



Indonesia  
Research  
Institute for  
Decarbonization

# Strengthening the Role of Financial Sector and Capital Market to Ensure Just Climate Transition in Indonesia



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**Layout:**

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Oktober 2025

Publikasi ini bisa diunduh melalui:

<https://irid.or.id/publication/>

Produced based on the discussion conducted by Indonesia Research Institute for Decarbonization (IRID), in collaboration with Asia Investor Group on Climate Change (AIGCC) and the Ministry of Finance of the Republic of Indonesia on 9 October 2025.

The materials presented have received consent from the relevant sources.

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## List of Abbreviations

4P	: Public-Private-Philanthropic Partnerships	GCF	: Green Climate Fund
ADB	: Asian Development Bank	GDP	: Gross Domestic Product
AIGCC	: Asia Investor Group on Climate Change	GHG	: Greenhouse Gas
APBN	: <i>Anggaran dan Pendapatan Belanja Negara</i>	GX	: Green Transformation
BAPPENAS	: Badan Perencanaan Pembangunan Nasional	IDR	: Indonesia Rupiah
BESS	: Battery Energy Storage System	IRID	: Indonesia Research Institute for Decarbonization
BPJS	: Badan Penyelenggara Jaminan Sosial	JETP	: Just Energy Transition Partnership
BUR	: Biennial Update Report	KPBU	: Kerja Sama Pemerintah dan Badan Usaha
CBI	: Climate Bonds Initiative	LTS-LCCR	: Indonesia Long-Term Strategy for Low Carbon and Climate Resilience
CBT	: Climate-Budget Tagging	MDB	: Multilateral Development Bank
CCS	: Carbon, Capture, and Storage	MEMR	: Ministry of Energy and Mineral Resources
CFPPs	: Coal-fired Power Plants	MOEF	: Ministry of Environment and Forestry
CIPP	: Comprehensive Investment and Policy Plan	MRV	: Monitoring, Reporting, and Verification
ESG	: Environmental, Social, and Governance	MW	: Megawatt
ETM	: Emission Trading Mechanism	NDC	: Nationally Determined Contribution
ETM	: Energy Transition Mechanism	NZE	: Net Zero Emission
ETS	: Emissions Trading System	OJK	: Otoritas Jasa Keuangan
EV	: Electric Vehicle	PFB	: Pooling Fund Bencana
FOLU	: Forest and Other Land Uses	PLN	: Perusahaan Listrik Negara



POME	: Palm Oil Mill Effluent
PPP	: Public-Private Partnership
PT	: Perseroan Terbatas
PTBAE-PU	: Persetujuan Teknis Batas Atas Emisi bagi Pelaku Usaha
PTPN	: PT Perkebunan Nusantara
PV	: Photovoltaic
RAN-API	: Rencana Aksi Nasional Adaptasi Perubahan Iklim
RBP	: Result-Based Payment
RPJPN	: Rencana Pembangunan Jangka Panjang Nasional
RUKN	: Rencana Umum Ketenagalistrikan Nasional
RUPTL	: Rencana Usaha Penyediaan Tenaga Listrik
SBN	: Surat Berharga Negara
SCORE	: Sarawak Corridor of Renewable Energy
SDG	: Sustainable Development Goal
SFC	: Sustainable Finance Committee
SMEs	: Small and Medium Enterprises
SMI	: Sarana Multi Infrastruktur
SOEs	: State-owned enterprises
USD	: United States Dollar
VVBs	: Verifier or Validator Bodies



## 01. Background

Indonesia's Golden Vision 2045 has set ambitious climate and development goals. For instance, Indonesia aims to cut greenhouse gas (GHG) emissions by 32% by 2030 through renewable energy and carbon trading, as part of its Net Zero Emission (NZE) 2060 strategy. Indonesia's Ministry of National Development Planning (BAPPENAS) estimates **Indonesia's overall sustainable development financing gap, including climate, adaptation, biodiversity, and social protection, to be around USD 1.7 trillion.** [Indonesia's Ministry of Energy and Mineral Resources \(MEMR\)](#) indicated that **accelerating the energy transition requires up to \$1 trillion USD until 2060.** This estimate has not yet included the costs of socio-economic impacts and the transition to renewable energy. In addition, the [Just Energy Transition Partnership \(JETP\) Indonesia Secretariat](#) has estimated the energy transition cost for the electricity sector alone at USD 97.3 billion by 2030. However, the number does not yet cover the financial needs for the just transition intervention.

Given that public finance covers only a fraction of Indonesia's climate financing needs, the role of the financial sector becomes crucial in bridging the financing gap. Delivering Indonesia's climate goal requires a large-scale and sustained investment. Hence, positioning the private sector as the primary engine for capital, innovation, and implementation. In this regard, the private sector can play a key role in mobilizing capital, driving technological advancement, and participating in new green markets.

Indonesia's climate ambition, as reflected in its commitment to net-zero emissions and low-carbon development, finds strong resonance in the Financial Omnibus Law, which serves as a catalyst for shifting the financial sector toward low carbon and sustainable investments. By mandating the integration of sustainability across banking, capital markets, and non-bank financial institutions, the law ensures that financial flows are directed toward renewable energy, climate-resilient infrastructure, and sustainable enterprises. Crucially, this transformation is designed to incorporate the principles of a just transition—balancing decarbonization with social equity by safeguarding jobs, supporting small and medium enterprises (SMEs), and ensuring vulnerable communities are not left behind. In this way, the greening of the financial system under the Omnibus Law framework does more than mitigate systemic climate risks: it enables inclusive economic transformation, aligning Indonesia's financial stability with its broader climate and social development agenda.

[The Place-Based Just Transitions report](#) offers a policy baseline for Indonesia, mapping existing policy architecture, financing mechanisms, and social protection systems. **The report identifies critical enablers and gaps for the financial sector in ensuring that transition pathways are people-centered, locally relevant, and financially viable.** Included in the report is the opportunity for Indonesia's financial sector—with its Golden Vision 2045—to shift the investment away from fossil fuel and prioritize community-centered economic diversification. The report also provides an **entry point to integrate just transition into investment decision-making by the asset managers.**



In this context, Directorate of Banking, Financial Markets, and Other Financing Development of the Ministry of Finance of the Republic of Indonesia, in collaboration with Indonesia Research Institute for Decarbonization (IRID) and the Asia Investor Group on Climate Change (AIGCC), have convened a multi-stakeholders roundtable to explore the role of the financial sector in Indonesia to integrate the just transition principles into Indonesia's low greenhouse gas emission and resilient development strategies, as well as exploring possible financing instruments for just climate transition, drawing on findings from AIGCC's Place-Based Just Transitions: Policy Baseline & Case Studies report. The discussion aims to explore how investors, particularly the private sector, can support financing models that explicitly link climate goals with social equity outcomes. This involves identifying the necessary ecosystem to attract capital for just transition programs and activities, including at the sub-national level.






## 02. Place-Based Just Transition

There are two phases of transitioning to a low-carbon economy. First, the transition-in phase, where transition into the low-carbon economy happens. This phase involves the emergence of new sectors, including those related to critical minerals. Second, the transition-out phase, moving away from the carbon-intensive sector, which largely involves the decline of the thermal power sector. There are economic and environmental impacts resulting from such transitions that must be managed with approaches that are just, people-centric, and place-based. In that context, AIGCC published a report on '[Place-Based Just Transition \(2025\)](#)', which conceptualizes just transition as strategies for managing economic, social, and environmental changes during the process of transitioning to low carbon economy. These strategies are tailored to the local reality of a particular location or region, including its specific needs, characteristics, and assets. It also recognizes that the impacts, opportunities, and solutions associated with the transition will depend on local economic structures, social dynamics, and natural resources.

The report examines place-based just transition perspectives emerging in four Asian markets: India, Indonesia, Malaysia, and Japan. Each country has distinct policy baselines, institutional capacities, and labor market dynamics. The report seeks to give an overview of how the transition can contribute to achieving net zero emission (NZE), while remaining socially inclusive. To support this, the report maps out policy baselines of each market and what needs to be improved from just transition perspectives. In addition to that, the report aims to understand the main motivations, the readiness, and the ambition of the four markets to undertake just transition planning.

## 2.1 Place-Based Just Transition

After reviewing over 50 definitions of just transition, AIGCC identified three common elements found in most definitions that just transition must involve:

- 
**Inclusive engagement** in decision making, where all stakeholders, ranging from business, investors, governments, workers, and civil society, are meaningfully engaged;
- 
**Equity in outcomes**, meaning that the transition must be carried out in a fair and equitable manner; and
- 
**Systemic perspective**, which emphasizes the interconnectedness among environmental sustainability, social dimensions, and broader economic volatility.



During the transition process, certain actors and groups may experience disproportionate impacts. Thus, mapping the spectrum of the stakeholders for a just transition is crucial. The left side of Figure 1 below outlines the key stakeholders in the just transition, which include workers, communities, consumers, SMEs, civil society, investors, industry, academia, and government bodies. When referring to workers, the report includes those in formal, informal, and induced employment, as well as trade union members. For workers, the key issues are related to income security and job protection. As for the communities, the key issues are related to local and livelihood resilience. Meanwhile, for the consumers and SMEs, the issues of just transitions are rather on energy access and affordability.

