving the Enabling Environment for Local Capital Towards Climate Action in Indonesia, the Philippines, and Vietnam

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catalytic climate finance facility

CLIMATE POLICY INITIATIVE

CONVERGENCE BLENDING GLOBAL FINANCE

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ABOUT THE LEARNING HUB

The Learning Hub is a knowledge-sharing platform under the Catalytic Climate Finance Facility (CC Facility), a partnership between Climate Policy Initiative (CPI) and Convergence. The purpose of the CC Facility is to accelerate the implementation of high-impact, ready-to-scale financial structures, filling a market gap in mobilizing private capital for climate action in developing economies. Drawing on CPI and Convergence's extensive data collection and research efforts, the Learning Hub offers knowledge-sharing activities, capacity building, and research products that highlight new and existing evidence on best practices on advancing the implementation of financial vehicles that mobilize private capital for climate action and gender equality in developing economies.

DESCRIPTORS

SECTOR

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Region

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GLOSSARY OF KEY TERMS

ADAPTATION FINANCE: Resources directed to activities aimed at reducing the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by maintaining or increasing adaptive capacity and resilience. Climate adaptation interventions are often linked to the concept of increased resilience in human, biological, ecological, and geological systems.

BLENDED FINANCE: The use of concessional, catalytic capital from public or philanthropic sources to increase private sector investment in developing countries for sustainable development. It is a structuring approach, not an investment approach.

COMMERCIAL CAPITAL: Market-priced capital invested with the expectation of financial returns, typically at or near market rates. Commercial capital can include capital from private, public, and philanthropic sources.

CONCESSIONAL/CATALYTIC CAPITAL: Funds provided on below-market terms within or alongside the capital structure of a transaction to reduce the overall cost of capital for the borrower and/or provide additional downside protection to senior investors (e.g., in a first-loss position). Concessional capital can be provided through various instruments, including debt, equity, grants, and mezzanine capital.

CROSS-CUTTING/DUAL BENEFITS FINANCE: Resources directed to activities contributing to both climate change mitigation and climate change adaptation, and meeting the respective criteria for each category.

ENABLING ENVIRONMENT: Policies, regulations, financial instruments, and institutional support that lower investment risks, build market confidence, and attract capital from both domestic and international sources for climate-aligned projects.

FINANCIAL ADDITIONALITY: The extent to which a blended finance instrument introduces financial solutions that are either absent or undersupplied in a given market. It assesses whether the instrument addresses a short-term market failure by providing financing that would not otherwise be available under current market conditions. Financial additionality is inherently a qualitative measure, focused on the unique contribution of the instrument to correcting inefficiencies or gaps in the financial ecosystem.

JUST ENERGY TRANSITION PARTNERSHIP (JETP): A financing mechanism designed to deliver large-scale funding to emerging markets for decarbonizing the energy sector, while also supporting domestic development priorities. JETP funding is led by public resources from the International Partners Group, which includes donor governments (primarily advanced economies) and private capital mobilization. JETPs have been announced for countries including South Africa, India, Indonesia, Senegal, and Vietnam.

MITIGATION FINANCE: Resources directed to activities contributing to reducing or avoiding greenhouse gas (GHG) emissions, including gases regulated by the Montreal Protocol, or maintaining or enhancing GHG sinks and reservoirs.

NATURE-BASED SOLUTIONS: Efforts to protect, manage, and/or restore ecosystems to address societal challenges like food insecurity, climate vulnerability, and public health.

These solutions recognize that healthy ecosystems are critical for both natural systems and sustainable economic development.

NET ZERO: The state in which the amount of GHGs emitted into the atmosphere equals the amount being removed. Achieving net zero stops the process of global warming. Net zero differs from absolute zero emissions, which means the complete cessation of GHG emissions.

PRIVATE CAPITAL: Capital invested exclusively by private sector actors (commercial banks, institutional investors, corporations, impact investors, and private equity or venture capital firms). It excludes investments from public entities such as development finance institutions (DFIs) and multilateral development banks (MDBs). While private capital is often market-priced with expectation of financial returns, it can also be used catalytically.

DEFINING DOMESTIC CAPITAL MOBILIZATION

For this report, local capital mobilization refers to investment from domestically based investors. The report primarily focuses on mobilizing in-country private capital on market terms with the support of catalytic capital and blended finance mechanisms.

Local currency financing refers to the provision of capital (through debt, equity, or grants) in the same currency as the borrower's revenue, thereby reducing exposure to exchange rate fluctuations and avoiding currency mismatches. It can be offered by domestic private investors or by international investors and development partners who either absorb or hedge the associated currency risk.

The report distinguishes between domestic, regional, and international capital mobilization within its analysis. It recognizes that while regional investments are aligned with the broader goals of local capital mobilization, the term "local" is used strictly to refer to domestic sources.

EXECUTIVE SUMMARY

With the demand for climate-responsive finance growing across Asia, domestic investors in the region are well-positioned to play a larger role in meeting financing needs for the transition. Increasing local investment towards climate finance can bring distinct advantages:

i. Local actors have a deeper understanding of the local investment landscapes and can align climate finance with more long-term objectives and local needs,

ii. Local actors invest in local currency, reducing the need for hedging costs, and

iii. Local actors can build a track record and create a demonstration effect for others to invest in climate-aligned sectors.

Moreover, with global reductions in official development assistance (ODA) as well as macroeconomic volatility reducing cross-border flows, the traditional sources of capital underpinning climate finance are at risk of declining. In view of this context, maximizing local investment is a critical priority. Host country governments have an important role to play by creating an enabling environment for climate finance, including by determining national investment priorities to achieve key climate targets as enshrined in their Nationally Determined Contributions (NDCs), capitalizing concessional capital facilities for private investment, and creating a favorable regulatory environment for investment in green sectors.

This report analyzes the enabling environment for climate investments in Southeast Asia, focusing on the role of local actors such as national governments, development banks, and private investors. In particular, this report focuses on the barriers and opportunities for climate finance flows from local sources in three countries: Indonesia, the Philippines, and Vietnam. Findings from this report indicate that despite capital needs and growing interest from local investors in climate finance, **the majority of capital flowing into climate sectors in the region is sourced from foreign investors**.

Part 1 of the report outlines key similarities and differences between overall climate finance and blended climate finance trends in the region.[1] Key findings include:

- Most Southeast Asian countries continue to rely heavily on international capital, with the exception of Vietnam and Singapore, with higher levels of domestic climate finance flows. Participation of local financial institutions remains limited in the region.
- Participation from domestic investors in blended finance deals remains very low, just 5% of total investment commitments, mirroring broader trends in climate finance where international capital plays a dominant role.

1 To understand the financing landscape in Southeast Asia and opportunities for increasing local capital mobilization, this report analyzes the broader climate finance market as well as the use of blended finance in the region, based on complementary analysis from Climate Policy Initiative's (CPI) Global Landscape Database and Convergence's Market Data on blended finance deals. The report refers to "primary capital flows that support greenhouse gas (GHG) emissions reductions and climate resilience activities" as climate finance, and "the use of concessional capital provided by public or philanthropic sources to increase private sector investments that explicitly aim to combat and/or respond to the effects of climate change in developing countries" as blended climate finance.

Part 2 and **Part 3** of the report provide a comparative assessment of domestic capital mobilization and the enabling environment, as well as an in-depth analysis of the barriers and opportunities for domestic climate finance in Vietnam, Indonesia, and the Philippines.

A comparison of **key trends in domestic capital mobilization** for climate action in Indonesia, the Philippines, and Vietnam reveals the following observations:

- The most active local investors in climate finance across all three countries are corporates, reflecting the important role of domestic project sponsors in the energy sector. However, there is limited diversity among these actors; climate finance activity is largely concentrated among well-capitalized corporates, often subsidiaries of large conglomerates, rather than a broad range of domestic firms.
- Institutional investors and domestic financial institutions play a limited role, while regional multilateral development banks (MDBs), development finance institutions (DFIs), and multi-donor funds have played a central role in shaping the enabling environment for blended climate finance across the countries.
- Financing for climate mitigation exceeds that for climate adaptation across all three countries, though the Philippines has been the most intentional on catalyzing adaptation financing.
- Vietnam and the Philippines have had limited government-led blended finance programs. While Indonesia has had higher levels of government-led programs, the country presents the most challenging policy environment for the energy transition. Meanwhile, Vietnam's high levels of local financing for climate finance showcase the role of a strong enabling environment for renewable energy investments.

Based on a detailed analysis of each country's **enabling environments,** various opportunities were identified for **increased domestic capital mobilization** in Indonesia, the Philippines, and Vietnam. The report emphasizes the critical role that blended finance can play in enhancing financial additionality and addressing market failures to ultimately encourage local investment into climate action.

- Blended finance can play a catalytic role in scaling local investments in nature-based solutions (NbS) and carbon markets by de-risking projects, leveraging private capital, and reducing high upfront costs associated with new climate sectors such as electric vehicle (EV) infrastructure.
- Blended finance and technical assistance can encourage local financial institutions and institutional investors to participate in large-scale project finance while also building their capacity to invest in the space.
- Guarantees are a valuable tool to address the tenor constraints faced by local financial institutions and institutional investors, encouraging more participation from these players at the local level.
- Green bonds present a significant opportunity across the three countries to mobilize local investment, including alongside global investors. Meanwhile, green finance taxonomies are a foundational step for standardization that can encourage more domestic investments into climate finance.

CONTENTS

INTRODUCTION

Mobilizing local capital is an essential component of effective and sustainable climate finance. **As the global climate finance gap continues to widen, relying solely on international funding sources is no longer sufficient to meet the scale of investment required for climate mitigation and adaptation.** Global reductions in ODA and macroeconomic volatility are contributing to reduced cross-border flows, making the traditional sources of capital underpinning climate finance at risk of declining. In this context, maximizing local investment is critical.

Local capital from domestic public budgets, private sector actors, and financial institutions can play a catalytic role in bridging this gap. Increasing local investment towards climate finance can bring distinct advantages:

i. Local actors have a deeper understanding of the local investment landscapes and can align climate finance with more long-term objectives and local needs,

ii. Local actors invest in local currency, reducing the need for hedging costs, and

iii. Local actors can build a track record and create a demonstration effect for others to invest in climate-aligned sectors.

Host country governments have an important role to play by creating an enabling environment for climate finance, including by determining national investment priorities to achieve key climate targets as enshrined in their NDCs, capitalizing concessional capital facilities for private investment, and creating a favourable regulatory environment for investment in green sectors. When strategically combined with concessional finance and international investments, local capital not only enhances the efficiency and scalability of climate projects but also ensures stronger local ownership, contextual relevance, and long-term resilience.

This report analyzes the enabling environment for climate investments in Southeast Asia and explores the potential of blended climate finance as a tool to unlock and leverage local capital, thereby accelerating climate action. It focuses on the barriers and opportunities impacting greater finance flows from local sources in three countries that account for 70% of total climate finance flows to Southeast Asia: **Indonesia, the Philippines, and Vietnam.**

The report is divided into three sections:

Part 1 of the report outlines key climate finance and blended climate finance trends in the region.

Part 2 provides a comparative assessment of the enabling environment for climate finance in Indonesia, the Philippines, and Vietnam, along with key takeaways and recommendations for fostering domestic capital mobilization across the countries.

Part 3 of the report provides an in-depth analysis of climate finance trends, barriers, and opportunities for domestic capital mobilization within each of the three countries.

PART 1: CLIMATE FLOWS TO SOUTHEAST ASIA

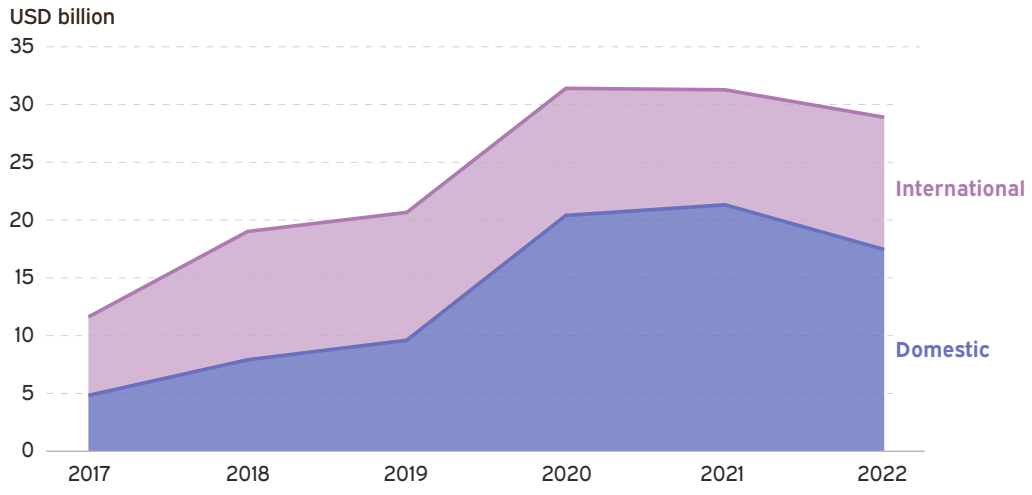
The International Monetary Fund (IMF) estimates that meeting climate mitigation and adaptation needs in emerging and developing Asia requires investment of at least USD 1.1 trillion annually (Lim et al 2024). While the region has adopted a proactive policy approach to enabling climate investments, climate finance mobilized for Southeast Asia remains much lower than the rest of East Asia and the Pacific region, and a significant financing gap remains (CPI 2023) to achieve NDCs and implement National Adaptation Plans (NAPs).

This section explores the landscape of climate finance in Southeast Asia, with a particular emphasis on the evolving role of blended finance within the broader climate finance ecosystem. It compares domestic and international capital mobilization patterns, examining how blended finance mechanisms are being utilized to attract commercial investment and close financing gaps in the region.

1.1 MARKET TRENDS

Climate Policy Initiative (CPI) tracked USD 142.5 billion in total climate finance flows to ten Southeast Asian countries between 2017 and 2022 (CPI 2024a). **Of this amount, more than half (USD 81.2 billion) was from domestic sources of financing due to exceptional levels of domestic climate investments in Vietnam and Singapore between 2020 and 2021** (Figure 1). As a subset of overall climate finance, blended climate finance in Southeast Asia has reached a cumulative value of USD 24.5 billion to date, across 132 transactions tracked by Convergence.[2]

Figure 1: Climate finance flows to Southeast Asia



Data source: CPI. 2024. Global Landscape of Climate Finance 2024: Insights for COP 29.

2 See Annex 1 for methodology notes related to the climate finance and blended finance datasets

1.2 COMPARING SOURCES OF CAPITAL FOR CLIMATE ACTION

In the broader climate finance landscape, domestic capital mobilization in Southeast Asia has been heavily concentrated in Vietnam and Singapore. In Vietnam, a significant surge in solar project development, spurred by the introduction of the feed-in tariff (FIT) policy in 2020, drove a large share of domestic financing. In fact, the three largest equity financing contributions from local corporations between 2017 and 2022 were directed toward solar projects in Vietnam.