Some of these stakeholders also possess varied capacity in directing just transition. Civil society largely emphasizes accountability in the transition process. The investors and industry groups, on the other hand, influence the direction of the transition through their business models and capital-allocation decisions. Lastly, the government plays key role in ensuring policy coherence between the subnational and national levels as well as effective institutional coordination.

In contrast, the right side of Figure 1 shows the socio-demographic vulnerabilities that must be considered to ensure that the just transition reflects the lived realities of people and is truly place-based. However, the socio-demographic vulnerabilities are difficult to incorporate in the initial stage of engagement with the stakeholders represented on the left side.

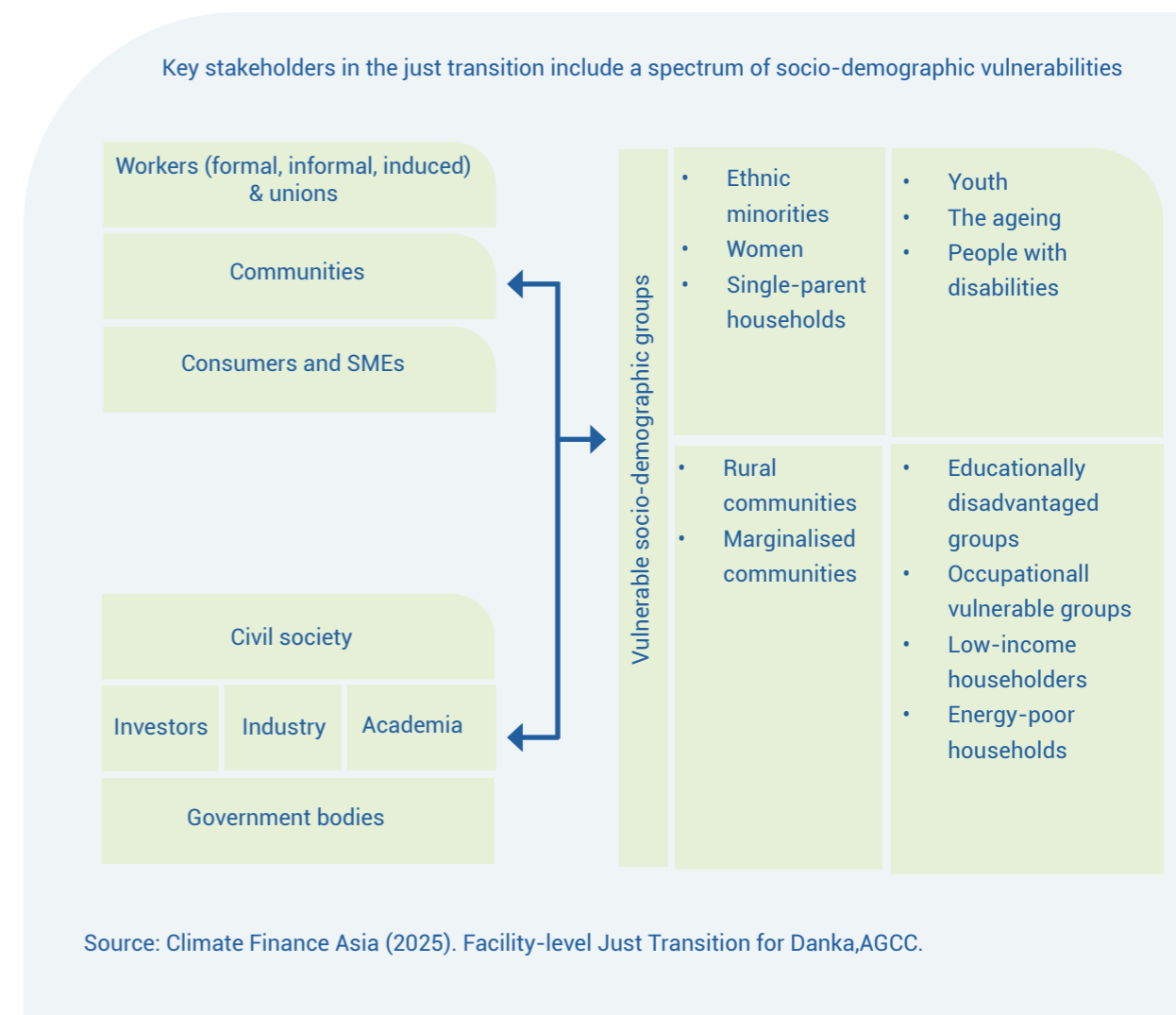


Figure 1. Key Stakeholders of the Transition (AIGCC, 2025)â

In the context of the place-based approach, the framing and application of just transition—including the opportunities and challenges it presents—may vary across Asian countries, particularly between emerging and developed markets. In emerging markets, economies are typically resource-intensive, extractive, and susceptible to disruption, with entire livelihoods at stake. Under this condition, poverty alleviation and development are urgent priorities compared to climate mitigation actions. In contrast, developed markets typically have more diversified industrial bases and stronger social protection systems; therefore, the just transition priority is to balance support for people in declining industries and maintaining high living standards.

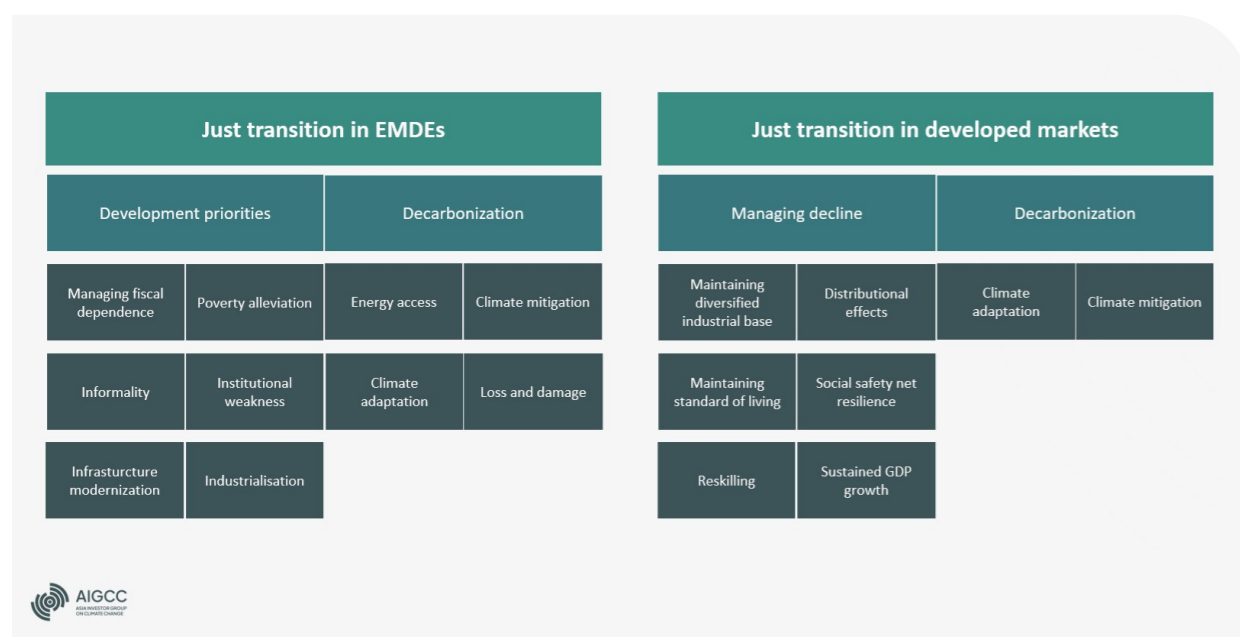


Figure 2 Just Transition in Emerging Markets vs. in Developed Markets in Asia (AIGCC, 2025)



## 2.2 Key Takeaways Across Asian Markets

The just transition landscape in Asia is diverse, where drivers and challenges are varied across markets (see Table 1). **Market readiness for just transition financing depends on the strength of institutions, the quality of local governance, and the alignment between climate ambition and social equity.** Although each market—Japan, India, Indonesia, and Malaysia—has demonstrated early progress, all four countries have established policy baselines for implementing just transition. However, **local governance capacity, social protection adequacy, and funding alignment with just transition objectives are common areas where these markets are lacking.** Other key takeaways on just transition financing are:

### A. Just transition is a policy aspiration in every market

Indonesia ([Golden Vision 2045](#)), India ([Viksit Bharat 2047 Visions](#)), Malaysia ([Madani Economy Framework](#)), and Japan ([Green Transformation \(GX\) Policy](#)) have referred to the just transition elements. However, the breadth of issues surrounding just transition is too wide to assume that the aspirations of these policies will automatically lead to implementation. This underscores that many elements need to be strengthened, such as clear national mandates and strategies that prioritize just transition. **Effective transition planning in Asia will depend on recognizing specific realities of the regions and addressing challenges in labor security, institutional alignment, and equitable financing.**

### B. Economic diversification pathways have few early takers

**Several markets have begun exploring economic diversification.** Indonesia is pursuing mineral down-streaming as part of its industrial strategy. India is looking at the agro-processing potential, especially in the coal-dependent regions. Malaysia is promoting investments in renewable energy and high-tech industry through initiatives, such as the Sarawak Corridor of Renewable Energy (SCORE). Japan's GX policies and digital transformation strategies support industrial transformation through digitalization, hydrogen, and clean energy development.