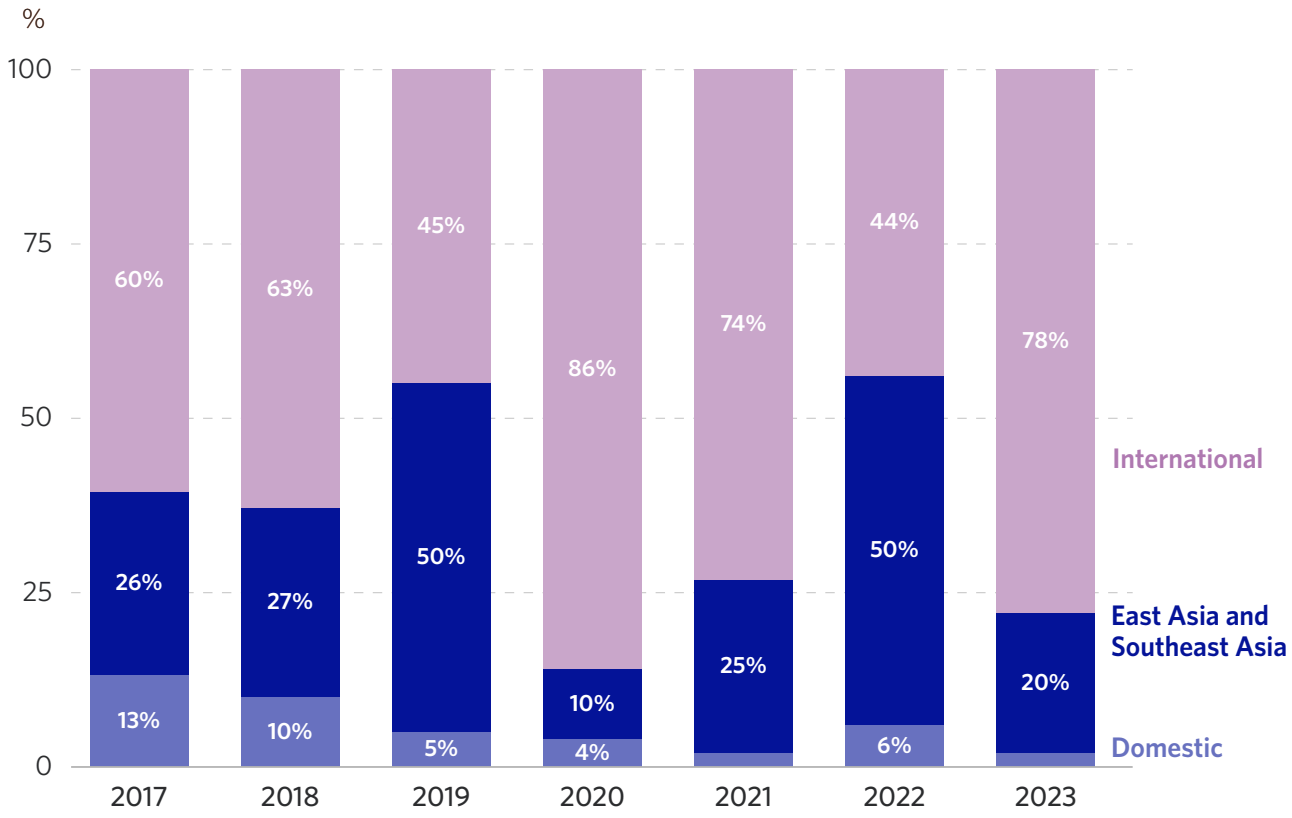
High levels of domestic financing in 2021 and 2022 can also be attributed to high volumes of green and sustainable bond issuances in Singapore. This includes, for example, the inaugural green bond issuance of SGD 1.65 billion (USD 1.23 billion) (Tan 2021) by Singapore's National Environment Agency and others issued by corporations.

The decline in climate financing from domestic private actors in 2022 parallels the decline in renewable energy investments by corporations in Vietnam (CPI 2024a) and the decrease in sustainable bond issuances in Singapore. These shifts reflect changing domestic market conditions and underline the fragility of private sector momentum in the absence of enabling policies or incentives.

In contrast, most other Southeast Asian countries continue to rely heavily on international capital. Although there has been a modest increase in domestic capital mobilization in recent years, the gap between domestic and international sources remains wide outside of Vietnam and Singapore.

For blended climate finance, the dominance of regional and international capital becomes even more pronounced. As observed in Figure 2, international investors and regional investors represent 66% and 28% of the investment commitments, respectively, in the blended climate transactions in Southeast Asia from 2018 to 2023 (Convergence 2024). Over 60% of the climate deals in Southeast Asia had at least one regional investor (Convergence 2024). Deals with more than one regional investor are often the result of participation from project developers and corporations that serve as project sponsors and tend to be domiciled in the region.

Figure 2: Blended Finance flows to Southeast Asia by investor domicile



Data source: Convergence Market Data

Conversely, domestic investors only represent, on average, 6% of the blended investment commitments (Convergence 2024). Those that do participate typically invest on commercial terms, rather than providing concessional capital. This imbalance reflects the dominant role of global investors, particularly DFIs, MDBs, and OECD-DAC governments, who have historically been the most consistent and significant providers of finance for blended climate transactions.

PART 2: DOMESTIC CAPITAL MOBILIZATION CROSS-COUNTRY COMPARISONS & TAKEAWAYS ACROSS INDONESIA, PHILIPPINES, AND VIETNAM

Southeast Asia presents a growing opportunity for climate-aligned local investments, particularly in Indonesia, the Philippines, and Vietnam—three economies with rising energy demand, climate commitments, and evolving financial ecosystems. These three countries account for 70% of total climate finance flows (CPI 2024a) to Southeast Asia. Yet, while key initiatives such as Just Energy Transition Partnerships (JETPs)—financing pledges and mechanisms designed to support coal-dependent emerging economies in transitioning to renewable energy—have provided important signals for investors, climate investments by domestic actors remain limited.

As shown in Part 1, local financing does exist within Southeast Asia's climate landscape, but it is unevenly distributed. Vietnam and Singapore stand out with stronger domestic contributions, while other countries remain more reliant on international flows. **Blended finance is designed to create financial additionality** by mobilizing capital that would not otherwise flow under current market conditions. It does so by addressing barriers such as policy gaps, limited commercial viability, and investor risk perceptions.

This section, along with the spotlights, **explores when blended finance can be used most strategically,** either as a complement to existing policies or as a tool to address regulatory challenges. It also **compares local climate finance trends across the three countries,** highlighting common patterns and country-specific differences in policy frameworks, financing flows, and private sector participation. It **examines how enabling environments, blended finance initiatives, and regulatory approaches have shaped investment outcomes at the local level.** The key takeaways underscore the opportunity for blended finance to support domestic capital mobilization, particularly in segments where policy or regulatory barriers continue to limit private sector participation in climate-aligned sectors. Detailed tables with comparisons across the three countries are available in Annexes 2, 3, and 4.

2.1. KEY TRENDS IN DOMESTIC CAPITAL MOBILIZATION AND BLENDED FINANCE FOR CLIMATE ACTION

2.1.1. Corporates are the dominant source of local investment in climate finance. This highlights the important role of domestic project sponsors in the energy sector. These corporations often play a first-mover role, both as project developers of large-scale energy projects, as well as investing in newer sectors such as the EV industry. In some instances, corporates have also participated in innovative blended finance mechanisms, such as green bonds, as a source of raising additional investment for green projects.

Yet, when it comes to financing major projects, domestic capital markets often cannot meet the full scale or structure of funding required. Large infrastructure and clean energy projects, in particular, demand long tenors, substantial ticket sizes, and flexible terms. Local financial institutions are often unable to meet these needs due to regulatory limits, counterparty restrictions, and limited project finance expertise. As a result, local project sponsors frequently turn to foreign lenders for raising capital, limiting local capital mobilization volumes.

Policy initiatives can help promote greater investments from local financial institutions into climate finance, including smaller actors. Regulatory initiatives, such as the implementation of Indonesia's Sustainable Finance Roadmap, outline a five-year strategy to mainstream environmental, social, and governance (ESG) considerations across the financial sector. Guarantees provided by the Philippines Guarantee Company (PhilGuarantee) in the Philippines have been successful in supporting borrowers, from established corporates to micro, small, and medium-sized enterprises (MSMEs), to secure longer tenor loans from local banks.

2.1.2. Larger and more well-resourced corporations are the ones providing and receiving climate finance. For instance, in the Philippines, it is often the well-resourced and well-capitalized corporates (subsidiaries of conglomerates) that are involved in renewable energy investments and that were mostly reliant on their own balance sheets to finance energy projects (until more recently, when greater revenue certainty was ensured in the renewable energy market through the Green Energy Auction Program introduced in 2022). Smaller renewable energy companies and sub-national actors, such as local government units (LGUs), have played only a limited role.

2.1.3. Domestic capital remains low in blended climate finance transactions, largely because DFIs, MDBs, and multi-donor funds dominate the market. By acting as anchor or first-in funders, these institutions help de-risk transactions and build investor confidence. However, this reliance on external actors is also one reason why domestic capital remains relatively limited in blended climate finance. Multilateral institutions such as the Asian Development Bank (ADB), the Japan International Cooperation Agency (JICA), and the Green Climate Fund (GCF) account for the largest share of blended climate finance in the region (Convergence 2024). Their dominant role, as the most consistent and significant providers of capital for blended climate transactions, has helped scale activity, but also underscores the continued dependence on international financing.

2.1.4. Foundations and philanthropic organizations, on the other hand, have played a relatively limited role in providing catalytic capital for blended climate finance. Development agencies and donor-funded pools account for 61% of concessional finance directed toward blended climate transactions in Southeast Asia, while grants from foundations and NGOs make up around 20% (Convergence 2024). However, with unprecedented cuts to ODA since 2024, foundations will need to play an increasingly important role. Convergence Market Data shows that two-thirds of foundation investments are made on concessional terms. Unlike DFIs and MDBs, foundations are often more willing to take on higher-risk transactions, positioning them uniquely to act as catalytic capital providers.

2.1.5 Financing for climate mitigation exceeds that for climate adaptation across all three countries, though the Philippines has been the most intentional on catalyzing adaptation financing. Of the three target countries, the Philippines has taken the most proactive policy approach to bolstering adaptation financing, driven by policies such as mandatory credit requirements in the agricultural sector. These policies have been successful in stimulating greater financing for adaptation relative to Indonesia and Vietnam: adaptation financing in the Philippines was 32% of total climate financing, compared to 4% and 22% in Vietnam and Indonesia, respectively.

2.1.6. Vietnam and the Philippines have had limited government-led blended finance programs, while the Government of Indonesia has been more proactive. Such programs can serve as coordinated financing platforms that combine grants, concessional loans, and commercial funding to offer below-market-rate or long-tenor financing to local actors. These platforms can be designed to increase access to diverse funding sources for strategic projects, mobilize and coordinate private sector support for government priorities, and reduce the fiscal burden on the state in financing initiatives aimed at achieving the SDGs.

PT SMI's SDG Indonesia One initiative represents the largest government-backed blended finance platform in Southeast Asia, whereas disbursements from government actors in the Philippines and Vietnam have been modest. The Government of the Philippines provides some instruments, such as guarantees through the Philippine Guarantee Corporation, while the Government of Vietnam has yet to offer blended finance mechanisms directly. A more active role for government-led strategies in Vietnam and the Philippines would align blended finance more closely with national climate priorities outlined in their NDCs and NAPs.

2.1.7. Indonesia stands at a pivotal point, with the greatest potential to strengthen its policy environment for the energy transition. While all three remain reliant on fossil fuels, Indonesia's policies are particularly supportive of continued coal production, exemplified by the Domestic Market Obligation, which requires coal producers to sell a portion of their output at capped prices to the state-owned utility PT PLN. At the same time, Indonesia has been a regional leader in blended finance initiatives, mobilizing capital for renewable energy through mechanisms such as JETPs and Energy Transition Mechanisms (ETMs). However, current policy and financing efforts, taken together, remain insufficient to align with the country's decarbonization targets, given the continued incentives for coal production.

2.1.8. Vietnam's high levels of local financing for climate finance showcase the role of a strong enabling environment. The country recorded the highest share of local financing among the three countries, driven largely by feed-in tariffs (FITs) that attracted 60% of climate finance, primarily into solar energy, between 2020 and 2022 (CPI 2024a). While these tariffs successfully boosted generation capacity, they were less aligned with Vietnam's long-term energy requirements. The experience illustrates how targeted policies can rapidly mobilize investment into emerging climate sectors, though sustained private sector engagement will depend on addressing broader energy system needs.

2.2. KEY TAKEAWAYS ON DOMESTIC CAPITAL MOBILIZATION FOR CLIMATE ACTION

2.2.1. Blended finance can play a catalytic role in scaling nature-based solutions (NbS), adaptation, and carbon markets by de-risking projects to attract domestic private capital. Across all three countries, there is a lack of local investment in NbS and adaptation projects, mainly as a result of unfamiliarity with the space and risk perceptions (despite national climate priorities, for instance, in the Philippines). Project preparation grants, concessional loans, and first-loss tranches, acceleration support, and local capacity building are some of the blended finance tools that can be leveraged to grow domestic investments in these more challenging sectors.

Design-stage grants are particularly important, as blended finance transactions can often be complex, time-intensive, and costly to structure. By funding feasibility studies, proof-of-concept work, and other early-stage activities, design-stage support enables transactions that might otherwise be considered too risky or complex. The Asia Climate Solutions (ACS) Design Grant Window, managed by Convergence with commitments from The Rockefeller Foundation, Monetary Authority of Singapore (MAS), the Australian Department of Foreign Affairs and Trade (DFAT), The Olayan Group, and the UBS Optimus Foundation, provides such funding for the design, development, and launch of innovative blended finance solutions in priority climate mitigation and adaptation sectors in Asia.

Another example is a dual-facility approach, which combines a grant window, often used to provide technical assistance, with an equity or debt fund to scale successful grantees. The Nature Catalyst, a USD 100 million blended finance facility designed by Palladium International with support from a Convergence feasibility grant (through the Asia Climate Solution window), illustrates this potential. Its dual structure integrates the Nature Catalyst Incubation Facility, which provides grants and technical assistance to early-stage, locally led NbS initiatives, with the Nature Catalyst Fund, which offers tailored capital to scale these projects.

Moreover, platforms such as IDX Carbon (Indonesia's national carbon exchange launched in 2023) provide essential market infrastructure that can complement blended approaches by facilitating credit transactions from NbS and adaptation projects, as well as from Technology-Based Solutions (TbS). When paired with targeted financing mechanisms, these platforms can play a catalytic role in channeling domestic investment into climate-resilient initiatives.

2.2.2. Blended finance can also drive the growth of the broader energy ecosystem, ultimately encouraging local investors to join. Blended finance tools, such as concessional debt and equity, have significant potential to catalyze electricity generation in off-grid areas and advance renewable energy development beyond electricity generation, supporting critical areas such as energy storage, grid stability, and transmission and distribution upgrades. Concessional finance can reduce the weighted average cost of capital and mitigate the high upfront costs associated with renewable energy infrastructure, ultimately allowing more actors, particularly domestic ones, to participate in investments.

In the Philippines, a portfolio approach has proven effective in reducing transaction costs, as small renewable projects often require the same due diligence as large-scale ones. By aggregating demand, overhead costs can be reduced and passed through to borrowers as lower loan pricing or more favorable terms. For example, the Association of Isolated Electric Cooperatives aggregated demand for off-grid solar projects, supported by equity from InfraCo Asia and technical assistance from the Private Infrastructure Development Group (PIDG).

In Indonesia, ADB's ETM aims to scale up renewable energy and accelerate coal plant retirement by reducing financing costs through the combination of low-cost public and philanthropic funds with commercial capital. ETM also uses blended financing to ensure that existing shareholders are compensated fairly and not affected by early retirements.

2.2.3. Strong presence of regional MDBs, DFIs, and multi-donor funds can create demonstration effects for local private actors. Their involvement can strengthen local financial markets by channeling investment into nascent sectors such as EV infrastructure and water systems, supporting energy transition mechanisms, and providing TA to domestic financial institutions. Deeper collaboration between regional and international actors, as well as local investors, could generate stronger spillover effects and encourage more participation from domestic players.

2.2.4. Technical assistance and capacity building are critical to increasing the participation of local financial institutions in climate finance. Such efforts help local banks build familiarity with risk assessments of infrastructure projects and local borrowers perceived to have low creditworthiness, as well as technical aspects and time horizons related to land use and NbS projects, financial structuring, and collaboration with global counterparts. In established infrastructure sectors such as clean energy, TA has often served as a key precursor to local investment, sometimes proving more influential than de-risking instruments like guarantees or first-loss financing.

The Greening the Banks initiative, led by Allotrope Partners, illustrates this role. Supported by donors, the program collaborates with local philanthropies in Vietnam to build capacity and improve understanding of clean energy within local and regional financial institutions.

The Climate Smart Shrimp Fund (CSSF),[3] a USD 100 million blended finance revolving debt fund conceptualized by Conservation International, aims to finance sustainable shrimp farming while restoring degraded mangrove ecosystems in Indonesia. The accompanying technical assistance facility will support farmers in adopting the CSS model by providing training on best management practices, monitoring mangrove restoration, and deploying specialized expertise such as environmental engineers for pond grading and nursery teams for mangrove replanting.

2.2.5. Guarantees address the tenor constraints faced by local financial institutions and institutional investors. In all three countries, commercial banks face significant constraints in offering the long tenors often required for project finance — sometimes 20 years or more. These limits stem from balance sheet restrictions and the limited-

3 The CSSF was supported by both CPI's Global Innovation Lab for Climate Finance (the Lab) as a proponent in 2022, as well as by Convergence's Asia Climate Solutions window, with a feasibility grant.

recourse nature of such loans, which depend solely on project cash flows. As a result, local banks remain focused on short-term, smaller-scale renewable energy projects. Expanding the use of liquidity extension guarantees, such as those offered by GuarantCo, can unlock 15–20 year maturities. This allows domestic banks and institutional investors to take part in large-scale, long-term climate projects that are currently out of reach. In the Philippines, guarantees from the PhilGuarantee, the principal agency for state guarantee finance, have supported local banks in issuing longer tenor loans.

2.2.6. Green bonds present a significant opportunity to mobilize local investment, including alongside global investors. Key benefits include the ability to adopt a portfolio approach that bundles smaller deals, to provide corporates with an avenue to raise additional financing (e.g., Ayala's sustainability-linked bond), to offer longer tenors suited to institutional investors such as insurance companies and pension funds, and to enhance liquidity. Issuing green bonds in local currency further reduces hedging costs and currency risk for domestic investors. In Indonesia, the regulatory environment has advanced to include faith-based financing instruments, such as Green Sukuk and Waqf Sukuk, which align with culturally specific investment mandates and have proven attractive to local investors. With 85% of the population identifying as Muslim, faith-based social financing is deeply rooted in society, reinforcing the relevance of these instruments in the domestic context.

However, given the complexity of issuing such instruments, along with potential liquidity and demand challenges, TA has played a crucial role in supporting issuers in meeting international sustainability standards. For example, the Global Green Growth Institute (GGGI), through the Vietnam Green Bond Readiness Program funded by the Government of Luxembourg, has been helping issuers align with the Green Bond Principles of the International Capital Market Association (ICMA).

In addition, guarantees from institutions such as GuarantCo, backed by its investment-grade credit rating (AA-/A1), have provided credit enhancement to private sector lenders and bond investors, improving the attractiveness and bankability of green bond issuances.

2.2.7. A green finance taxonomy is a foundational step for increasing domestic investments into climate finance. A sustainable and standardized taxonomy can provide an important signal to local private investors towards investing in green finance. In recent years, all three countries have implemented, or are in the process of implementing, a green taxonomy to help provide an investment framework aimed at familiarizing private investors with climate-aligned sectors (including both adaptation and mitigation) and developing a common understanding and definition. A green taxonomy can serve as both a foundation and a complement to national climate plans (such as NDCs and NAPs) and climate finance vehicles, helping to channel investments into green bonds, project finance, and climate funds.

To ensure interoperability, green taxonomies should align with and be compatible with other established frameworks. As an example, Indonesia's and the Philippines' taxonomies for sustainable finance align with the Association of Southeast Asian Nations' (ASEAN). In Vietnam, the Ministry of Natural Resources and Environment (MONRE), the Ministry of Finance (MOF), and the State Bank of Vietnam are jointly developing a national green taxonomy that is expected to align with the European Union (EU)

Taxonomy closely. In parallel with this government-led initiative, Germany's development agency, GIZ, is supporting financial institutions by building their capacity to finance green projects. Through its Shifting Investment Flows Towards Green Transformation (SHIFT) project, GIZ provides technical expertise, tools, and internationally recognized best practices to help institutions in Vietnam integrate sustainability considerations into their operations.

PART 3: COUNTRY SPOTLIGHTS

By spotlighting Indonesia, the Philippines, and Vietnam, this section examines how each country's blended finance architecture, regulatory evolution, and institutional platforms are nurturing domestic capital flows toward climate-related investments—and identifies strategic pathways to accelerate progress. While these countries have made progress in developing climate policies and attracting international funding, challenges persist in scaling domestic capital flows toward climate-related investments. These include regulatory constraints, limited financial sector readiness, underdeveloped green finance markets, and weak coordination between public and private actors. At the same time, emerging opportunities, such as growing investor interest in ESG, innovations in green financial instruments, and national commitments to energy transition, present strong foundations for unlocking domestic capital.

Each spotlight aims to identify practical entry points for strengthening local capital mobilization as part of a broader blended finance strategy. Each country spotlight highlights key policies and initiatives that have contributed to creating an enabling environment, while also identifying barriers that continue to hinder climate finance flows. The section concludes by outlining the potential opportunities for narrowing the climate financing gap and enhancing the mobilization of local capital.

3.1. INDONESIA

3.1.1. OVERVIEW

Indonesia's energy sector is the country's largest source of greenhouse gas emissions, with fossil fuels dominating the energy mix (Ministry of Energy and Mineral Resource 2023) coal accounts for 40%, followed by oil (30%) and gas (17%). Over the past two decades, coal's share has more than doubled (World Bank 2023). To address this, the government has introduced energy transition policies through the National Energy General Plan (RUEN), including a moratorium on new coal plants and a cap on existing coal operations by 2050. Several international climate initiatives—such as the Just Energy Transition Partnership (JETP) and the Energy Transition Mechanism—as well as domestic blended finance platforms like SDG Indonesia One, have been introduced to support the transition away from coal dependency.

However, mobilizing domestic capital remains a challenge due to market risks, policy distortions, and structural barriers. Blended finance is key to bridging these gaps, particularly in energy infrastructure, NbS, and long-tenor financing. Success will depend on continued reforms, strong local intermediaries, and better investment tools to unlock local private sector participation.

3.1.2. KEY DATA TRENDS

Indonesia relies heavily on international sources of climate finance. From 2017 to 2022, 73% of climate finance in Indonesia (CPI 2024a) came from international sources,

which is significantly higher than in Vietnam or the Philippines. This reliance on foreign capital is underpinned by Indonesia's investment-grade sovereign credit rating, which enhances investor confidence and facilitates funding from global capital markets.

Domestic climate finance is limited and public-led. In contrast, only 27% of climate finance in Indonesia originated from domestic sources (CPI 2024a), with the public sector accounting for the majority. Domestic private sector participation remains modest, constrained by high perceived risks, a limited project pipeline, and shallow capital markets.

Blended finance in Indonesia is catalyzed by PT Sarana Multi Infrastruktur (PT SMI) and other government-led initiatives. PT SMI's SDG Indonesia One platform has mobilized USD 3.2 billion across 111 projects, blending public and private capital. It is also accredited by the GCF, providing direct access to large-scale concessional finance. Project-specific special purpose vehicles (SPVs) are the dominant transaction model, enabling local investors to participate through de-risked vehicles. While international concessional investors dominate blended finance, domestic contributions remain small—just 10% —primarily from corporations and project developers. Risk mitigation tools (guarantees, risk insurance, and TA) have played a critical role in attracting local investors, especially in early-stage or complex infrastructure projects.

Public-Private Partnerships (PPPs) have emerged as a key vehicle for domestic investment in infrastructure, including renewable energy, transport, and water. PPP structures facilitate private investor participation through both equity and debt, while the government provides catalytic capital to mitigate risk. Domestic investors in PPP projects have participated via co-investments with the Indonesia Investment Authority (INA) and through debt instruments such as specialized mutual funds (RDPTs). Their structured nature and public backing help attract risk-averse domestic capital.

Green bonds are gaining traction among local investors, though the market remains dominated by foreign currency issuance. In 2018, PT SMI issued the country's first corporate green bond—IDR 3 trillion (USD 225 million), rated idAAA—which was oversubscribed, drawing interest from insurance companies, pension funds, banks, and mutual funds. This highlights the potential of listed, investment-grade instruments to align with the preferences of domestic institutional investors. However, around 69% of green bond and sukuk issuances remain denominated in foreign currency, underscoring the continued dominance of international capital. To encourage more domestic participation, the Indonesian Financial Services Authority Regulation POJK 18/2023 expanded the green finance framework, which focuses not only on emission reduction and environmental impact, but also on broader sustainability aspects (e.g., social and biodiversity considerations) and includes culturally aligned instruments such as Green Sukuk and Waqf Sukuk, appealing to faith-based investors.

3.1.3. BARRIERS & OPPORTUNITIES: DOMESTIC CAPITAL MOBILIZATION FOR CLIMATE ACTION

BARRIER 1: COAL PRICING POLICIES (DMO) AND FEED-IN TARIFFS (FITS)

Indonesia's coal pricing scheme, particularly the Domestic Market Obligation, requires producers to sell a portion of their output to PT PLN at capped prices well below international market levels. While this lowers PT PLN's power generation costs, it also places downward pressure on electricity prices across the system.

Fossil fuel subsidies have also accounted for 9% of total government spending over the past five years, compared to just 6% allocated to climate-related expenditures (CPI 2024b). This imbalance not only skews energy economics but has also contributed to an oversupply of electricity, limiting IPPs' ability to secure Power Purchase Agreements (PPAs) and access project financing.

The renewable energy sector has faced additional hurdles. The 2012 introduction of FITs was intended to promote renewables, but set price levels too low to be economically viable. This challenge was compounded by Indonesia's location-based tariff system, which added complexity and implementation delays. As a result, Indonesia's renewable energy development lags behind that of neighboring countries such as the Philippines and Vietnam.

OPPORTUNITY 1: TO COMPENSATE FOR DISTORTIONARY POLICIES, BLENDED FINANCE CAN PLAY A DUAL ROLE IN THE INDONESIAN ENERGY SECTOR.

Blended finance can help redirect private sector interest towards segments that are currently perceived as less commercially viable yet essential, such as energy storage, transmission/distribution upgrades, and variable renewable energy (VRE). While renewable generation has grown, Indonesia's national grid has lagged behind, revealing systemic gaps, especially highlighted by PT PLN's oversupply crisis, which underscores the lack of a resilient, integrated energy value chain.

Private investors are showing growing interest in energy storage, seen as a bankable, tangible asset, and in transmission and distribution upgrades, especially in underserved regions where weak grid infrastructure hinders VRE integration. In some of these regions, securing agreements with PLN may also be more feasible. However, domestic financial institutions remain cautious, largely due to limited experience with VRE projects and concerns over risk and bankability. **Blended finance tools, such as guarantees, concessional capital, and technical assistance, can help de-risk these investments,** enabling domestic lenders and developers to participate in modernizing the grid and scaling storage solutions.

Blended finance can also incentivize early coal phase-out, especially in a policy landscape distorted by subsidies and long-term PPAs. Indonesia's regulatory framework requires PT PLN to honor long-term PPAs, which makes early coal retirement complex: PT PLN must continue making payments even if a plant is decommissioned. The Cirebon-1 coal-fired power plant, which is part of both the JETP and ADB's ETM, provides an example of how blended finance can play a role: In November 2022, a memorandum

of understanding was signed between the local independent power producer, ADB, and the government of Indonesia to retire the plant seven years ahead of schedule, moving the closure from 2042 to 2035. The deal involves USD 300 million in blended financing, combining concessional and private capital to refinance outstanding debt and compensate the project owner for lost revenue under the PPA.[4]

BARRIER 2: LIMITED CAPITAL FLOWS TO NATURE-BASED SOLUTIONS (NBS)

Sustainable land use receives a significant share of climate-aligned investment in Indonesia—primarily driven by flows into certified palm oil.[5] However, investment in more inclusive and community-based models—such as NbS, smallholder forestry, and regenerative agriculture—remains limited due to lack of more complicated financial structuring and longer return horizons—factors that make them less attractive to mainstream capital. Commercial viability and revenue certainty remain critical challenges.

"Banks are reluctant to fund agriculture in places like Indonesia because they see too much inherent risk, such as crop failures, disease outbreaks, and a general decline in productivity. There's not been enough investment in the sector, which remains largely unmodernized. There's no organized agricultural extension service and not enough institutional support for rural areas, despite frequent talk about improving access to finance."