### C. Social safety net needs to be improved to meet the challenge

Distributed impacts—which sometimes are disproportionate—are already acknowledged in climate and development planning. However, across these markets, this is often not backed by dedicated governance mechanisms as well as financing structures and protections for vulnerable parties. **Social protection schemes, such as health coverage and income support, already exist, yet they have not addressed social risks from climate transitions. Linking the social safety net to informal sectors is also needed.**

### D. Interventions on adaptation need equal focus

**Just transition issues are mainly incorporated in climate mitigation, while its application in the climate adaptation context remains overlooked.** Although Indonesia and India have begun integrating social considerations into adaptation, they are lack of institutional coordination frameworks and earmarked financing mechanisms. Most adaptation investments prioritize infrastructure development over socio-economic resilience.



Table 1. Market-specific context for place-based just transitions (AIGCC, 2025)

Market	Main Drivers of Just Transition	Big Challenge	Unique Trait
India	Inclusive growth via job creation and improving quality of life	Reconciling informal economy to build inclusive livelihoods	<b>Employment:</b> Development-linked transition model rooted in employment schemes and grassroots delivery systems
Indonesia	Seizing transition opportunities and phasing in sustainable energy across coal-rich provinces	Strong subnational dependence on coal for jobs and local budgets	<b>Community:</b> Emphasis on 'just' decentralization, requiring community buy-in and compensation in affected provinces
Malaysia	Advancing energy transition while addressing historical development gaps in the Peninsular regions	Fiscal dependence on oil and gas revenue, with uneven state capacity	<b>Equity:</b> Emphasis on distributional justice through partially implementing living wage, and budding ideas around wage progression
Japan	Using technological innovation to drive secure and competitive low-carbon growth	Rapid ageing and rural depopulation strain labor markets	<b>Technology:</b> Civil society leadership, technological optimism and past transition lessons



## 2.3 Policy Baseline for Place-Based Just Transitions: Indonesia's Context

Indonesia already has several policies that can serve as a baseline for achieving a just transition in the country. The national development plan has addressed the need for a just transition, although in a very general context, such as highlighting the importance of adaptive social protection mechanisms, including towards climate change. The sectoral policies already exist and can be leveraged for just transition planning and implementation.

### A. Development planning and economic diversification

In the context of broad development planning, the Indonesian Government has introduced the **Golden Vision 2045**, which outlines Indonesia's plan to reach high-income status through social transformation. This aspiration is then supported by the **National Long-Term Development Plan** (Rencana Pembangunan Jangka Panjang Nasional/RPJPN). Although the Golden Vision 2045 does not explicitly mention 'just transition', it sets out the plan to shift from static welfare<sup>1</sup> to adaptive social protection by integrating social assistance, cash transfers, and disaster risk systems.

<sup>1</sup> Traditional social protection system that is fixed, reactive, and not designed to adjust quickly to shocks.

On economic diversification, the government is promoting mineral down-streaming, such as processing nickel into battery chemicals to build value-added industries, with the expectation that it may create alternative employment opportunities for workers who are affected by the decline of extractive industries. **The Ministry of State-Owned Enterprises has directed state-owned enterprises to build businesses that support a green economy ecosystem.** The just transition framework of JETP Indonesia has also included economic diversification as one of its elements. There are already **some pilot projects aimed at supporting the community in the coal-dependent regions to transition away from coal**, such as the [Ombilin project](#). Such projects can directly benefit Indonesia's coal-dependent regions, including South Sumatra, South Kalimantan, and East Kalimantan.

### B. Social protection systems

Indonesia already has a social protection system that provides a good foundation for advancing just transition. **The universal health insurance (BPJS Kesehatan)<sup>2</sup> and mandatory employment social security program (BPJS Ketenagakerjaan)** can provide a strong foundation. BPJS Kesehatan provides near-universal health coverage, while BPJS Ketenagakerjaan covers old-age saving, pension program, and work accident insurance. However, some challenges, such as informality and weak enforcement, remain. Informal workers are less likely to enroll in, let alone retain, the scheme due to **irregular incomes, low awareness, and affordability issues.**

<sup>2</sup> BPJS stands for Badan Penyelenggara Jaminan Sosial (Social Security Administering Body). It is the Indonesian government agency responsible for managing the country's national social security programs.



### C. Labor market

Indonesia currently lacks dedicated policy instruments to address potential wage disparities arising from the transition away from fossil fuel industries. In Indonesia, although the wages in coal-related jobs are generally higher compared to other industries, this may change as the transition to renewable energy takes place. The data from the Indonesia's Ministry of National Development Planning shows that coal jobs pay 67% and 52% more than in-demand and green jobs (see Figure 3). On the other hand, this **wage gap between coal and green jobs hinders the labor market transition, thus becoming a deterrent to economic diversification.**

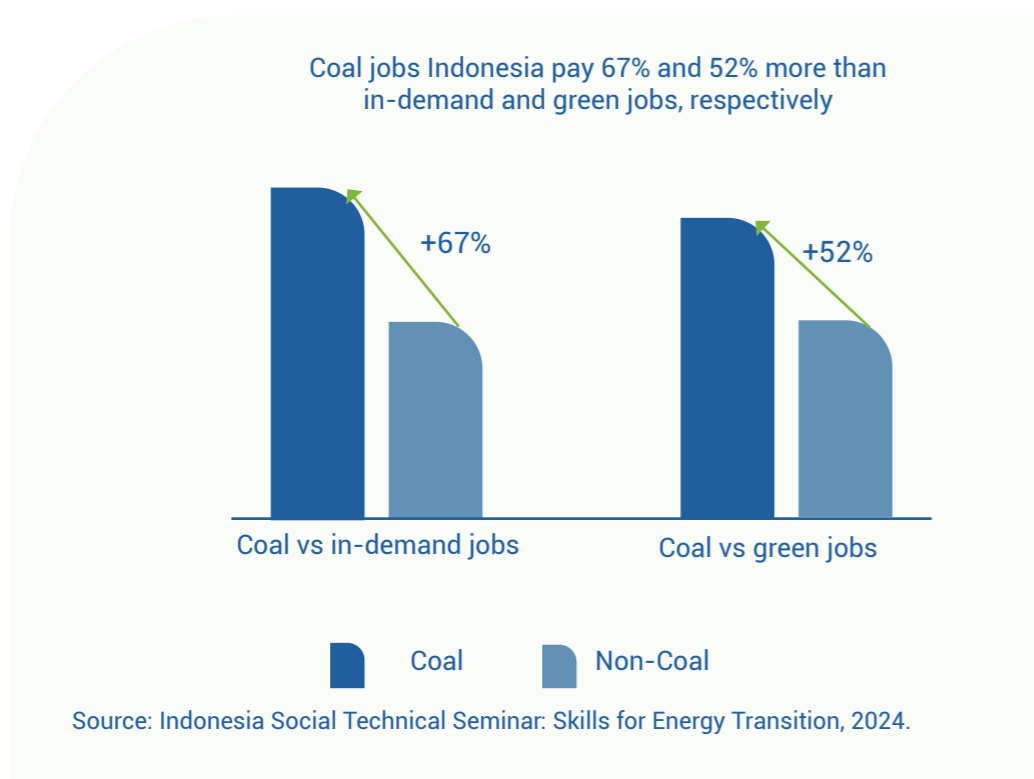


Figure 3. Wage Differences between Coal Jobs and Non-Coal Jobs (Indonesia Social Protection Technical Seminar: Skills for Energy Transition, 2024)



### D. Public and international financing

In Indonesia, climate-related government spending is tracked through **the climate-budget tagging (CBT) system**. In 2023, USD 6.3 billion was spent on climate-related activities and programs (AIGCC, 2025). However, specific funds for just transition programs have not yet been explicitly labelled in the CBT system. One of the identified just transition fund allocations is **for job training and labor migration**, in response to industrial shift trends in several regions, including for supporting emerging electric vehicle (EV) industry. The fund allocations are provided by Indonesia's Ministry of Manpower.

In terms of international funding, Indonesia received a **USD 20 billion JETP financing package** during its 2022 G20 Presidency<sup>3</sup>. Grants and technical assistance, which are vital for funding the social elements, remain under USD 250 million. A total of USD 218.5 million is allocated to financing the just transition assessment, as appears in the [Comprehensive Investment and Policy Plan \(CIPP\) JETP](#). The assessment cost comprises (i) USD 18 million for capacity building, scoping study, and project piloting; and (ii) USD 0.5 million for assessment for each project priority, totaling USD 200.5 million. This implies that **the just transition fund is limited to assessment rather than to holistic intervention, such as addressing the upskilling and reskilling needs of the affected workers.**

<sup>3</sup> Before US withdrew from IPG.