- ADM Capital

These issues are compounded by a broader financing gap often described as the "missing middle," which refers to the space between proof-of-concept and investment readiness. Even promising NbS ventures emerging from early-stage grant windows often remain far from bankable due to inadequate financial structuring, weak governance, and underdeveloped business models.

"We saw a lot of interesting ventures coming out of our Asia Natural Capital Design Funding Window, some with feasibility studies, some with proof of concepts, but they still had a long way to go before they are deemed investable by institutional investors. That missing middle is where most nature-based projects stall. They're too early for more established impact investment and institutional capital, yet too complex for traditional philanthropy and therefore this is where catalytic capital really plays a key role."

- RS Group

4 While this case demonstrates the potential of blended finance in enabling early coal retirement, replicating and scaling this approach remains a major challenge due to the complexity of deals, regulatory constraints, and financing requirements.
5 CPI finds that 54% of climate-aligned investment went to sustainable land use and natural resource management (CPI 2024a).

Yet, Indonesia's enhanced NDC states that over 60% of national emission reductions are expected to come from the Forestry and Other Land Use (FOLU) sector. The Ministry of Environment and Forestry has set a goal for FOLU to become a net carbon sink by 2030, which will require large-scale restoration of peatlands and degraded forests. A massive scale-up of investment is required to meet this goal.[6] Without support for project preparation, governance strengthening, and early-stage investment, these initiatives will struggle to move from potential to implementation.

"The Social Forestry Program has opened the door for us to become active in Indonesia's forest land sector. It creates the legal foundation for cooperation with local communities. However, many cooperatives need further support, particularly in governance, financial management, and access to working capital. With the right capacity building and investment, there's real potential to turn these areas into thriving, sustainable landscapes."

- Fairventures Social Forestry

OPPORTUNITY 2A: INDONESIA'S FOLU AND CARBON TRADING POLICIES CAN SEND STRONG SIGNALS FOR PRIVATE AND LOCAL INVESTMENTS TOWARDS NBS

The FOLU Net Sink 2030 target, which commits that the FOLU sector will absorb more GHG emissions than the amount it emits, has provided policy certainty and long-term direction by signaling national-scale demand for restoration and sustainable land use. To achieve this, the government is advancing initiatives focused on reducing deforestation and forest degradation, enhancing forest restoration, and promoting sustainable land management. For example, while still in development, the Social Forestry Program could serve as a significant project pipeline when paired with blended finance mechanisms and appropriate investment tools. Practical models like Fairventures Social Forestry are already demonstrating success. By blending grants, soft loans, and equity, Fairventures supports cooperatives under the Social Forestry Program with working capital, TA for reforestation, and profit-sharing arrangements with local communities. These models show how blended finance can make smallholder-led initiatives more bankable and scalable.

Market infrastructure in Indonesia is also gradually improving. The IDX Carbon platform, launched in 2023 and opened internationally in 2025, enables domestic carbon trading. The government is actively preparing forestry-sector offsets, and strong buyer interest suggests future demand for credits from high-quality NbS projects. Additional incentives have been introduced to encourage greater participation from local financial institutions in climate finance, particularly around green bonds and IDX Carbon. To support the development of the green bond market, the Indonesian Financial Services Authority has

6 One implementation channel by the Government of Indonesia is the Social Forestry Program, which has allocated nearly 7 million hectares of long-term land leases to smallholder cooperatives. While the program aims to strengthen land tenure and promote inclusive forest management, many cooperatives lack the operational capacity and working capital to design and deliver viable projects. Source: World Bank, Climate Action Game Changers: The Forest Story from Indonesia

reduced the registration fee for public offerings of green bonds by 25% in comparison to normal bonds, while the Indonesia Stock Exchange has halved the annual listing fee. In parallel, the IDX Carbon platform has waived registration fees for participants until September 2025 and removed listing fees for the project owner to promote engagement in carbon trading.

OPPORTUNITY 2B: REGIONAL FAMILY OFFICES AND PHILANTHROPY CAN PROVIDE CRITICAL SUPPORT TO NBS THROUGH PROJECT PREPARATION GRANTS AND ACCELERATION SUPPORT

Terratai, a venture builder based in Bali and incubated by the Hong Kong based family office, RS Group, provides deep operational support and catalytic capital to early-stage NbS ventures in Indonesia. By providing financial and venture building support over a 3-5-year period, it enables ventures to mature into more investable entities. However, as RS Group acknowledges, this model still requires time to prove its economic sustainability as it is resource-intensive and requires ongoing support from catalytic or philanthropic capital. Fortunately, due to Terratai's unique role in the sector, it has attracted support from organisations like UBS Optimus Foundation, SwissRe Foundation and government related entities such as the Australian Department of Foreign Affairs and Trade.

OPPORTUNITY 2C: LOCAL GOVERNMENT PROGRAMS CAN ACT AS CRITICAL INTERMEDIARIES FOR BLENDED CLIMATE FINANCE FROM DOMESTIC SOURCES

The blended climate finance market is fragmented in the country, with a lack of intermediation for challenging global investment to smaller-scale projects, such as NbS. Local government programs, such as the BPDLH (Public Agency for Environment Fund Management), can play an intermediary role. A CPI study explains in detail the role and potential of BPDLH as the "financing hub" for environmental programs in Indonesia that can receive and manage both state and non-state funds (CPI 2020). It acts as a financial intermediary for the World Bank's Forest Carbon Partnership Facility Carbon Fund, a results-based finance mechanism supporting emissions reductions from deforestation and forest degradation (REDD+). BPDLH continues to serve as a key national platform to channel and manage both public and donor resources. Its role in results-based finance and capacity to administer blended finance makes it critical to scaling NbS investments.

BARRIER 3: MISMATCH IN LOAN TENOR FINANCING LIMITS DOMESTIC INVESTMENT

A significant barrier to domestic bank participation in climate-aligned infrastructure and renewable energy projects in Indonesia is the mismatch in loan tenors. While the average loan tenor ranges from seven to eight years for factory and industrial projects, infrastructure and renewable energy projects typically require loan tenors of at least 20 years. In general, Indonesian banks are reluctant to invest in long-tenor, high-capital expenditure sectors like renewable energy or resilient infrastructure.

Amongst domestic lenders, repayment risk is a top concern, particularly in deals with unfamiliar technologies or extended payback periods. Most project finance in Indonesia follows a non-recourse or limited-recourse structure, which means lenders rely solely

on project cash flows for repayment, without access to sponsor balance sheets or physical collateral. This is further constrained by Law No. 1 of 2004 on State Treasury (Republic of Indonesia 2004) which prohibits the use of state-owned assets as collateral in financial transactions.

This challenge is compounded by the limited availability of blended finance platforms and guarantee mechanisms outside the PPP model. While institutions like the Indonesia Infrastructure Guarantee Fund (IIGF) support public-private partnerships, many climate-aligned infrastructure projects, particularly those without direct government contracting support, lack access to risk-sharing instruments. These non-PPP projects often fall into a support gap, where neither commercial lenders nor concessional finance providers are able to absorb the risk.

"There is a need for a proper risk allocation framework, along with instruments such as de-risking facilities, to improve project feasibility and enable more projects to move forward."

- PT SMI

However, the institutional capacity to deliver these tools at scale remains limited. Without stronger structuring platforms, TA, and risk-sharing facilities, local investment will remain underutilized across Indonesia's broader climate finance landscape.

OPPORTUNITY 3A: UNLOCKING CAPITAL FOR LONG-TENOR PROJECTS THROUGH GUARANTEES

The mismatch in loan tenors and exposure to repayment risks further highlights the importance of blended finance guarantees. One key institutional mechanism supporting this is IIGF, a Special Mission Vehicle under the Ministry of Finance. IIGF offers project-based sovereign guarantees for PPP projects to cover political and contractual risks from government contracting agencies to improve project bankability. IIGF also launched the Smart Hub, a platform designed to improve coordination among local lenders, investors, and regional governments to better understand project-level risks for PPP projects and ensure that early-stage support is matched with financing pipelines. Complementing these efforts, the Ministry of Finance recently issued Regulation No. 5/2025, introducing a government guarantee scheme to support energy transition and renewable energy projects, including risk coverage for geothermal exploration.

Blended finance actors such as GuarantCo (a Private Infrastructure Development Group affiliate) play a key role in expanding long-term lending through **liquidity extension guarantees**, which cover up to 50% of long-tenor loans, enabling local banks to participate in deals with 15–20-year repayment horizons, durations typically out of reach in the domestic lending market (PIDG 2025).

OPPORTUNITY 3B: CREATING LOCALLY DOMICILED SPECIAL PURPOSE VEHICLES (SPVS) THAT ARE TAILORED TO LOCAL INVESTOR RISKS

In response to the barriers faced by local financial institutions, blended finance practitioners should consider setting up locally-domiciled SPVs that better appeal to local investors. For instance, Fairventures implemented a dual-vehicle structure with a separate SPV established in Indonesia to focus on local fundraising. This approach allows them to tailor financial engagement to local investor risk perceptions (for example, currency risk) while leveraging blended finance instruments, such as guarantees, to de-risk projects and improve bankability.

3.1.4. CASE STUDY: PT SARANA MULTI INFRASTRUCKTUR - GRESIK DRINKING WATER SYSTEM (SPAM) PROJECT

The PT Sarana Multi Infrastrucktur SPAM Project case study illustrates the **role of government-led blended finance initiatives in mobilizing local private sector capital.** The financial structure of the SPAM Project demonstrates how a combination of instruments, including TA, syndicated lending, local equity, and take-out financing, can accelerate infrastructure development with local capital.

PT Sarana Multi Infrastruktur – Gresik Drinking Water System (SPAM) Project

SDG Indonesia One, a blended finance platform launched by PT Sarana Multi Infrastruktur (PT SMI), a special mission vehicle under Indonesia's Ministry of Finance, was established to mobilize public and private financing toward sustainable infrastructure aligned with the Sustainable Development Goals. The platform acts as a coordinated financing facility, comprising grants, concessional loans, and commercial funding, with a total capital commitment exceeding USD 3.2 billion as of March 2025. SDG Indonesia One is an umbrella platform that pools resources from various donors, development institutions, and private investors to de-risk infrastructure projects across Indonesia.

SDG Indonesia One supported the Gresik Drinking Water System (SPAM) Project, a climate adaptation initiative aimed at developing a large-scale water supply system in Gresik Regency in East Java, Indonesia. The project seeks to provide clean and reliable drinking water to meet the growing needs of both residential communities and industrial users in the region. It reached financial close in July 2022 and started commercial operation in August 2022. Building on the success of the SPAM Project, the blended finance model has been replicated in the SPAM Dumai Project, which follows the same public-private collaboration model supported by PT SMI and development partners. The financial design of the Gresik Drinking Water System (SPAM) Project showcases how blended finance, including TA, syndicated lending, local equity, and take-out financing,can accelerate infrastructure deployment.

Capital Structure

- Senior-term loan facility: PT Indonesia Infrastructure Finance (PT IIF) (USD 28 million).
- Equity: PT Pembangunan Perumahan Krakatau Tirta, the project sponsor (USD 12 million).
- Anchor offtaker: PDAM Giri Tirta (providing revenue stability through long-term purchasing commitments in a PPP model).
- Total project cost: IDR 600 billion (approx. USD 40 million).

Technical Assistance

- TA grants through the United States Agency for International Development (USAID) Indonesia Urban Water, Sanitation and Hygiene (IUWASH) program to conduct **off-taker feasibility studies and assess the demand and operational readiness of the local water utility intended to purchase bulk water from the project.**
- European Union/KfW Strengthening Investment in Water Infrastructure (S4I) program to conduct l**egal due diligence, ensure regulatory compliance, and enhance overall bankability of the transaction**.

Impact & Performance

- Expected to benefit approximately 90,000 households (including in underserved regions)
- Monitored indicators include **service expansion, infrastructure capacity, and water quality improvements.**
- Early progress suggests that infrastructure deployment is on track to meet the government's 60% coverage expansion target, contributing directly to health, sanitation, and climate resilience goals in Indonesia.

Lessons Learned & Structural Innovations

The Gresik project highlighted the critical importance of:

- **Robust contractual arrangements** between the project developer and the off-taker (PDAM).
- Clear **alignment between municipal authorities, the PDAM, and the private sponsor.**
- Attention to **pipeline design, metering accuracy**, and strategies to control **Non-Revenue Water**, which directly impact repayment capacity.

These insights have influenced risk structuring in follow-on transactions and strengthened lender confidence. The success of the Gresik SPAM Project has attracted interest from other **development partners and DFIs**, including **ADB**, which have since explored participation in similar initiatives.

3.2. THE PHILIPPINES

3.2.1. OVERVIEW

Climate adaptation has emerged as a clear priority in the Philippine government's climate agenda. Initiatives to increase financing for climate adaptation include the Agri-Agra Reform Credit Act, which introduced mandatory lending requirements for agriculture and agrarian reform beneficiaries (ARBs), and the People Survival Fund, a special fund in the National Treasury to finance adaptation projects of local government units (LGUs) and community organizations. Meanwhile, Bangko Sentral ng Philipinas (BSP), the central bank of the Philippines, is iterating on the Sustainable Finance Taxonomy first issued in 2024 to further guide investment activities with the priorities of the NAP.

Since 2022, BSP has also issued a series of regulations to unlock sustainable financing at large, including amending regulations on the single borrower's limit, reducing the applicable reserve requirement for green bonds, and allowing for banks to comply with the mandatory agricultural credit requirement through sustainable financing. While the Philippines mobilized the lowest amount of climate financing at USD 22.5 billion (CPI 2024a) and the lowest volume of blended climate finance deals at USD 2.6 billion between 2017 to 2022 (Convergence 2024), it remains to be seen whether the incentives issued by BSP will be effective in mobilizing greater volumes of domestic capital for climate action.

3.2.2. KEY DATA TRENDS

International climate finance is dominant in the Philippines, as is the case in Indonesia. Financing from international actors (84%, principally from the broader East Asia and Pacific region), far exceeds that of domestic actors (CPI 2024a). Bilateral DFIs are key players, including JICA (one of the top providers of concessional capital in blended climate finance transactions in the Philippines) (Convergence 2024). The anticipated transition (World Bank 2024) of the Philippines from lower middle income country status to upper middle income country status will likely reduce access to some concessional financing, raising concerns about levels of climate financing in the future.

Domestic climate financing is primarily private sector-led. Domestic commercial financial institutions and corporations have primarily financed renewable energy companies that are owned by local conglomerates (80% of loans from domestic commercial financial institutions are channeled towards the renewable energy sector).

Climate financing for the energy sector in the Philippines was significantly lower than in Vietnam and Indonesia during the period 2017-2022. This gap is largely due to delayed government efforts to provide revenue certainty for renewable energy projects. The feed-in tariff (FIT) scheme implemented from 2011 to 2019 had limitations, as investor eligibility could only be confirmed at the project's commissioning stage—creating uncertainty and discouraging early investment. However, more recent policy developments, such as the establishment of the Renewable Energy Market rules and the launch of the Green Energy Auction Program, have improved regulatory clarity. As a result, climate finance for renewable energy has increased since 2023.

Philippines Guarantee Corporation (PhilGuarantee) plays an important role in de-risking and catalyzing domestic commercial lending to climate activities. PhilGuarantee, the principal agency for state guarantee finance of the Philippines, has a strong focus on the agriculture and energy sectors through its Agriculture Credit Guarantee Program and Sustainable Energy Credit Guarantee Facility. Most importantly, the guarantees from PhilGuarantee have allowed for the lending of longer-tenor loans to large enterprises.

3.2.3. BARRIERS & OPPORTUNITIES: DOMESTIC CAPITAL MOBILIZATION FOR CLIMATE ACTION

BARRIER 1: RELUCTANCE OF DOMESTIC CAPITAL PROVIDERS TO FINANCE SMALL RENEWABLE ENERGY PLAYERS

Low revenue certainty—partly due to challenges in the FIT system, such as installation caps allocated on a first-come, first-served basis—has limited the use of project financing for renewable energy projects in the Philippines (Barroco and Herrera 2019). Although the country has since shifted from FIT to competitively allocated renewable energy capacity, earlier policy uncertainty meant that, up until at least 2022, only well-capitalized firms—such as publicly listed renewable energy companies or those backed by large local conglomerates—could pursue projects (Barroco and Herrera 2019) using primarily corporate finance.

Smaller renewable energy developers face significant financing constraints: they often lack the balance sheet strength to self-finance and cannot rely on project finance due to persistent revenue risks. Local banks are also hesitant to lend to these actors, due to perceived risks of lending to MSMEs; stringent bank minimum capital requirements and collateral requirements also limit lending.

These patterns are reflected in climate finance data. Globally, commercial bank loans are a major source of renewable energy financing, but in the Philippines, they account for just 27%—compared to 55% from balance sheet financing (CPI 2023). Even when banks do offer commercial loans for renewable projects, they tend to favor established players with a history of corporate-financed development.

> "Access to finance is the main challenge for small power players and small businesses…Much as the commercial banks want to finance the small power producers, the perceived riskiness is too high. Risk mitigation has to be addressed."
>
> - Association of Development Financing Institutions in Asia and the Pacific

OPPORTUNITY 1A: CATALYZING AN ENABLING ENVIRONMENT FOR SMALL RENEWABLE ENERGY COMPANIES THROUGH PUBLIC FINANCING

The Philippine government has implemented mechanisms to improve the risk-return profile of investments in priority sectors, helping, for instance, to reduce lending risks for smaller renewable energy players. Among these are PhilGuarantee's credit guarantee programs for MSMEs, such as the MSME Credit Guarantee Facility and the Sustainable Energy Credit Guarantee Facility, both offering 50% to 80% partial guarantees on loans with tenors of up to 10 and 15 years, respectively, for renewable and energy efficiency projects.

"In the last few years, banks have become much more comfortable with lending to renewable energy projects because of low default rates. But they still see a lot of risks when lending to power projects in remote islands, and there is demand for guarantee products there."

- Philippines Guarantee Corporation

To address the financing gap in the early stages of project development, especially for rural electrification, direct financing programs can target electric cooperatives. For example, the Development Bank of the Philippines' (DBP) Financing Utilities for Sustainable Energy Development (FUSED) program aims to mobilize at least PHP 58 billion toward the Philippines Energy Plan by 2030. The ADB has recommended expanding FUSED to offer project preparation financing to small developers and AAA-rated electric cooperatives, as well as incorporating TA support for borrowers through participating financial institutions.

OPPORTUNITY 1B: SUPPORTING ELECTRIC COOPERATIVES THROUGH A BLENDED FINANCE PORTFOLIO APPROACH

In recent years, blended finance and project aggregation approaches have emerged as effective models to meet electric cooperatives' demand for affordable, reliable off-grid power. They address the financial barriers that limit power generation by pooling funding from domestic and international sources for multiple mini-grid projects, improving bankability and scaling impact.

A key example is the Philippines Smart Solar Network, the country's first off-grid smart solar initiative, where the Association of Isolated Electric Cooperatives played a central role in aggregating project demand (ADB 2020). Financing was mobilized through InfraCo Asia, which provided concessional equity and TA via the PIDG Technical Assistance Facility.

Another model is Allotrope's Local Utility Project Aggregator (LUPA), which aggregates not only project demand but also financing. Under this model, LUPA helps electric cooperatives connect with project debt and equity to enable individual projects to move forward that would have been previously considered too small or risky by commercial investors. This enables electric cooperatives to pursue ownership of renewable energy

assets and catalyzes domestic financing for clean energy infrastructure serving rural and remote areas across the islands.

"For impactful lending like in agriculture or in small-scale renewable energy projects, the volumes are too small, so you need someone who can aggregate the demand. They need to arrange it, establish a way to profile and manage the portfolio risk, and build the financing structure from there. Demand aggregation will increase chances for projects to be part of the overall credit appetite of local and international banks."

- HSBC Philippines

BARRIER 2: GREEN BONDS ISSUANCES DO NOT MATCH DOMESTIC INVESTORS' PREFERENCES

The first green bond in the Philippines was issued in 2016 by AP Renewables to refinance its equity investment in the Tiwi-MakBan geothermal facilities. Since then, green bond issuances have been dominated by large domestic private entities, including major banks and well-capitalized renewable energy companies. Unlike other countries in the region—where local governments often led early green bond issuances—the Philippine government, as of end-2024, has only issued broader sustainability bonds, not dedicated green bonds.

According to the 2022 Philippines Green Bond Market Survey, local institutional investors show the strongest interest in sovereign green bonds, followed by those from financial institutions and development banks (ADB 2022a). The lack of public sector issuers has contributed to an undersupply of green bonds in the domestic market, falling short of investor demand.

Additionally, most green bonds in the Philippines are not peso-denominated. As of December 2024, about 71% of the country's total sustainable debt stock was issued in foreign currencies—a level similar to Indonesia's but significantly higher than Vietnam's. Yet, all local advisors and underwriters surveyed (ADB 2022a) reported that their clients preferred peso-denominated green bonds, underscoring a mismatch between market supply and investor preference.

OPPORTUNITY 2: LEVERAGING NEW PPP CODE AND TECHNICAL ASSISTANCE TO EXPAND AND DIVERSIFY GREEN BOND ISSUANCES

Most flagship infrastructure projects in the Philippines have traditionally been financed through ODA. However, the adoption of a new PPP Code in 2023 marks a renewed government push to expand PPPs as a key financing mechanism. The new code strengthens the legal framework for PPPs and introduces "alternative financial instruments," such as project bonds, to support project financing. This opens the door for LGUs to issue green bonds for local PPP initiatives (ADB 2025)—an important development given LGUs' limited access to direct funding.

Beyond diversifying green bond issuers, there is also significant potential to expand the range of sectors through TA. Although the 2022 Philippines Green Bond Market Survey found that local investors consider renewable energy the most attractive sector for green bond investments (followed by water management and energy efficiency) (ADB 2022a), TA can successfully support bonds outside of these preferred sectors as well. For instance, USAID's Green Invest Asia program provided early-stage TA for structuring the Earthwake Reforestation Bond Fund, which was subscribed by private investors. TA can help local companies issue green bonds and identify eligible green projects and expenditures.

BARRIER 3: RISK PERCEPTIONS AND UPFRONT COSTS RESULT IN PERSISTENT CLIMATE ADAPTATION FINANCING GAPS DESPITE ADAPTATION PRIORITIZATION

While the Philippines allocates a relatively higher proportion of its climate finance to adaptation compared to Indonesia and Vietnam—thanks in part to a supportive policy environment—domestic financing for mitigation still far exceeds that for adaptation. Despite being prioritized in the Philippines NAP, the agriculture and water sectors continue to face significant financing gaps.[7] For example, annual local investments in water supply and sanitation average just PHP 3.4 billion (USD 60 million), far short of the PHP 1.07 trillion (USD 20 billion) needed between 2020 and 2030 (NEDA 2021).

A major barrier to bank compliance with the mandatory agricultural credit requirement—which mandates all government and private banks to allocate at least 10% of their total loanable funds to agrarian reform beneficiaries (ARBs), including individual farmers and fishers—is the high perceived risk of lending to this group. This stems from issues such as poor or non-existent collateral, along with other constraints (Tolentino et al 2021) including high operational costs, lack of agricultural lending expertise, limited access to borrower credit data, and difficulties in identifying viable ARB borrowers—especially for larger financial institutions.

Similarly, financing gaps in the water sector are driven by the chronic underfunding of water service providers, resulting in significant disparities in service quality and coverage across the country. Most providers are small, privately run entities with limited operational scale. Politically influenced low tariffs discourage them from seeking financing to expand services or invest in infrastructure (ADB 2013). Even when financing is sought, access is limited, as commercial investors perceive the sector as high-risk and financially unattractive.

OPPORTUNITY 3A: ADDRESSING RISKS TO FINANCING WATER SERVICE PROVIDERS AND SMALL-SCALE PRODUCERS THROUGH CREDIT ENHANCEMENT TOOLS

Guarantees play a crucial role in reducing credit risks and enabling adaptation actors to access longer-term loans. For example, the Agricultural Guarantee Fund Pool, managed by PhilGuarantee and partly funded by penalties collected by the BSP from banks that

7 Despite mandatory credit requirements, the agricultural sector ranks only fourth in total climate financing volumes captured between 2017 to 2022.

fail to comply with the Agri-Agra Reform Credit Act, provides guarantee coverage of up to 85% on unsecured loans to smallholders and small-scale fishers.

Guarantees have also successfully attracted private banks to invest in the water and sanitation sector. The Philippines Water Revolving Fund (PWRF) (USD 234 million) leveraged a concessional loan from JICA, alongside guarantees from the Philippine government and USAID, to mitigate private banks' risk concerns. Additionally, DBP supplied a credit line to cover liquidity risks faced by private financial institutions. These guarantees boosted investor confidence and encouraged private lending to water service providers.

Insurance is another credit enhancement tool for reducing risk in the agricultural sector. The Philippine government has implemented various measures to boost agricultural insurance uptake, including substantial premium subsidies. For example, PhilGuarantee offers a 50% discount on guarantee fees for agricultural loans insured by the Philippines Crop Insurance Corporation. Despite these efforts, only about one-third of Filipino farmers are currently covered by agricultural insurance. To improve coverage, the government is exploring strategies to diversify insurance products and encourage greater private sector participation in the market.

OPPORTUNITY 3B: SUPPORTING RURAL BANKS AND LOCAL GOVERNMENT UNITS TO CHANNEL FINANCING FOR CLIMATE ADAPTATION ACTIVITIES IN AGRICULTURE AND WATER SECTORS

While universal and commercial banks dominate agricultural lending, rural banks play a critical role in closing the agricultural credit gap due to their strong local presence and role in extending finance to segments often excluded from formal banking systems. However, these banks have historically been unwilling to participate in medium to long-term financing due to liquidity constraints, choosing instead to meet short-term credit needs of small-scale producers. Since 2022, BSP has introduced strengthening programs to enhance the operations, capacity, and competitiveness of rural banks (Tolentino et al 2021); increase the minimum capital requirements; and include TA to provide digitalization and financial advisory support for the rural banking sector. With further strengthening of their capital base, rural banks are expected to play a more significant role in providing financial services to rural communities and supporting climate adaptation activities undertaken by smallholders and small-scale fishers. This can also allow for these banks to participate in more blended transactions.

In addition to rural banks, LGUs, subnational governing bodies, also possess key insight into local adaptation needs and play a crucial role in implementing the NAP at the local level (PIA 2025). The government supports LGUs with direct financing for adaptation through mechanisms like the People Survival Fund and allows them to secure loans—often backed by national government guarantees—from foreign institutions for infrastructure development and capacity building. These resources empower LGUs, including those managing local water service providers, to advance water infrastructure and services via local PPPs.

However, despite these financing opportunities, LGUs still require strengthened institutional capacity and technical expertise to effectively access and leverage funds

for climate-resilient initiatives (UNFCCC 2024). Addressing this, ADB together with the governments of Australia and Canada, funded a TA program administered by the National Economic and Development Authority, which includes efforts to strengthen LGU PPP units and support the development of local PPP codes.

3.2.4. CASE STUDY: AYALA ELECTRIC MOBILITY ECOSYSTEM PROJECT

This case study underscores **the role of local conglomerates in driving innovation in nascent markets.** Ayala Corporation's participation was pivotal in signaling private sector commitment to developing the electric vehicle (EV) ecosystem and bridging the credibility gap that often hinders early-stage market development.

Ayala Electric Mobility Ecosystem Project

Following the enactment of the Philippines' Electric Vehicle Industry Development Act, Ayala Corporation, one of the countries' largest conglomerates, has been investing in the development of an EV market in the Philippines. To support this initiative, ADB provided a blended finance package in 2024 to Ayala to procure and install EV charging stations (EVCS) and purchase EVs for commercial use. The structure was designed to mitigate risks in the emerging Philippine EV market, such as high upfront costs and technology uncertainty.

Capital Structure

- Tranche A: ADB (USD 85 million dual-currency loan) (ADB 2025c)
- Tranche B: ADB & Canadian Climate and Nature Fund for the Private Sector in Asia (USD 15 million concessional loan) (ADB 2025c)

Technical Assistance

- ADB's Transport Sector Office supported due diligence of Ayala's e-mobility business; estimating GHG emission reductions; and assessing total cost of ownership of EVs compared to internal combustion vehicles (ADB 2025c).

Impact & Performance

- Objective: Establish a **national EVCS network** that addresses charging infrastructure gaps; reduces range anxiety; improves accessibility
- Engage female customers and promote **gender inclusion** within technical teams and workplace culture

Lessons Learned & Structural Innovations

- The E-Mobility project is the first EV initiative in the Philippines led by a private conglomerate, marking a shift from earlier efforts that were primarily government-led. The involvement of the Ayala Group has been pivotal in **demonstrating private sector commitment** to the development of the EV ecosystem, addressing the credibility gap, and signalling confidence in the sector.
- The concessional loan was critical to enhancing financial viability. ADB's corporate loan covers two e-mobility subprojects, with Ayala expected to fund the remaining costs of the broader initiative. For Ayala, this blended finance structure helped offset the **higher upfront costs and technology risks** associated with early-stage EV deployment, thereby enabling continued investment in an emerging and untested market (ADB 2025c).
- **Long-standing relationships** with reputable conglomerates have proven beneficial in mitigating risks associated with emerging sectors like e-mobility

3.3. VIETNAM

3.3.1. OVERVIEW

Vietnam has emerged as a regional leader in mobilizing domestic climate finance, driven largely by private sector investment and supportive policy measures such as the feed-in tariff (FIT), which sparked a solar energy boom. In 2021, Vietnam reinforced its climate ambition by committing to net-zero emissions by 2050 under its National Climate Change Strategy, with a target of reducing GHGs by 43.5% by 2030 (Climate Change Vietnam 2025). To support this transition, the government has introduced policies on green credit and bonds, encouraging financial institutions to expand green lending and channel more capital toward sustainable investments.