## E. Climate adaptation and resilience

Indonesia already has **National Action Plan for Climate Change Adaptation** (Rencana Aksi Nasional Adaptasi Perubahan Iklim/RAN-API) which aims to build climate-resilient livelihoods. Concerns regarding climate adaptation are also addressed in RPJPN, **emphasizes the need for climate adaptation at coastal areas. However, the RPJPN does not explicitly mention just transition.**

The Indonesian Government has established the **Disaster Pooling Fund (Pooling Fund Bencana/PFB)**, which is managed by the Ministry of Finance, as part of its disaster risk financing framework. While PFB is primarily designed to support fiscal responses during disaster events, this mechanism provides an institutional baseline that could be further strengthened to incorporate climate risks and social protection dimensions.



## 2.4 Case Studies of Place-Based Just Transition

The AIGCC report also presents case studies of place-based just transition in practice, with the aim of offering insights and lessons for policy makers, investors, and practitioners navigating just transition pathways.

### A. Integrating climate adaptation with social equity in the supply chain

Schroders and the Global Labour Institute at Cornell University have collaborated on the topic of just resilience, aimed at raising awareness on the social impacts of physical climate risk and adaptation. In 2024, Schroders engaged with companies in the apparel sector on maintaining exposure to physical climate risks in Asia's supply chain. During this engagement, a UK-based apparel company informed that the **recent heatwave in India is affecting its supply chain**. The company was encouraged to deepen its **climate risk assessment by considering worker exposure, supply chain resilience, and differentiated impacts on vulnerable communities, in addition to operational disruption risks**. Since then, another European company has developed a heat stress standard for suppliers to address the risks of workers' heat stress. Schroders has developed [a toolkit](#) to guide investors in engaging with investee companies on the implications of physical climate risks for communities and portfolios.

This case study shows that **climate adaptation can be integrated into Environmental, Social, and Governance (ESG) frameworks, by examining supply chain risk and labor productivity**. In addition, it also illustrates how investor-led engagement can direct corporate's attention towards just transition by using supply chain and labor productivity framing.

## B. Decoupling repurposing and repowering initiatives from decommissioning schedules

Komati is the first large-scale coal-fired power plant transition project in South Africa, planned for a phased shutdown from 2018 to 2022. The shutdown would put USD 92.34 million Gross Domestic Product (GDP), 4,166 jobs (257 direct and 3,909 indirect jobs), and 38 households' sustainable income at risk, according to various socio-economic studies. In 2019, staff engagement and broader community consultation began in Komati. Eskom (South Africa's State Own Enterprise in the power sector) has two approaches to stabilize the region's economy: repowering and repurposing. As of May 2025, phase 1 of the repowering stage is underway, with the following configuration: 72 MW of solar PV and 150 MW x 4-hour battery energy storage system, with all regulatory approvals secured.

In this case study, **repowering and repurposing were not undertaken concurrently with decommissioning**<sup>4</sup>. Both were treated as different processes. The first key lesson from the case study is that **early planning and implementation of a just transition are crucial, with upfront preparatory work essential for identifying impacts and informing project as well as policy design**. Just transition planning needs to be integrated into the early stages of decommissioning processes, rather than being treated as a subsequent step. The second key lesson is that **renewable energy, as a sector, is insufficient to absorb the region's workforce. Therefore, there are other complementary sectors that need to be built to ensure long-term social-economic development**.

<sup>4</sup> The formal process of permanently shutting down and retiring a power plant facility from operation, which typically involves ceasing operations permanently, disconnecting the facility from the grid or system, dismantling equipment and structures (if required), managing environmental remediation, securing or rehabilitating the site.

## 2.5 Financing Just Transition

Early-stage models for financing just transition have begun to emerge. There are three key features of these financing models. First, just transition financing comprises various financing sources, from public and private sources, as well as blended finance mechanisms. The **mix of public, private, and blended finance** instruments is intended to share risk more evenly across stakeholders. Second, **concessional finance is used to fund the non-commercial aspects in just transition**. Concessional finance can be used to fund the social components. For instance, just transition instruments might pair a market rate loan for a new renewable energy activity, with grants or soft loans allocated for workers' reskilling and social protection measures. Third, **the incorporation of explicit social and governance criteria into investment decision-making**. In practice, investors are required to evaluate project impacts on workers, community, households, and other relevant stakeholders. These emerging financing models extend the mandate of traditional financing instruments by aiming to contribute to climate goals as well as positive socio-economic outcomes. They add layers of conditionality but also leverage the market and protect investors to an extent. However, the development of these models is early, and many just transition financing structures remain pilot concepts or small in scale. Hence, **it is critical to identify the enabling environment to ensure these financing models to be effective for long-term investors and aligned with the climate transition goal**.

### 03. Indonesia's Finance Policy Landscape

Indonesia is highly vulnerable to the adverse impacts of climate change, including the rising temperatures and sea-level rise. From 1981 to 2018, temperature rise in Indonesia was recorded at 0.03oC per year (Indonesia's Meteorology, Climatology, and Geophysical Agency, 2020) and sea level rise in Indonesia reaches 0.8-1.2 cm annually. Sea level rise is a prominent threat for the country as 65% of the population lives in coastal areas (BAPPENAS, 2021). Furthermore, other major climate risks in Indonesia, including the increasing risk of hydrometeorological disasters, water scarcity due to floods and severe droughts, land and marine ecosystem damage, could lead to economic losses to the level of 0.66% to 3.45% of GDP in 2030.

The Indonesian Government has calculated the financing needs to mitigate those impacts. According to Indonesia's Third Biennial Update Report (BUR) (2021), financing mitigation actions to achieve the Nationally Determined Contribution (NDC) target requires IDR 4,000 trillion (around USD 281 billion) from 2018 to 2030. Indonesia's NDC Mitigation Roadmap (2020) states that the accumulated cost of mitigation actions to achieve the NDC target from 2020 to 2030 is IDR 3,779 trillion or IDR 343.6 trillion per year. Indonesia's public finance capacity remains insufficient to meet the climate finance needs.

Table 2. Funding Needs for Climate Change Mitigation by Sector (Ministry of Finance of Indonesia, 2025)

Sector	Third BUR		NDC Mitigation Roadmap	
	(Rp trillion)	(USD billion)	(Rp trillion)	(USD billion)
Forestry	309.01	21.68	93.28	6.55
Energy and Transportation	3,500.00	245.61	3,500.00	245.61
IPPU	0.93	0.07	0.92	0.06
Waste	185.27	13.00	181.40	12.73
Agriculture	7.23	0.50	4.04	0.28
<b>Total</b>	<b>4,002.44</b>	<b>285.00</b>	<b>3,779.63</b>	<b>265.24</b>



The Indonesian Government tracks climate-related expenditures within the state budget (*Anggaran dan Pendapatan Belanja Negara/APBN*) through the CBT initiative. During 2018-2023, the average annual state budget allocation for climate-related activities was approximately 3.2% of the total state budget, or IDR 89.2 trillion (USD 5.9 billion). In 2023, the state budget allocation for climate-related activities reached IDR 702.9 trillion (USD 46.9 billion).

### The Climate Budget Tagging (CBT) Report 2018 – 2023

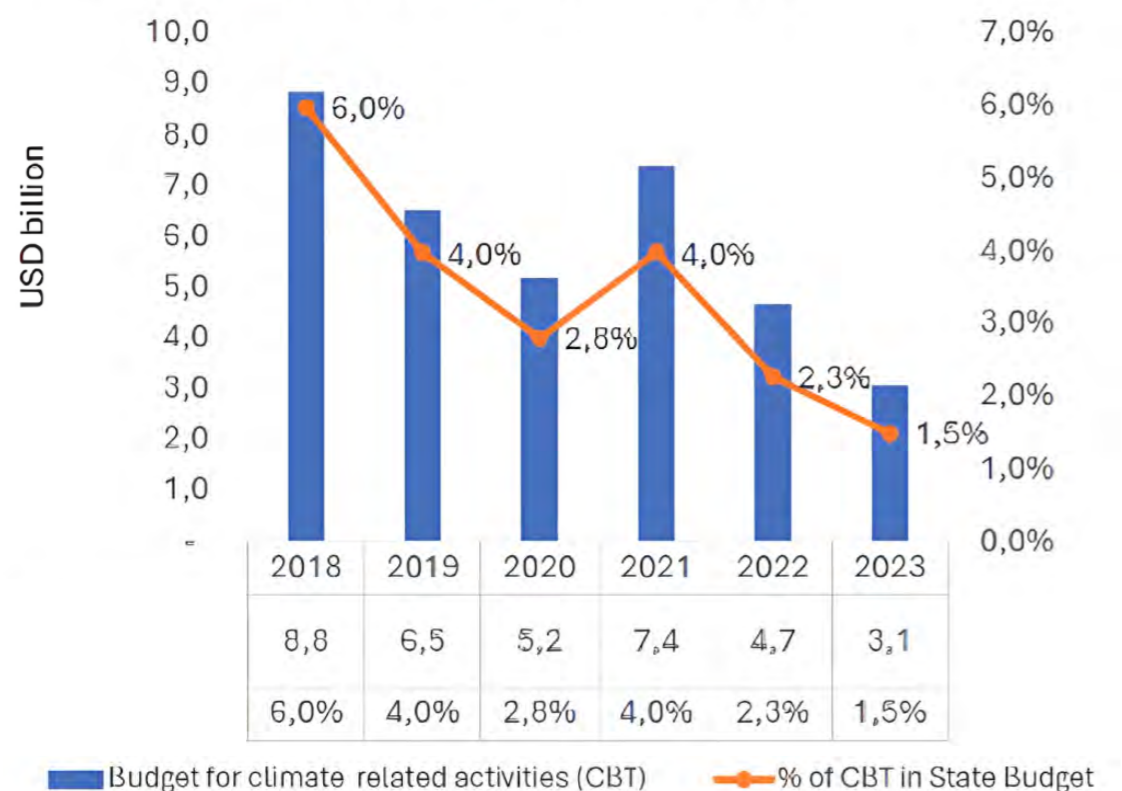


Figure 4. The Climate Budget Tagging (CBT) Report 2018-2023 (Ministry of Finance of Indonesia, 2025)

The CBT shows that Indonesia's public finance can cover approximately 16.4% of the total investment required for NDC implementation, leaving an estimated 83.6% financing gap. Mobilizing other sources of finance, particularly private and international finance, is indeed needed to close the gap. **However, the role of private sector financing and the capital market in financing climate transition in Indonesia remains underdeveloped relative to the scale of financing required.**

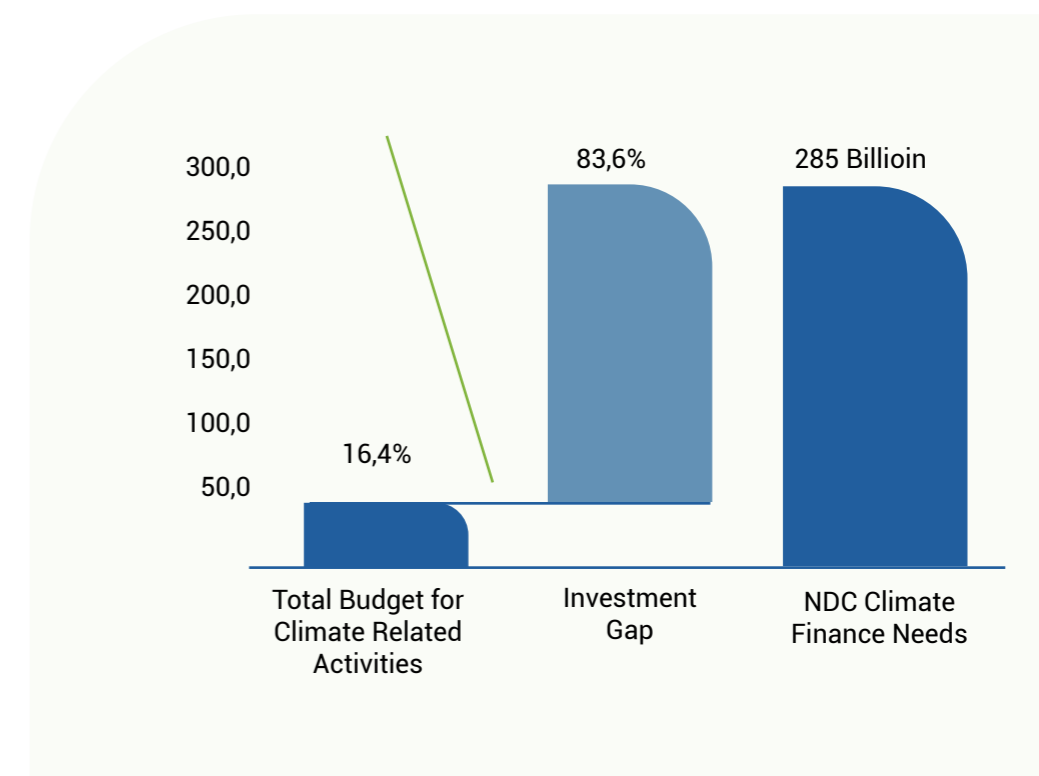


Figure 5. Financing Gap for Meeting Indonesia's NDC Target (Ministry of Finance of Indonesia, 2025)





### 3.1 Indonesia's Sustainable Finance Sector

The Indonesian Government has enacted [Law Number 4 of 2023 on the Development and Strengthening of the Financial Sector](#), an omnibus law governing the financial sector. The Law aims to strengthen Indonesia's financial system by consolidating and amending existing legislation, embedding sustainable finance principles across financial institutions, issuers, and public companies, as well as reinforcing regulatory support for its implementation.

In addition, the Law seeks to strengthen stakeholder cooperation in sustainable finance development by establishing the Sustainable Finance Committee (SFC), comprising the Ministry of Finance, the Financial Services Authority (Otoritas Jasa Keuangan/OJK), and the Bank of Indonesia. SFC plays a role in redirecting investment to Indonesia's climate and development agenda. This includes providing support towards [Asta Cita missions](#), particularly on strengthening national security and national independence through self-sufficiency in food, energy, water, sharia economy<sup>5</sup>, digital economy, green economy, and blue economy<sup>6</sup> (Asta Cita Mission 2); and strengthening the harmonious life by balancing the environment, nature, and culture, as well as increasing tolerance among religious communities to achieve a just and prosperous society (Asta Cita Mission 8).

<sup>5</sup> Sharia economy is an economic system based on Islamic principles, which prohibit usury, uncertainty, and gambling, aiming to achieve social justice, equity, and ethical, sustainable development.

<sup>6</sup> The sustainable use, management, and conservation of ocean, sea, and coastal resources to drive economic growth, improve livelihoods, and create jobs while maintaining ecosystem health.



Figure 6. Golden Indonesia Vision of 2045 and the Role of the Financial Sector (Ministry of Finance of Indonesia, 2025)

The financial sector is expected to play a critical role to achieve Indonesia's long-term development goals as stated in the Golden Indonesia Vision of 2045 (Figure 6), by becoming the source of deep, innovative, efficient, stable, and inclusive financing. To do so, the financial sector must optimize its role through several approaches, including:

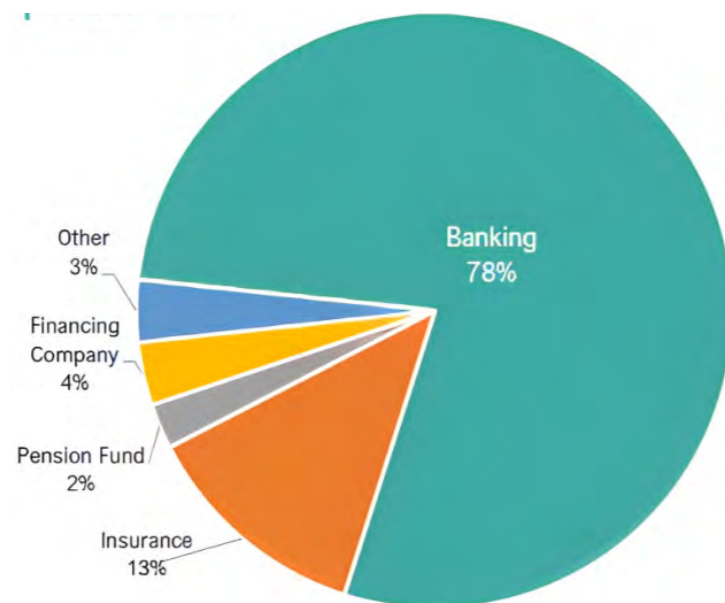
- 1 **Financial deepening**, refers to the growth of the financial sector, in which financial institutions, products, and services are deeper, more liquid, and accessible, ultimately channeling savings into productive investments to the country's economic growth;
- 2 **Strengthening the intermediary role of the financial sector;**
- 3 **Strengthening the funding source and the role of the non-bank financial sector; and**
- 4 **Financial inclusion**, encompasses the provision of access to an adequate range of safe, convenient, and affordable financial services for disadvantaged and other vulnerable groups<sup>7</sup>.

<sup>7</sup> Bank of Indonesia. Financial Inclusion. Accessed from <https://www.bi.go.id/en/fungsi-utama/stabilitas-sistem-keuangan/keuangan-inklusif/default.aspx>

### 3.2 The State of Indonesia's Financial Sector

Indonesia's financial sector has grown considerably in recent years, with the banking sector continuing to dominate the financial sector's assets (Figure 7). However, the intermediary role of the banking sector needs to be strengthened, as the current situation indicates that Indonesia's banking sector prefers to invest its funds in Government Bonds (Surat Berharga Negara/SBN) (Figure 8) rather than to play its core function as banks. On the contrary, the non-bank financial institutions, as a source of long-term funding, still have limited share and role in the financial sector, hence limited contribution to the GDP. The non-bank financial sector, such as pension and insurance, faces challenges in achieving higher growth due to limited public trust and low participation in long-term financial instruments, among other factors.