As a result of the FIT in particular, Vietnam attracted the highest volume of climate finance among the three countries analyzed. Between 2017 and 2022, Vietnam received a total of USD 49.1 billion in climate finance (CPI 2024a). In comparison, the blended finance market (a subset of climate finance) mobilized USD 3.4 billion across all years (Convergence 2024). Climate finance in the country has been heavily concentrated in smaller, short-term mitigation initiatives, while large-scale utility renewables and climate adaptation projects continue to face capital constraints due to higher perceived risks and limited experience among local investors.

3.3.2. KEY DATA TRENDS

Domestic sources of climate financing far exceeded external sources in Vietnam. Approximately 80% of total climate financing from 2017 to 2022 originated from inside the country, in stark contrast to Indonesia and the Philippines (CPI 2024a). A sharp increase in financing between 2020 and 2021 can be largely attributed to the government's FIT policy that led to a solar boom in the country.

Vietnam's domestic climate finance landscape is largely driven by the private sector. Since 2020, the majority of commercial climate finance in Vietnam has come through balance-sheet equity financing, totaling approximately USD 21 billion between 2020 and 2022 (CPI 2024a). Strong private participation reflects statutory limits on public guarantees and the government's focus on incentives for domestic private investment.

Financing for utility-scale renewable energy projects in Vietnam remains limited. Although investor interest is growing, most investment is directed toward smaller projects suited to short-term financing structures. Blended finance has been instrumental in mobilizing capital for larger, more complex solar and wind projects. Vietnam's climate deals have a median size of USD 70.6 million, which is the highest among the three countries analyzed. Notably, 29% of transactions fall within the USD 100 - 250 million range, and 11% between USD 250 - 500 million (Convergence 2024).

Vietnam's green bond market has seen notable growth since 2023. Total issuances reached VND 6,875.1 billion (USD 275 million) in 2024 (ADB 2025b). Over 50% of Vietnam's sustainable debt stock in 2024 was issued in foreign currencies (ADB 2025b). While this share remains significant, it is lower than the proportion of foreign currency-denominated bonds observed in Indonesia (69%) and the Philippines (71%), indicating a

comparatively stronger presence of local currency issuance in Vietnam's sustainable finance landscape.

Adaptation initiatives in Vietnam are underfunded. Only USD 2.1 billion of the USD 49.1 billion in climate finance between 2016 and 2022 went towards adaptation (CPI 2024a). As a BB+ rated market, Vietnam presents inherent credit risks that may deter institutional investors. However, the emergence of blended green bonds presents a promising avenue to attract institutional capital for adaptation. These instruments offer the potential to enhance risk-adjusted returns, mobilize private sector participation, and build secondary market liquidity in a space that has traditionally lagged behind mitigation finance.

3.3.3. BARRIERS & OPPORTUNITIES: DOMESTIC CAPITAL MOBILIZATION FOR CLIMATE ACTION

BARRIER 1: VIETNAM'S SHORT-TERM POLICIES ARE MISALIGNED WITH THE COUNTRY'S LONG-TERM CLIMATE GOALS

While the government can be credited for introducing policies aimed at fostering an enabling environment for climate finance, a misalignment remains; short-term policy measures often conflict with the country's long-term net-zero ambitions. For instance, the huge influx of solar capacity in 2019 - 2020 (Dan 2022), significantly impacted power system operations, as the transmission lines lacked the capacity to handle supply spikes during peak hours (Le 2022). Moreover, many solar projects have faced curtailment since 2020, leading to delayed debt payments or, in some cases, loan defaults to both domestic and international lenders. Despite the curtailment, Vietnam Electricity (EVN), which has a high credit rating, has delayed payments to solar developers due to financial losses from selling electricity at government-regulated, below-market prices.

While electricity markets across Southeast Asia are generally centralized, stakeholders noted that EVN's role as the sole buyer and distributor of electricity has created challenges for project developers. Under the FIT mechanism, developers were assured of grid connectivity. However, electricity sales under the current PPA model follow a 'take and pay' structure (Allens 2024). This means that if the electricity delivered to the grid is less than what the project company actually generates, EVN is not obligated to pay for the surplus. This creates significant cash flow risk in Vietnam, where EVN has historically been the sole off-taker.

Moreover, political uncertainty in recent years has made investors more cautious, particularly due to the absence of a stabilization clause in Vietnam's legal framework under the PPA (Allens 2024). Without such a provision, project companies are not protected against adverse changes in the law, leaving the project and its financial viability exposed to legal and regulatory shifts.

Vietnam's strict public and publicly guaranteed debt (PPG) ceiling and broader fiscal constraints limit the government's ability to take on financial obligations for renewable energy projects or purchase power at above-market rates, further worsening the situation for project developers and discouraging investment in the sector (IMF 2018). Besides the general protections offered under the Investment Law, the government

is unable to provide specific guarantees for energy projects (Allens 2024). This includes guarantees of EVN's payment obligations as the power purchaser under the PPA, as well as assurances regarding the availability of foreign currency to convert revenues earned in VND.

These shortcomings have unfortunately driven many domestic private actors to take a more cautious approach towards climate finance in recent years, holding back on funding until there is greater clarity on future policies and regulations.

OPPORTUNITY 1A: EXPANDING VIETNAM'S CLEAN ENERGY ECOSYSTEM

To date, both policy efforts and blended finance initiatives in Vietnam have primarily targeted investments in energy generation, where perceived investment risks are relatively low. However, to build a more resilient renewable energy ecosystem, there is an urgent need to expand support beyond generation to include grid stability, energy storage, and distribution infrastructure. There is a need to proactively develop policy and financing frameworks that de-risk these segments and incentivize private sector participation.

In a positive step forward, EVN, in collaboration with the Vietnam Energy Partnership Group and with support from the Global Energy Alliance for People and Planet, launched the Battery Energy Storage System Task Force in 2025 (VIR 2025). The initiative aims to provide TA and advisory services to support discussions on policy and regulatory frameworks, financial mechanisms, technical standards, and other key enablers to promote large-scale **energy storage** deployment (VIR 2025).

OPPORTUNITY 1B: BLENDED FINANCE CAN ADDRESS THE HIGH UPFRONT COSTS FOR VIETNAM'S COMMERCIAL AND INDUSTRIAL (C&I) SOLAR SECTOR

As an alternative to the FIT scheme and a solution for renewable energy producers facing curtailment or surplus output, the government has approved a **Direct Power Purchase Agreement (DPPA)** mechanism. With Vietnam's industrial hubs driving demand for clean energy, the DPPA has garnered strong support from C&I stakeholders. Multinational companies operating in Vietnam's electronics, semiconductor, textile, and consumer goods sectors are among the key drivers of demand for clean energy procurement (Nguyen 2024). They are increasingly adopting **rooftop solar for self-consumption**, as generation costs are typically lower than retail tariffs. For investors, these projects offer a way to manage risks tied to output curtailment and lack of termination protections.

In this context, blended finance can play a key role in addressing high upfront capital needs, improving access to affordable debt, and enabling long-term financing. In 2023, for instance, ADB led a USD 13.8 million financing package for GreenYellow (French company with a local office in Vietnam), including a USD 3.3 million loan and a USD 3 million grant from the Climate Innovation and Development Fund (ADB 2023). The grant helped overcome challenges related to long-term local currency financing and currency volatility, catalyzing additional investment from FMO, responsAbility, and Société Générale.

Moreover, recognizing that **energy storage** technologies are at a critical tipping point in Vietnam, Allotrope has been actively engaging C&I consumers and their supply chain manufacturers to stimulate demand for renewable energy. Allotrope is developing blended finance mechanisms to streamline funding and create larger, aggregated project opportunities. Its 'industrial park-level strategy' is designed to engage land owners and zone operators to address the challenges faced by multinational companies in individually supporting their suppliers' transition to clean energy.

BARRIER 2: LIMITED FINANCING FOR UTILITY SCALE RENEWABLE ENERGY PROJECTS

Private capital is relatively easy to mobilize in Vietnam for climate-related projects, compared to some other Southeast Asian countries. However, while there is an appetite for investment, it is primarily for smaller projects that fit within shorter-term project finance structures. In fact, the challenge is not necessarily due to the lack of willingness to pursue larger or more complex projects, but a result of limited experience of domestic private actors, lower-risk appetite, and regulatory frameworks that do not incentivize or support a long-term financing structure.

For example, the 2020 FIT also mandated developers to ensure the projects were commercially operational by the end of the year, which further encouraged investments in rooftop solar and other short-term projects. This becomes more challenging for utility scale solar and wind projects. EVN notes that the timeline to design and build an offshore wind farm is typically six to seven years. While the FIT provided a three-year eligibility window for wind farms, many developers considered this insufficient to bring projects to full operation (Do et al. 2022). In fact, significant construction delays and supply chain bottlenecks during the COVID-19 pandemic led to 62 wind projects missing their deadlines for the FIT (Le 2022).

Moreover, in Vietnam, non-recourse financing remains challenging due to regulatory and contractual issues (Allens 2024), including the absence of internationally standard PPA terms and exposure to change-in-law risks. As a result, project financing often requires some level of sponsor support during the construction phase. Limited-recourse financing, or non-recourse financing backed by guarantees from export credit agencies or local banks, has become the standard approach. In fact, despite the FIT, the standard PPA was not considered bankable by international lenders for non-recourse project financing (ADB 2022b).

AIA Group Limited, which has invested over USD 120 million (VND 3,000 billion) in green bonds, also noted that one of their biggest challenges is the limited pipeline of renewable energy projects that match their risk appetite (AIA Group 2025). Vietnamese companies, owing to the pressure of short-term development and quick profit, have not yet identified a suitable ESG roadmap, which often requires a long-term vision.

In addition, local financial institutions often face significant barriers when engaging with DFIs and MDBs. A key challenge is the limited experience many local banks have in working with these entities, compounded by a lack of standardization across DFI and MDB products. This complexity can be particularly daunting for smaller institutions that are unfamiliar with blended finance structures.

OPPORTUNITY 2: A/B LOANS PROVIDE A PATHWAY FOR MOBILIZING GREATER DOMESTIC INVESTMENTS TOWARDS UTILITY-SCALE RENEWABLES IN VIETNAM

Blended finance has proven effective in crowding in more capital to support more sophisticated, large scale utility projects for both solar and wind energy. **A/B loan structures,**[8] which are typically used by MDBs and DFIs in project financing can be quite effective in addressing challenges with insufficient funding for utility-scale projects, a shortage of long-term financing from domestic banks, and extended construction timelines that fall outside tariff eligibility periods.

For example, in 2022, ADB led and structured the limited-recourse debt financing for a USD 155 million, 88 MW wind farm in Vietnam (ADB 2022b), an option not readily available in the local market. The project was sponsored by ACEN, a subsidiary of Ayala Corporation, in partnership with local developer BIMEH. ADB acted as lender of record, providing a USD 35 million senior A loan and a USD 5 million grant from the Climate Innovation and Development Fund. The remaining loan (B loan) was co-financed by JICA, SMBC, and ING Group. This structure enabled commercial lenders to benefit from ADB's Charter-based privileges and preferred creditor status.

Notably, ADB designed a comprehensive sponsor support package linking the 88 MW wind project to a larger 405 MW solar portfolio owned by the sponsors, providing additional security through agreed trigger events. The financing package also aligned with the project's currency and tenor needs since local lenders are unable to provide long-term US dollar financing to mitigate the currency mismatch risk.

BARRIER 3: REGULATORY CONSTRAINTS ON LENDING

While the federal government and the State Bank of Vietnam have made significant efforts to expand green lending in the country, challenges remain for both domestic and international lenders. One of the major challenges to scaling climate finance in Vietnam is the presence of stringent counterparty exposure limits in the financial sector, especially in a market where state-owned enterprises dominate and vertical integration is common. The 2024 Law on Credit Institutions sets out a phased reduction in credit exposure limits for banks (Tilleke & Gibbins 2024). While these limits are intended to help banks diversify their lending and reduce default risks, they also constrain financing for renewable energy projects. For example, a sponsor borrowing from a medium- or large-sized bank (with equity of approximately USD 1.5 - 2.1 billion or USD 3–3.4 billion) would only be able to access about USD 213 million under the 10% limit (Vietnam News 2024). This amount is often insufficient for energy and infrastructure projects, making syndicated loans or co-financing among multiple domestic banks the only viable financing route for many developers.

Project sponsors often turn to foreign lenders to finance their projects. While international financiers tend to have a greater risk appetite, they also face several challenges including restrictions on cross-border lending and concerns around the bankability of PPAs (Allens 2024). In addition, foreign loans are subject to varying

8 Note: A/B loan structures are not inherently blended; rather, they are a standard offering provided by many MDBs. In blended A/B loan structures, however, the A loan is often partially concessional or paired with a grant, typically sourced from a donor-funded concessional pool managed by the MDB acting as the lender of record.

limitations depending on their tenor, as well as caps on borrowing amounts, interest rates, and associated fees. As a result, most foreign loans are structured as recourse loans, requiring project sponsors to provide full guarantees to enhance bankability, which increases the burden on project sponsors and can serve as a deterrent, particularly for larger ticket sizes.

Commercial bank credit and bonds have been the primary sources of green finance in Vietnam (UNDP 2024). However domestic commercial banks also face significant challenges in financing capital-intensive, long-maturity energy projects, particularly without government guarantees. This is largely due to their reliance on short-term deposits, relatively low capitalization compared to regional peers, and high levels of non-performing loans, all of which limit their ability to sustain long-term credit growth. While state-owned commercial banks and joint-stock commercial banks dominate the market, there is potential for two state-owned policy banks, the Vietnam Development Bank (VDB) and the Vietnam Bank for Social Policies (VBSP), to play a larger role. Currently, however, due to their specific mandates and focus areas, neither VDB nor VBSP has developed the institutional capacity needed to finance projects that support a just transition (UNDP 2024).

"The Vietnam Development Bank is exploring a green credit line but faces some constraints. They are mandated to provide loans at a capped interest rate of 5% and cannot charge more than that. To sustain this low rate, they require support from a blended finance platform to help cover the gap. Despite these challenges, the bank holds significant capital, positioning it well to support green investments."