#### Indonesia's Financial Sector Asset Proportion 2024



**Total Financial Sector Assets in 2024:**  
Rp15,930 T

**Total Financial Sector Assets in 2019:**  
Rp11,811 T

Figure 7. Indonesia's Financial Sector Asset Proportion in 2024 (Financial Services Authority, 2025)

#### ASEAN-5 Countries' Local Currency Bond Market by GDP (%)

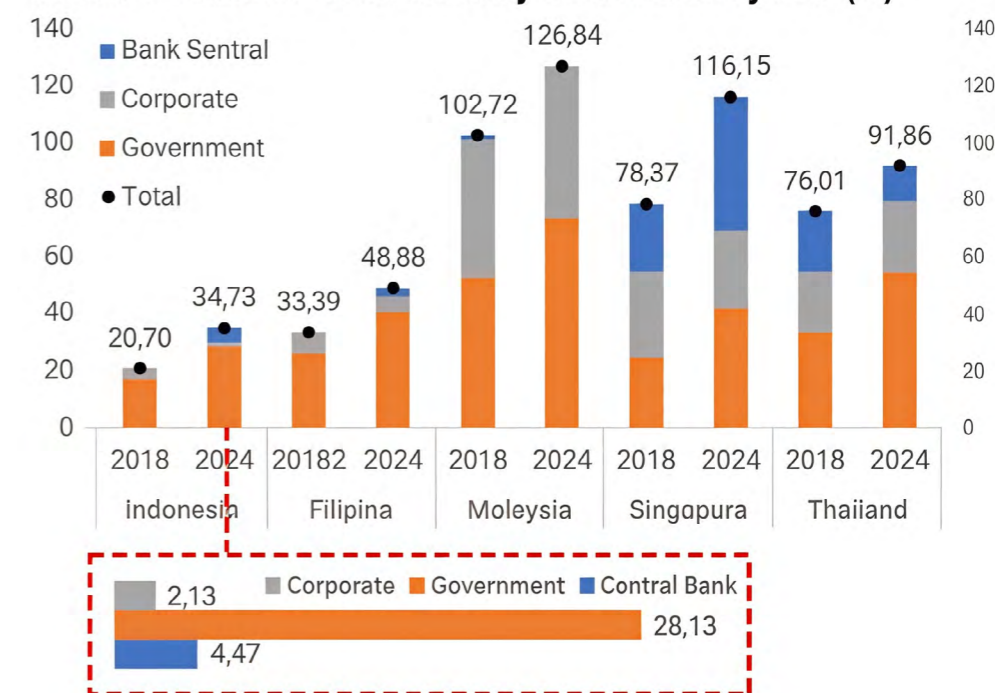


Figure 8. ASEAN-5 Countries' Local Currency Bond Market by GDP (%) (Ministry of Finance of Indonesia, 2025)

Comparing Indonesia with other 4 ASEAN countries—The Philippines, Malaysia, Singapore, and Thailand—Indonesia's financial sector depth (Table 3) and capital market ratio to GDP (Figure 9) remains relatively low. However, there are opportunities for improvement, including strengthening the private sector's role in mobilizing domestic finance. Accelerating capital market development is seen as critical to catching up with these countries and enabling long-term financing for just climate transitions.



Table 3. ASEAN-5 Financial Sector Depth (%) (Ministry of Finance of Indonesia, 2025)

Negara	Aset Bank per PDB <sup>2</sup>	Kapitalisasi Pasar Saham per PDB <sup>b</sup>	Obligasi Local Currency per PDB <sup>c</sup>	Aset Industri Asuransi per PDB	Aset Dana Pensiun per PDB	PDB per kapita (US\$) <sup>g</sup>	Tax Ratio <sup>h</sup>
Indonesia	56,3	55,7	34,7	5,8 <sup>d</sup>	6,9 <sup>d</sup>	4.963	12,1
Filipina	97,3	75,7	50,2	10,8 <sup>e</sup>	2,8 <sup>f</sup>	4.078	18,4
Malaysia	187,1	101,6	127,6	22,2 <sup>e</sup>	58,0 <sup>f</sup>	12.613	12,2
Singapura	500,4	118,4	116,3	63,7 <sup>e</sup>	42,2 <sup>e</sup>	92.153	12,1
Thailand	135,2	104,2	92,9	23,8 <sup>f</sup>	8,1 <sup>e</sup>	7.494	16,7

Sumber: Bank Indonesia, OJK, BPJS TK, Taspen, Asabri, CEIC, WB Global Financial Development Database (GFDD), IMF Government Finance Statistics, AsianBondsOnline, FocusEconomics, OECD  
 a) per 2024 (CEIC); b) per 2024, kecuali Thailand (2023) (CEIC); c) per Q3-2024 (AsianBondsOnline); d) per 2020 (SSKI Bank Indonesia, OJK, seri JHT & JP); e) per 2020 (GFDD); f) per 2018 (GFDD); g) per 2024 (FocusEconomics); h) per 2022 (OECD)

ASEAN-5 Countries' Capital Market Capitalization per GDP (%)

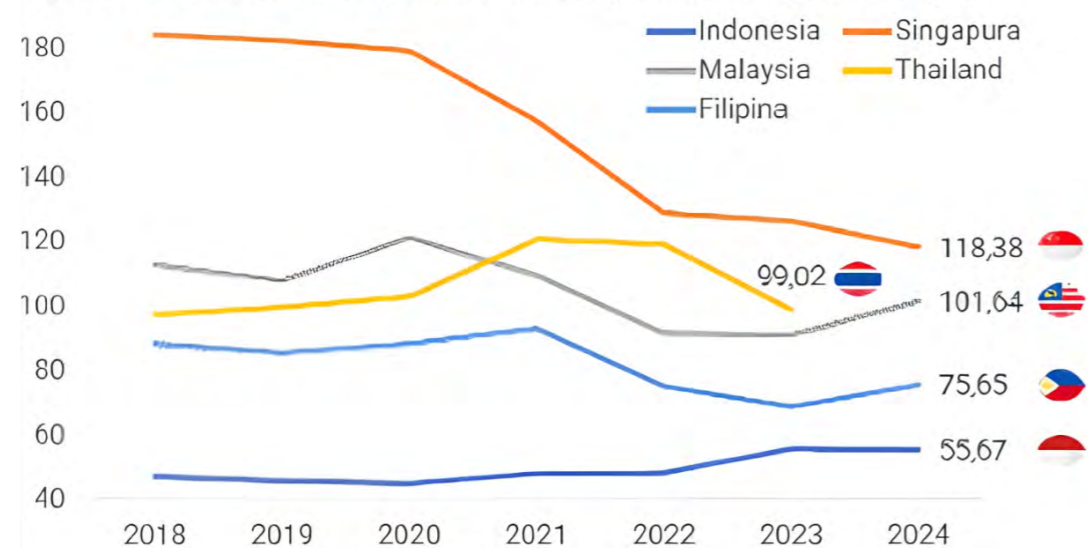


Figure 9. ASEAN-5 Countries' Capital Market Capitalization per GDP (%) (CEIC, Financial Services Authority, AsianBondOnline, 2025)

Enabling financing for just climate transitions requires bridging the gap between the supply (financial sector) and the demand side (green projects). **On the supply side**, financial institutions face **inadequate economic incentives**, which make them perceive green credit lines<sup>8</sup> as an unattractive business opportunity—such as renewable energy facilities or energy efficiency—as risky that leads to small investment in low greenhouse gas emission projects. Another factor that makes the low greenhouse gas emissions project unattractive is the **lack of capacity in assessing environmental risks, both in general and/or in the context of green investments**.

**On the demand side**, many companies demonstrate **little awareness** of environmental concerns. **The lack of economic incentives and pressure** to comply with environmental standards for these companies further hinders their interest in green project investments. Although some companies show interest in green investments, they **are not yet equipped to plan and implement green projects, nor do they have the information needed to access the cost-saving potential and associated risk of such investments**. Particularly for small and medium-sized companies, **access to finance is a challenge**.

<sup>8</sup> A green credit line is a dedicated, revolving loan facility from financial institutions designed to fund environmentally sustainable projects, such as renewable energy or energy efficiency.



## 04. Financing Just Transition in Indonesia

Financing just transition is a critical prerequisite for achieving Indonesia's climate commitments while safeguarding inclusive and equitable economic development. Given the diversity and scale of Indonesia's financial institutions, financing the climate transition should also consider the just transition's aspect to ensure that the transition to a low-carbon and resilient development is carried out fairly for those affected. Delivering a just climate transition requires coordinated action from governments, financial institutions, private sector, and philanthropies.

### 4.1 The Role of State-Owned Enterprises (SOEs) in Financing Just Climate Transition

One of the key players in Indonesia's just transition financing is PT Sarana Multi Infrastruktur (PT. SMI). Originally established as an infrastructure financing institution, PT SMI has expanded its role to other development financing areas related to sustainability, such as renewable energy, water, and sanitation. PT SMI's goal extends beyond private sector financing to include support for public sector projects, particularly at the subnational level. PT SMI also became the first direct access accredited entity of the Green Climate Fund (GCF) in Southeast Asia and already has a blended finance platform, Sustainable Development Goal (SDG) Indonesia One<sup>9</sup>, which was established in 2018. In 2022, PT SMI was appointed as the country platform manager for the Energy Transition Mechanism (ETM) to mobilize and crowd in private capital for energy transition assets. To achieve more inclusive and sustainable financing for the just transition, PT SMI has established the SMI Institute to conduct policy research, provide capacity-building, and outreach to assist developing countries, particularly in infrastructure development.