- Global Energy Alliance for People and Planet

OPPORTUNITY 3A: VIETNAM'S GREEN TAXONOMY AND FINANCIAL SECTOR READINESS

A clear and standardized **green taxonomy** can play a critical role in guiding local private investors toward sustainable finance by reducing ambiguity and enhancing investor confidence (Stewart et al 2024). While the government has introduced regulations on green credit and green bonds to encourage green lending, uptake by banks remains limited, partly due to the lack of consistent definitions for sustainable economic activities. Green taxonomies can also increase pressure on financial institutions to align their portfolios with sustainable finance frameworks. In response, the Ministry of Natural Resources and Environment (MONRE), the Ministry of Finance (MOF), and the State Bank of Vietnam are jointly developing a green taxonomy expected to align closely with the EU Taxonomy.

In parallel, GIZ is supporting the government in this effort through the **Shifting Investment Flows Towards Green Transformation (SHIFT)** project, launched in 2023. In partnership with IFC and UNDP, the project aims to strengthen green policy and investment frameworks to advance climate action in Vietnam. A key focus of SHIFT is

building the capacity of financial institutions to support green initiatives by providing technical expertise, tools, and internationally recognized best practices.

OPPORTUNITY 3B: LEVERAGING DFIS AND MDBS TO MOBILIZE LOCAL CAPITAL

DFIs and MDBs have long supported financial institutions in emerging markets by providing capital to expand lending to underserved, higher-risk, or low-income segments to unlock local currency financing. In 2024, for instance, IFC extended a five-year, USD 150 million senior loan to Vietnam's Orient Commercial Joint Stock Bank (VIR 2023) to strengthen its capacity to offer **medium- and long-term financing** for climate and social sustainability initiatives, particularly in the green building sector.

As the implementing agency of the Market Accelerator for Green Construction, a UK-IFC partnership focused on scaling green building finance, IFC also provided OCB with USD 480,000 in performance-based incentives (IFC 2025). These incentives are designed to accelerate the bank's rollout of green building and green mortgage strategies, helping to catalyze both supply and demand for green-certified buildings in Vietnam.

As noted earlier, Vietnam has the highest level of participation from regional investors (41%) compared to Indonesia and the Philippines. This is significant, as Convergence data shows that transactions in East Asia involving regional investors often include two or more local participants (Convergence 2024). This highlights a key opportunity for regional actors such as ADB or InfraCo Asia (a PIDG company) to play a catalytic role. Institutions like ADB (with its "AAA" long-term issuer default rating) and GuarantCo (rated "AA-"), can meaningfully enhance the risk appetite of local investors by improving credit quality and de-risking transactions.

BARRIER 4: UNDERFUNDING OF ADAPTATION INITIATIVES BY LOCAL ACTORS

Climate adaptation efforts have seen limited financing in Vietnam, largely due to the low risk appetite and limited experience of both domestic and international investors in this space. Yet, there is emerging demand from local actors. A nationwide survey by The Asia Foundation of over 10,000 Vietnamese enterprises revealed that many businesses are willing to invest in climate adaptation, particularly to meet environmental compliance requirements (The Asia Foundation 2020). However, most businesses stated that they lacked the technical knowledge to assess climate risks or identify suitable adaptation investments.

Efforts to mobilize domestic capital for adaptation are gaining traction but still face systemic challenges. Mekong Capital launched the Mekong Earth Regeneration Fund in 2024 to provide growth-stage financing for regenerative agriculture and sustainable land use businesses in the Lower Mekong region. The firm highlights that attracting private capital, especially from domestic sources, for sustainable agriculture remains difficult. Agricultural businesses struggle to access equity due to the sector's perceived high risk, driven by climate volatility, market price swings, and limited customer diversification. Accessing debt is equally challenging: many firms lack sufficient collateral or stable cash flow, and high interest rates make loans unaffordable even when they qualify.

These barriers are echoed by the GCF, which notes that adaptation investment in Vietnam is constrained by structural issues such as insufficient land use documentation, misaligned credit repayment schedules, weak financial planning, and limited sub-national technical capacity (GCF 2024). In particular, the integration of ecosystem-based approaches with green infrastructure for adaptation remains underdeveloped, representing both a gap and an opportunity for future domestic capital engagement.

OPPORTUNITY 4: UNLOCKING LOCAL CAPITAL THROUGH GREEN BONDS

Vietnam has witnessed a growing momentum in the use of green bonds to address climate adaptation. A distinctive feature of Vietnam, especially in comparison to peer countries, is that all green and sustainability bonds have primarily been issued exclusively by the private sector (ADB 2025b).

While green bonds are not the only tool to address financing challenges, they offer several advantages. They provide access to institutional investors seeking long-term, fixed-income instruments, which align well with the financing needs of adaptation infrastructure. Issuance in line with recognized frameworks such as the ICMA Green Bond Principles also enhances credibility and transparency. In addition, green bonds can aggregate multiple smaller projects into a single investment vehicle, reducing transaction costs and improving efficiency.

However, issuing green bonds remains complex and faces potential liquidity and demand constraints. TA has therefore been critical in helping issuers meet international sustainability standards. For instance, the GGGI, through the Vietnam Green Bond Readiness Program funded by the Government of Luxembourg, has supported issuers in aligning with the ICMA Green Bond Principles (GGGI 2025).

Bonds can serve as executive mechanisms to mobilize local investment, particularly by engaging domestic institutional investors. GuarantCo, part of PIDG, plays a catalytic role in this space by enabling local currency financing for infrastructure. To date, GuarantCo has supported five transactions in Vietnam to facilitate local currency bond issuance. One standout example is the VND 875.1 billion (approximately USD 34.5 million) 20-year green bond issued by Hoa Binh - Xuan Mai to finance a greenfield water supply project (PIDG 2024). This marks several firsts for Vietnam: the country's first verified green project bond in the water sector, its longest-tenor project bond, and the first project bond to receive an external credit rating from a domestic ratings agency.

It must be noted that although many of the companies investing in GuarantCo-guaranteed bonds are multinational firms, the investments are typically made through their Vietnamese branches, effectively channeling local currency capital into climate-related initiatives.

Traditionally, insurance companies have favored short-term instruments. However, chief investment officers of local offices are increasingly receiving strategic guidance from global headquarters to align with broader ESG mandates by allocating capital to impact-first instruments. In this context, GuarantCo-backed long-term bonds are particularly appealing since they not only support ESG objectives but also provide a hedge against long-term liabilities, such as those tied to life insurance policies. For reference, the

average size-weighted tenor of green bonds in Vietnam in 2024 was about 2.9 years, whereas blended finance bonds tend to offer longer maturities (ADB 2025b).

Another example is the five-year blue and green bond issued by Southeast Asia Commercial Bank (SeABank), a leading commercial bank in Vietnam (TN Global 2024). Subscribed to by IFC and private investors, the proceeds will support ocean-related initiatives, green building development, renewable energy, and energy efficiency projects.

3.3.4. CASE STUDY: GUARANTCO AND IDI SAO MAI GREEN BOND

This case study highlights the **potential of green bonds to attract institutional investment for climate adaptation.** The transaction demonstrated the commercial viability of issuing internationally verified green bonds in local currency, helping to deepen Vietnam's sustainable finance market.

GuarantCo, part of PIDG, mobilizes private sector local currency investment for infrastructure projects and supports the development of financial markets in lower income countries. With GuarantCo's investment grade credit rating (AA-/A1), their guarantee products support eligible companies to offer credit-enhanced structured credit to private sector lenders and bond investors, allowing them to participate in transactions.

In 2024, GuarantCo provided a guarantee to support the issuance of a **VND 1 billion** green bond by **IDI Sao Mai,** a market-leading seafood producer in Vietnam. Proceeds from the green bond will support IDI to expand its agriculture infrastructure, with **Vietcombank Securities** as the lead arranger for the bond offering.

Capital Structure

- Senior debt: Bonds with a value of VND 1,000 billion (USD 40 million), a tenor of eight years, and fixed coupon payments of 5.58%. The bond was oversubscribed and privately placed with insurance investors including Manulife Vietnam and AIA Vietnam.
- Local currency credit guarantee to cover the risk of bond non-payment and help extend the tenor, **improving the project' commercial viability.** This **enhanced the creditworthiness** of the bonds, enabling investment from insurance investors.

Technical Assistance Grant

- To support the development of the **financial model** and strengthen **health, safety, and environmental capacity building activities** (PIDG)
- To **create the green bond framework**, with an emphasis on improving sustainable seafood farming and processing practices (GGGI & Vietnam Ministry of Finance)

Impact & Performance

- First green bond from Asia's aquaculture sector; first VND-denominated green bond issued by a non-financial corporate entity in Vietnam; first access by IDI into local institutional debt markets
- Objectives: Increase fish seeding/processing facilities; reduce feed consumption; enhance value chain integration; increase farm yields and annual revenue

Lessons Learned & Structural Innovations

- The bond introduced a **new climate adaptation investment opportunity** for institutional investors in Vietnam, while also creating a **new investable asset class**, helping institutional investors diversify their portfolios.
- Demonstrated the **commercial viability of local currency, internationally verified green bonds** in the Vietnamese market
- Although local institutional investors were initially hesitant (due to limited exposure to corporate bonds outside major banks/conglomerates), **GuarantCo's credit guarantee** and **capacity building efforts** (maintaining global standards) were crucial to facilitating the deal.

4. CONCLUSION

Blended climate finance holds considerable promise as a strategic tool to mobilize much-needed private and domestic capital for climate-related investments in Southeast Asia. The region faces a dual imperative: to accelerate its transition toward low-carbon and climate-resilient development pathways while also addressing a wide range of socioeconomic priorities. Neither public nor foreign resources alone are sufficient to meet the financing needs for this transition. By deploying concessional capital in ways that mitigate risks, enhance bankability, and crowd in commercial investors, blended finance instruments can help bridge the gap and mobilize much needed domestic capital. At the same time, the appropriate enabling environment is needed to encourage domestic actors to invest in national climate-aligned activities.

This report highlights clear opportunities to leverage the diversity of blended finance modalities already in play in Indonesia, the Philippines, and Vietnam, as well as opportunities to create enabling market conditions for the exploration of further blended finance solutions across sectors — from energy and infrastructure to agriculture and forestry:

i) **Indonesia and the Philippines are proactively enhancing government-led blended finance platforms** (such as Indonesia's SDG Indonesia One and state-backed guarantees from PhilGuarantee) that can mobilize local capital toward underfinanced priorities like climate adaptation and nature-based solutions. These instruments help de-risk investments and crowd in private capital at scale.

ii) **Successful pilots in blended climate finance deployment offer strong models for replication and scaling.** Examples like ADB's ETM in Indonesia, A/B loan structures for utility-scale renewables in Vietnam, aggregation platforms for off-grid electricity generation in the Philippines can be expanded with the coordinated support of MDBs, bilateral donors, philanthropic actors, and domestic public institutions.

iii) **Strong and consistent policy signals are essential to unlocking domestic private sector participation in climate finance.** Actions such as issuing standardized green taxonomies, offering sustainable finance incentives (e.g. reduced fees for green bonds listings) and strengthening legal frameworks for PPPs, will build investor confidence and help accelerate local climate investment.

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ANNEX 1: METHODOLOGY

RESEARCH METHODOLOGY

This report draws on both qualitative and quantitative sources of information, spanning quantitative data analysis, interviews with over 30 institutions across the public and private sectors, and reviews of relevant literature and research. We analyzed Climate Policy Initiative's (CPI) 2023 Global Landscape of Climate Finance dataset and Convergence Market Data for quantitative insights on climate finance trends and blended climate finance trends specific to the Southeast Asia region as well as Indonesia, the Philippines, and Vietnam. More details on the methodologies employed by the two datasets as well as a breakdown on the differences between the two datasets can be found below.

DATASET METHODOLOGY

CLIMATE FINANCE DATA

Data analysis on climate finance landscapes in this report is based on climate finance transactions between 2017 and 2022 captured by CPI in its 2023 Global Landscape of Climate Finance report. The Global Landscape report captures available data on primary financing supporting GHG emissions reductions and climate resilience activities. The report uses this dataset when referring to climate finance.

For this purpose of this report, a key methodological addition to the Global Landscape report data was the incorporation of data from the Indonesia Power Sector Finance Dashboard for a more comprehensive overview of primary climate finance flows in Indonesia. The dashboard captures finance flows from the public and private sector to clean and dirty power sectors in Indonesia, and data on renewable energy investments was specifically used to complement data from the Global Landscape report.

A more detailed methodology including taxonomies, definitions, key data sources, and data processing is published separately for the Global Landscape report and the Indonesia Power Sector Finance Dashboard. A key summary of the methodology related to classifications of climate finance actors and sectors is included below.

DOMESTIC AND INTERNATIONAL FLOWS

Domestic flows pertain to climate finance that was raised and spent within the same country.

International flows pertain to climate finance flows that were raised in a specific country but spent in another. Climate finance from multilateral DFIs is automatically categorized as international flows.

BLENDED CLIMATE FINANCE DATA

Data analysis on blended climate finance landscapes in this report is based on blended finance transactions captured by Convergence Market Data, the largest and most detailed database of historical blended finance transactions (capturing over 1400+ deals to date).

Information on blended transactions is collected from i) credible public sources such as press releases, ii) information-sharing agreements with key data aggregators like the Organization for Economic Co-operation and Development (OECD), and iii) data validation exercises with Convergence members and partners.

To be included in Convergence Market Data, a deal must meet three main criteria:

1. The transaction attracts financial participation from one or more commercial investor(s) that would otherwise not have invested in the region / sector / project
2. The transaction leverages concessional capital in one of the following ways:
    a. Public/philanthropic investors are concessional within the capital structure
    b. Public/philanthropic investor provided guarantees or risk insurance
    c. Transaction design or preparation is grant funded
    d. Transaction is associated with a TA facility
3. The transaction intends to create development impact related to the SDGs in emerging or frontier markets, or directly impacts beneficiaries in emerging or frontier markets.

A key summary of the methodology related to classifications of blended climate finance actors and sectors is included below.

DOMESTIC, REGIONAL, AND INTERNATIONAL FLOWS

Domestic flows pertain to blended climate finance that was raised and spent within the same country.

Regional flows pertain to blended climate finance that was raised in Southeast Asia and East Asia but spent in another country in the regions. This includes multi-donor funds and DFIs/MDBs where the origin of financing is Southeast Asia and East Asia (e.g. ADB and JICA).

International flows pertain to blended climate finance that was raised in a specific country outside Southeast Asia and East Asia but spent in the regions. This includes multi-donor funds and DFI/MDBs where the origin of financing is outside Southeast Asia and East Asia (e.g. IFC and FMO).