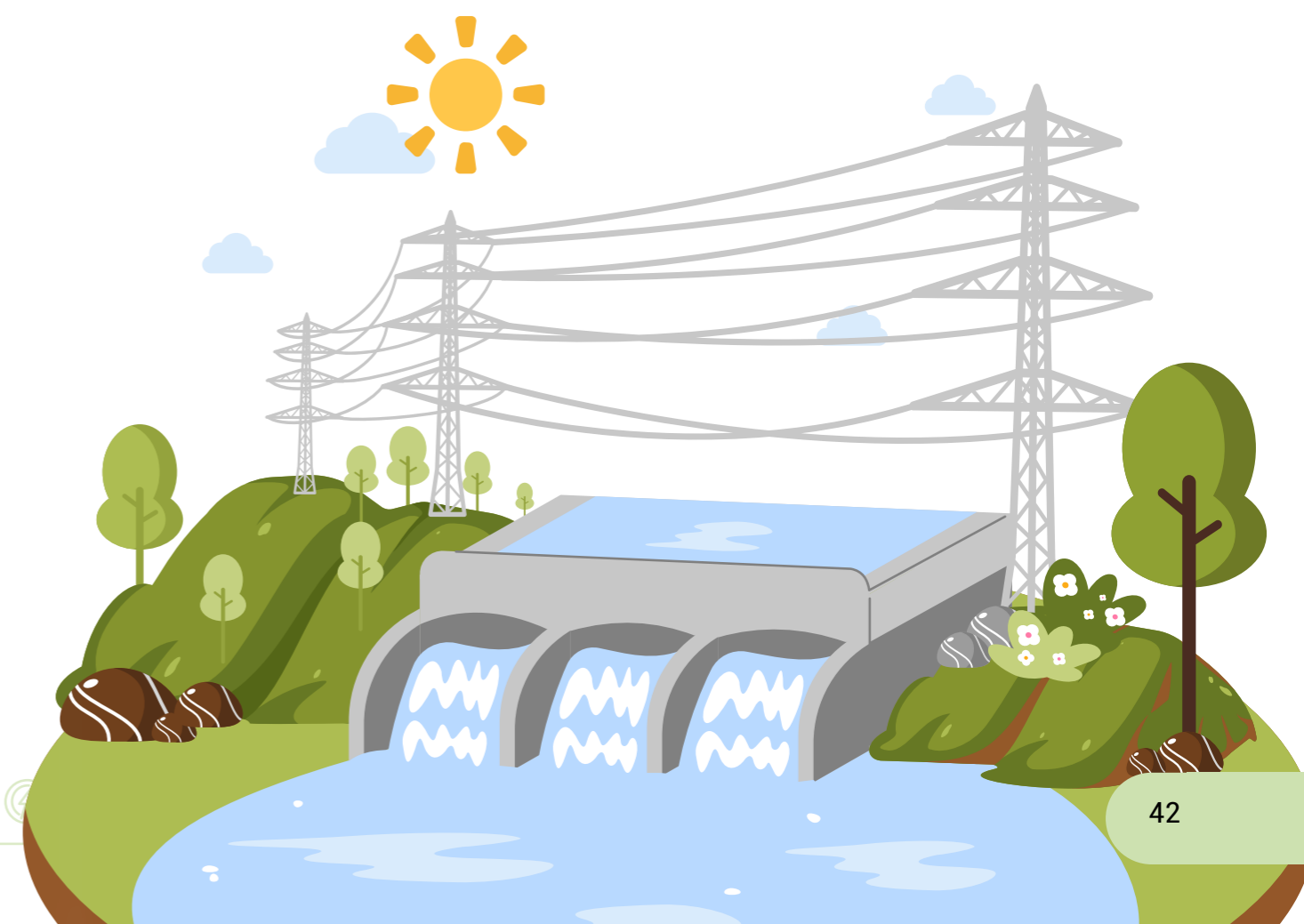
<sup>9</sup> SDG Indonesia One was established as a platform to support the achievement of the SDGs, including climate change projects.



### 4.1.1. Case Study of Innovative Financing

PT SMI has undertaken innovative financing initiatives. **First, a green loan** or sustainability-linked loan to support the transition undergone by Perusahaan Listrik Negara (PLN). PLN is currently undergoing a transition to reduce its reliance on fossil fuels and increase the share of renewable energy in its power generation mix. PT SMI provides green loans for specific asset types, including renewable energy, energy efficiency, and clean transportation. PT SMI committed IDR 2 trillion to support PLN's broader green financing program, which requires approximately IDR 12 trillion in total.

**Second, a loan and an investment grant** to support the Titab floating mini-hydro power plant. This project enables financing from the Asian Development Bank (ADB) through PT SMI for the 1.3 MW mini hydro power plant, with a total project cost of IDR 24.68 billion, with PT SMI's commitment of IDR 16.15 billion. The project has a strong potential for replication in other areas, as numerous existing dams could be converted into hydropower generation.



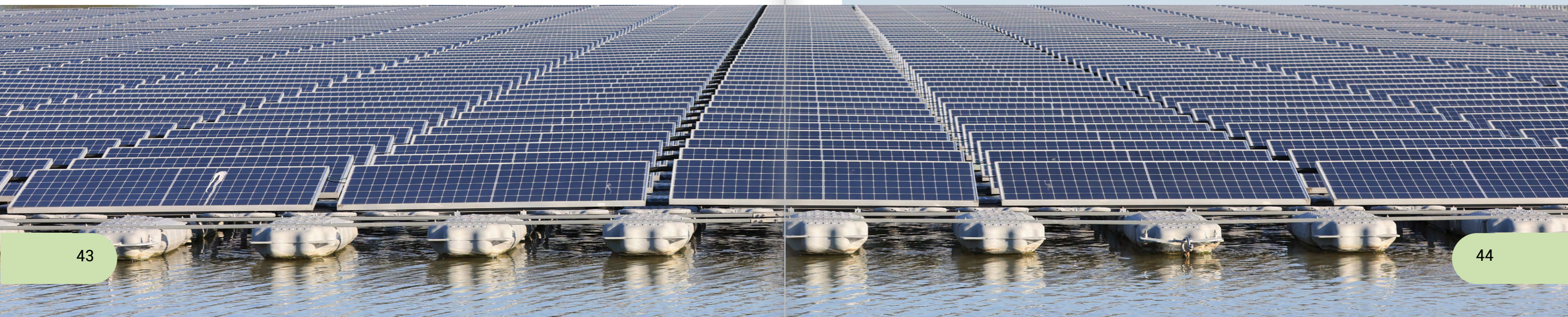
**Third**, PT SMI supports underdeveloped projects to support the energy transition in Indonesia through the **climate finance facility**. This program aims to support access to clean energy through innovation and strengthening the business models to sustainably finance, develop and operate small-scale renewable energy projects in the outermost, remote and disadvantaged areas in Indonesia. The project preparation facility has been approved by the GCF, and investment in certain loans for energy projects can commence once the full funding proposal is approved.

**Fourth**, blended finance in Tembesi that supports a floating solar PV project. This **loan and grant-type facility** allow PT SMI to commit USD 23.3 million from the total project cost of USD 29.1 million. This project also demonstrates PT SMI's efforts to accelerate the just transition through community development. Some initiatives have been developed, including: (i) knowledge center with solar demonstration units, forest conservation learning paths, and seeding sales to promote renewable energy; (ii) sustainable agriculture laboratory for testing eco-friendly farming inputs, sustainable techniques, and agroforestry systems; and (iii) marine product processing to support women groups and tourism in Pulau Lance, Batam, Indonesia.

#### 4.1.2. From Safeguards to Sustainability: Just Transition Framework

PT SMI has developed a socio-economic framework to identify, select, and monitor four elements in stages to manage socio-economic outcomes, including for coal phase-out projects. These four elements are:

- 1 **Key impact areas from transition activities:** The impacts require careful management during the decommissioning of CFPPs and the development of renewable energy;
- 2 **Target outcomes:** A set of target outcomes is needed to either mitigate risks or amplify opportunities stemming from the energy transition activities;
- 3 **Proposed metrics linked to outcomes:** Metrics can be proposed to assess how energy transition projects advance their socio-economic goals in a focused and measurable way;
- 4 **Activity types to manage the transition:** Identify activities to be implemented alongside current energy transition projects and to advance socio-economic goals in selecting the affected areas.