DIFFERENCE BETWEEN CLIMATE FINANCE DATA AND BLENDED CLIMATE FINANCE DATA

The data and analytical insights related to blended climate finance trends and overall climate finance trends should be understood in the context of not only the definitional differences between blended climate finance and climate finance, but also the methodological differences between the Convergence Market Data and CPI's Global Landscape report. The key methodological differences between the two datasets are presented in the table below.

Methodological difference	CPI Global Landscape Climate Finance Report	Convergence Market Data
Structure of financial flows	The Global Landscape report captures financial flows through the use of financial instruments, which include grants, low-cost project debt, project-level market rate debt, project-level equity, balance sheet equity financing and balance sheet debt financing. The Global Landscape report uses a dataset of use of proceeds estimates of green bond issuances from Climate Bond Initiative (CBI). Finance raised through green bond issuance itself is excluded as these are not yet allocated to specific projects. Risk management instruments such as guarantees and insurance are excluded from the dataset as actual disbursements from these instruments are contingent upon uncertain future events.	Convergence Market Data captures financial flows through the use of vehicles, which include bonds, companies, facilities, financial institutions, funds, and projects. Investment flows are captured based on the financial commitments made by various actors involved in blended finance transactions.
Concessional vs Commercial Capital	All grants and low-cost project debt captured by the Global Landscape report are classified as concessional climate finance in this report. Project-level market rate debt, project-level equity, balance sheet equity financing, and balance sheet debt financing are classified as commercial climate finance.	Funds provided on below-market terms within the capital structure of a transaction to reduce the overall cost of capital for the borrower and/or provide additional downside protection to senior investors (e.g., in a first-loss position). Concessional capital can be provided through various instruments, including debt, equity, grants, and mezzanine capital. Funds provided on market terms within the capital structure, primarily by private sector actors and DFI/MDBs are classified as commercial capital.
Origination of Financial Flows	The Global Landscape report only differentiates between domestic and international sources of climate finance. Climate finance from regional DFIs is categorized as international flows.	Convergence Market Data distinguishes between domestic, regional, and international capital flows, recognizing that regional investments, though cross-border, are aligned with the broader objectives of local capital mobilization.

ANNEX 2: COMPARISON OF ENABLING POLICY ENVIRONMENTS ACROSS INDONESIA, PHILIPPINES, AND VIETNAM

Sector	Policy instruments	Indonesia	Philippines	Vietnam
Cross-Cutting	**Net Zero Mandate**	 Net Zero mandate by 2060	 The Philippines has not adopted a Net Zero mandate.	 Net Zero mandate by 2050.
	Nationally Determined Contributions	**Mitigation focused** Aims to reduce greenhouse gas emissions by 31.89% unconditionally and up to 43.20% by 2030, with international support.	**Adaptation focused** Aims to reduce greenhouse gas emissions by 75% by 2030, 72.29% of which is conditional on international support.	**Mitigation focused** Aims to reduce greenhouse gas emissions by 43.5% below BAU by 2030, 63.67% of which is conditional on international support.
Financial	**Sustainable finance taxonomy**	 The Government of Indonesia approved the TKBI v2 in 2025, a taxonomy that classifies economic activities using a green/amber/red system. It was developed under the Sustainable Finance Roadmap (2021–2025) to guide the country's climate transition.	 In 2024, BSP approved the adoption of the Philippine Sustainable Finance Taxonomy Guidelines for banks. The guidelines aim to direct, accelerate, and increase capital flows to activities that reduce greenhouse gas emissions and build climate resilience.	 The Ministry of Natural Resources and Environment , the Ministry of Finance, and the State Bank of Vietnam are currently collaborating to develop a green taxonomy.
	Government-led blended finance instrument program	 **Blended Finance Platform** SDG Indonesia One, a blended finance platform governed under the Ministry of Finance, mobilizes public and private funding for sustainable infrastructure projects. Offerings include grants, concessional loans, and commercial financing to de-risk investments.	 **Guarantees** The Philippines Guarantee Corporation provides guarantees to de-risk and catalyze commercial lending. The organization has a strong focus on the agriculture sector through its Agriculture Credit Guarantee Program and other priority sectors such as the energy sector through its Sustainable Energy Credit Guarantee Facility.	

Sector	Policy instruments	Indonesia	Philippines	Vietnam
Financial	**Mandatory credit requirement**	 Indonesia's Financial Service Authority, the OJK, mandates banks to allocate a minimum of 20% of their loan portfolio to MSMEs.	 The Magna Carta mandates banks to earmark 8% of their total loan portfolio for micro and small enterprises, and 2% for medium enterprises. Agriculture, Fisheries and Rural Development Financing Enhancement Act of 2022 replaces the 2009 Agri-Agra Reform Credit Act, and sets aside a minimum mandatory agricultural and fisheries financing requirement for banks of at least 25% of total loanable funds, but no longer requires the minimum 10% allocation of lending portfolios to agrarian reform beneficiaries.	
Energy	**Renewable energy targets**	Under the National Energy General Plan, the government of Indonesia targets a 23% renewable energy mix by 2025 and 31% renewable energy mix by 2050.	Achieve 35% renewable energy share in the power generation mix by 2030, 50% by 2040, and more than 50% by 2050.	Achieve 37.7% renewable energy (excluding hydropower) share in the power generation mix by 2030, and 75% by 2050. By 2030, the combined capacity of hydropower sources, including small-scale hydropower, is expected to range from 33,294 to 34,667 MW, with a long-term goal of reaching 40,624 MW by 2050.
	Feed-in Tariff (FIT)	In 2012, the government introduced FITs in Indonesia, but prices were set too low for renewables to be economically viable. Tariff-setting remained mostly negotiated under Power Purchase Agreements with PLN (the state-owned utility company) that has a monopoly over Indonesia's Transmission & Distribution system - resulting in limited renewable uptake.	Prior to 2022, the FIT provided a guaranteed fixed price to renewable energy investors for 20 years. The program is funded by a universal charge on customers referred to as the FIT allowance. After 2022, the Green Energy Auction Program was launched to select eligible renewable energy plants through a competitive bidding process, and bids are not allowed to exceed the Green Energy Auction Reserve price. Winning bids are paid on a pay-as-bid basis, and the price is known as the Green Energy Tariff.	First introduced in 2017. In 2020, the government updated its feed-in tariff for solar and wind projects, and created a distinction between the different project types. In addition, the government provided clearer guidelines to project developers and fast-tracked approvals for permits and grid connections.

Sector	Policy instruments	Indonesia	Philippines	Vietnam
Energy	**EV subsidies**	The Government of Indonesia supports EV adoption through targeted fiscal incentives, including import duty and VAT exemptions for EVs and components. Direct purchase subsidies of IDR 7 million (approximately USD 450) for electric motorcycles were also introduced in 2023. These measures aim to reduce upfront costs and accelerate the domestic EV market.	In 2022, the Philippines passed the Electric Vehicle Industry Development Act to promote the development and adoption of EVs. EV incentives put in place include exempting fully electric vehicles from excise taxes, zero tariffs on EVs until 2028, reduced import duties on EV parts and components, and more.	Since 2022, Vietnam has fully exempted EVs from registration fees for three years, followed by a 50% reduction for the following two years. EVs also benefit from a preferential special consumption tax rate of 15%, significantly lower than the 35% to 50% applied to traditional gasoline and diesel vehicles.
	Coal phase-out	In 2022, Indonesia places a moratorium on new coal power plants, with exemptions for projects already under development or classified as national strategic projects under their National Energy General Plan. The regulation also caps coal plant operations by 2050 and introduces benchmark tariffs and a streamlined procurement process to attract renewable energy investment. To further support its energy transition, initiatives like the Just Energy Transition Partnership and the Energy Transition Mechanism aim to mobilize international climate finance to accelerate the early retirement of coal plants, even though implementation remains complex. Despite the efforts, coal remains dominant due to the Domestic Market Obligation policy, which requires producers to sell coal to PLN at below-market prices, effectively subsidizing coal generation. Combined with long-term PPAs and fossil fuel subsidies, these factors make it challenging for renewable energy to compete and scale.	In 2022, the Philippines introduced a moratorium on new coal-fired power plants. The government encourages voluntary decommissioning or repurposing of coal-fired power plants by the private sector. A well-recognized private sector initiative in the early retirement of fossil-fuel plant is the partnership between ACEN, Keppel and GenZero to retire a 246 MW coal plant in Batangas province in South Luzon by 2030, 10 years ahead of its scheduled closure in 2040, through the use of transition credits. While the government does not provide direct fossil fuel subsidies, the Universal Charge for Missionary Electrification subsidy, which is a cross-subsidy used to promote electrification in off-grid areas, is indirectly subsidizing diesel-generated electricity supplied by the National Power Corporation-Small Power Utilities Group.	The Vietnamese government plans to fully retire outdated and inefficient coal-fired power plants that are unable to transition by 2040. It is piloting the introduction of carbon capture systems at older coal plants and exploring their conversion to co-firing with ammonia or biomass. No new coal power plants will be developed after 2030. Despite these efforts, coal demand remains high, driven by the manufacturing sector. In 2024, Vietnam's thermal coal imports increased by 31%. The country also aims to install 37.33 GW of LNG-to-power capacity by 2030, which is expected to supply nearly a quarter of its electricity.

Sector	Policy instruments	Indonesia	Philippines	Vietnam
	Power sector ownership regulation	Indonesia's state-owned utility, PT Perusahaan Listrik Negara (PLN), holds a monopoly over the transmission and distribution of electricity. IPPs have been increasing in the last years, allowing foreign and private investors to participate in power generation. However, PLN remains the sole off-taker and retains control over grid access and system planning, limiting the development of a decentralized power system.	The 2001 Electric Power Industry Reform Act allows private ownership in the generation sector but limits it to 25% of total nationwide installed generating capacity per generation company. In 2022, the government opened the renewable energy sector to full foreign ownership.	Vietnam Electricity (EVN), a state-owned enterprise, has traditionally held a monopoly over electricity transmission and distribution. However, its share of electricity generation has declined over time (reaching 38% in 2022) with the entry of IPPs into the market. Owing to the country's rapid industrialization, the government also introduced Direct Power Purchase Agreements to allow renewable energy developers to sell electricity directly to large C&I consumers, in some cases, bypassing EVN.

ANNEX 3: COMPARISON OF DOMESTIC CAPITAL MOBILIZATION FOR CLIMATE FINANCE IN INDONESIA, PHILIPPINES, AND VIETNAM

Comparison items	Indonesia	The Philippines	Vietnam
Diversity of domestic financial actors	The financial systems of all three countries are dominated by banks, while non-bank financial institutions such as insurance companies, pension funds, and investment funds remain a small but growing segment of the financial systems. While institutional investors own 45% of market capitalization globally and 18% in Asia as of 2023, institutional investors in the Philippines only own 7% while those in Indonesia and Vietnam own 8%.		
Domestic market capitalization	USD 661.3 billion (Feb 2025)	USD 324.8 billion (Feb 2025)	USD 220.1 billion (Feb 2025)
Volume of climate finance (2017 - 2022)	Total Volume of Climate Finance (2017-2022): USD 26.9 billion Domestic Financing: USD 7.2 billion External Financing: USD 19.7 billion	Total Volume of Climate Finance (2017-2022): USD 22.5 billion Domestic Financing: USD 3.6 billion External Financing: USD 18.9 billion	Total Volume of Climate Finance (2017-2022): USD 49.1 billion Domestic Financing: USD 39.3 billion External Financing: USD 9.8 billion
Dominant [private] domestic actors in climate finance	Local corporations are the largest sources of domestic climate finance.	Domestic commercial financial institutions and local corporations are the largest sources of domestic climate finance	Domestic corporations are the largest sources of domestic climate finance.
Sector	Energy sector received 35% of total climate finance, followed by others & cross sectoral sector at 26% and transport sector at 11%.	Transport sector received 51% of total climate finance, followed by others & cross sectoral sector at 24%, and energy sector at 14%.	Energy sector received 84% of total climate finance, followed by buildings & infrastructure sector at 6% and others & cross sectoral sector at 3%.
Diversity of instruments	Total climate financing driven by commercial debt (36%). Concessional capital amounted to 38% of total climate flows.	Total climate financing driven by concessional debt (49%). Concessional capital amounted to 53% of total climate flows.	Total climate financing driven by corporate equity finance (52%). Concessional capital amounted to 7.7% of total climate flows.

ANNEX 4: COMPARISON OF BLENDED CLIMATE FINANCE EFFORTS IN INDONESIA, PHILIPPINES, AND VIETNAM

Comparison items	Indonesia	The Philippines	Vietnam
Total volumes (all years)	USD 7.6 billion	USD 2.6 billion	USD 3.4 billion
Top 3 Sectors	Renewable energy asset development accounts for 44% of transactions, followed by agro-finance (19%) and sustainable agriculture (15%).	Renewable energy asset development accounts for 50% of transactions, followed by water infrastructure (22%) and energy efficiency projects (17%).	Renewable energy asset development accounts for 54% of transactions, followed by energy efficiency (32%) and water infrastructure (18%).
Diversity of concessional capital providers	ADB is recognized as a key administrator of both concessional capital through donor-funded pools and commercial capital through its own capital resources		
	Bilateral agencies and multi-donor funds are the largest sources of concessional capital. International actors are the main source of capital.	Bilateral aid agencies and foundations are the largest sources of concessional capital. International actors are the main source of capital.	Multilateral funds and donor-funded concessional pools are the largest sources of concessional capital. Regional and international actors play an equal role
Commercial capital providers	MDBs/DFIs and MNCs are the largest sources of commercial capital.	MDBs/DFIs and MNCs are the largest sources of commercial capital.	MDBs/DFIs and financial institutions are the largest sources of commercial capital.
Blended finance opportunities	Less commercially mature sectors such as energy storage, transmission and distribution infrastructure, and variable renewable energy that require targeted support to attract private investment. Guarantees to help unlock private capital for long-tenor projects by mitigating credit and policy risks. Project preparation grants from regional family offices and philanthropic organizations to advance early-stage nature-based solutions.	Blended capital stack alongside project aggregation platforms to mobilize financing for MSMEs, including those working on energy access in remote islands. Technical assistance to promote issuance of green bonds by domestic actors, including local government units. Guarantees to reduce credit risk and incentivize lending to borrowers such as smallholders and MSMEs who find it challenging to meet banks' collateral requirements.	Less commercially mature sectors such as energy storage, transmission and distribution infrastructure, and variable renewable energy that require targeted support to attract private investment. A/B loan structures in financing utility-scale renewable energy projects by combining concessional, MDB, and private sector capital. Lines of credit and risk-sharing facilities extended to local financial institutions to help de-risk and scale climate-aligned lending within their portfolios. Blended green bonds to incentivize private sector participation and enable local-currency financing for adaptation-focused initiatives.

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