The framework further recommends a combination of activities to address the socio-economic aspect, from economic diversification to community support. Such activities that can be identified are:

- 1 **Investment in infrastructure, industries, and SMEs:** Develop new and existing public infrastructure, industries, and finance SMEs within the affected areas to improve the regional economy and diversify economic activities;
- 2 **Sustainable tourism:** Establish new tourism sites within the affected areas by preserving and promoting heritage;
- 3 **Investments in research and innovation facilities:** Financing research and development facilities to create sustainable innovations in the energy transition sector and foster the transfer of advanced technologies;
- 4 **Rehabilitation programs:** Promote education, training, and rehabilitation programs for the affected workers, women, and vulnerable groups to mitigate displacement and expand access to opportunities.

With support from ADB, PT SMI is further refining the just transition framework, to integrate both process-oriented (the how) and performance-based (the what) dimensions. The framework should also include managing both the positive and negative social, economic, and employment implications of transition, as well as covering broader economic issues beyond energy. Highlighting the importance of place, both social and spatial, is central to developing the framework.

## 4.2 Safeguarding Energy Transition

Relying solely on financing for a just energy transition while neglecting other key aspects may undermine the effectiveness of implementing energy transition in a justly manner. It is essential in safeguarding energy transition to ensure that the shift toward low-carbon energy systems protects social, economic, and institutional stability. **Effective safeguarding energy transition requires coherent policy, inclusive governance, and robust financial and regulatory frameworks. For instance, it is crucial to apply standards and safeguards for monitoring, reporting, and verification (MRV)** to ensure that energy transitions are credible, transparent, and accountable, while also protecting environmental integrity and social equity.

### 4.2.1 Regulations on The Implementation of Carbon Pricing in Indonesia

Reflecting the importance of safeguarding the energy transition, Indonesia has established a comprehensive regulatory framework for carbon pricing that embeds MRV standards across sectors and institutions to ensure transparency and accountability. According to the [Presidential Regulation No. 110/2025](#), the implementation of carbon pricing in Indonesia should be conducted by national and subnational governments, business operators, and society. The [Ministry of Environment and Forestry \(MOEF\) Regulation No. 21/2022](#) further regulates carbon trading instruments, including carbon offsetting mechanism and emission trading mechanism, as well as non-trading instruments including result-based payment (RBP) and carbon tax. Subsequent regulations include the [Ministry of Energy and Mineral Resources \(MEMR\) Regulation No. 16/2022](#) on power plant Emissions Trading System (ETS), [MEMR Decree No. 14.K/2023 on PTBAE-PU power plant](#), [MOEF Regulation No. 7/2023](#) on Forest and Other Land Uses (FOLU) ETS and offset, and [OJK Regulation No. 14/2023](#) that governs the secondary carbon market.



### 4.2.2 Role of PT Sucofindo as a Verifier or Validator Body (VVB)

One of Indonesia's state-owned enterprises (SOEs), PT Sucofindo, has been providing services regarding validation and verification to assure claims related to greenhouse gas (GHG) emissions, environmental labelling, product footprints, and sustainability reporting for the past three years. PT Sucofindo acts as one of the Verifier or Validator Bodies (VVBs) in the interventions related to CFPPs.

There are three different strategies to abate emissions from CFPPs:

- 1 **Retrofit.** There are two types of retrofits. First, fuel switching from high intensity carbon fuel to ammonia or biomass. Second, retrofit CFPP with Carbon Capture and Storage (CCS) technology;
- 2 **Repurpose.** Repurpose includes reducing CFPP operations by switching from baseload to power supply only during peak demand or supply-constrained periods;
- 3 **Early Retirement.** Early retirement involves decommissioning CFPP ahead of schedule and replacing capacity with renewable energy and associated storage technologies, such as solar PV with Battery Energy Storage System (BESS), hydrogen-based power plant, and other low-carbon alternatives.

For financing energy transition projects, a high-integrity requirement, such as third-party validation, is essential to prevent fraud or overstatement of emission reduction. The early retirement activity of CFPPs is validated prior to registration, and the resulting emissions reductions from CFPPs' early retirement will be verified before the issuance of credits or financial funds.

In the context of an energy transition scheme, PT Sucofindo safeguards the use of funds and carbon reduction claims by providing validation and verification services, including for the PT SMI and project owners. Validating and verifying processes ensure that funds are allocated to eligible sustainable projects and that resulting carbon credits are properly registered within the carbon market mechanism as shown in Figure 10.

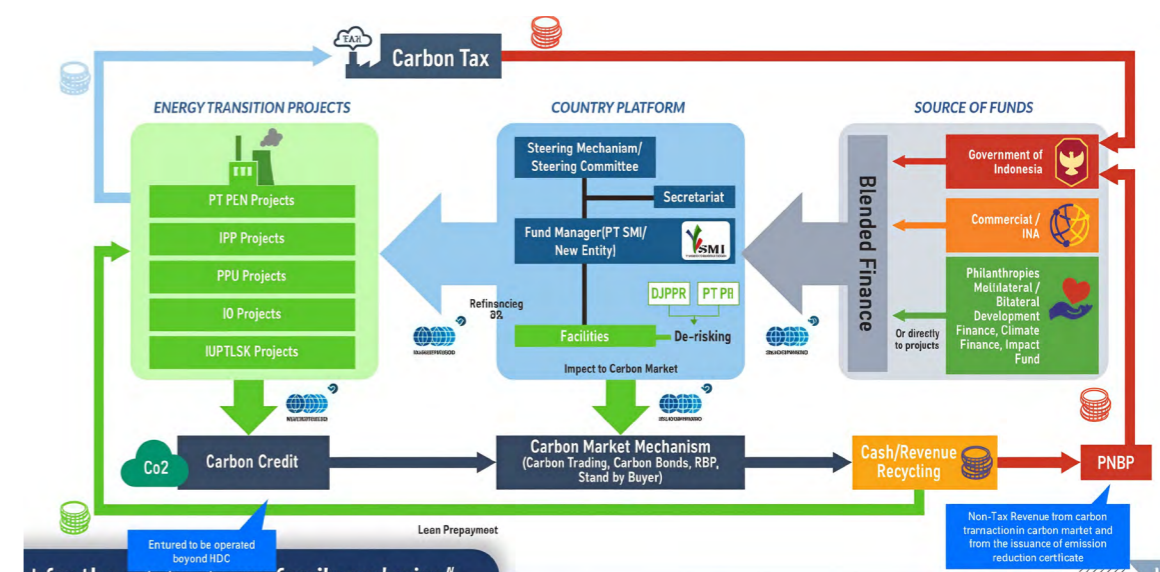


Figure 10. PT Sucofindo's Position in Energy Transition Scheme (PT Sucofindo, 2025)

The end-to-end services provided by PT Sucofindo are designed to meet the requirements of sustainable finance safeguards and environmental services. For sustainable finance safeguards, PT Sucofindo has been approved as a verifier under the Climate Bonds Certification Scheme of the Climate Bonds Initiative (CBI), which qualifies it to conduct external reviews for bond issuers seeking certification. It also conducts second-party opinions and verification against international standards, including the Green Bond Principles, the Climate Bonds Standard, and Indonesia's Sustainable Finance Taxonomy. For environmental requirements services, PT Sucofindo provides environmental auditing and certification, environmental analysis and testing, as well as consultation and technical studies.



In the first phase, PT Sucofindo validated 73 units of CFPPs in 2024 and 75 in 2025. Phase two will be conducted in 2026, with 454 units to be validated, including CFPPs, Gas Engine Power Plant, Gas Power Plant, and Steam Gas Power Plant. As the VVB for energy transition, PT Sucofindo has been supporting several new and renewable energy projects in Indonesia, such as:

-  Lahendong Geothermal Power Plant in North Sulawesi;
-  Gunung Wugul Mini Hydro Power Plant in Central Java;
-  Priok Combine Cycle Power Plant in Jakarta;
-  Muara Tawar Combine Cycle Power Plant in Jakarta;
-  Grati Combine Cycle Power Plant in East Java;
-  Operation of a New Natural Gas, Gas Engine Power Plant in Sumbagut (North Sumatera);
-  Utilization of Palm Oil Mill Effluent (POME) for Biogas Co-Firing in PT Perkebunan Nusantara (PTPN) IV;
-  Muara Karang Combine Cycle Power Plant in Jakarta; and
-  Supreme Energy Rantau Dedap Geothermal Power Plant in South Sumatera.



## 05. Placed-Based Just Transition: FOLU Sector

Beyond mobilizing finance and establishing safeguards for energy transition, achieving a just climate transition requires cross-sectoral learning and application. The FOLU sector provides an important example of how just transition principles can be operationalized beyond the energy sector. A just transition in the FOLU sector seeks to ensure that climate interventions, such as conservation and land-use reform, do not disproportionately burden vulnerable communities. Given that livelihoods are closely tied to land, the transition will likely affect the community's lives and livelihoods. There is a risk of losing access to resources, which can deprive communities of their traditional land-use rights. This typically occurs due to land acquisition for the construction and operation of buildings associated with the transition. Moreover, the economic displacement of workers who lose their jobs without viable alternatives further exacerbates the transition's impact. Indigenous people and local communities can also be affected, specifically their cultural and spiritual lives, which are closely tied to surrounding ecosystems. Thus, the just climate transition in the FOLU sector should prioritize maximizing the climate actions that minimize the negative impacts to the social and economy.



Building on the above-mentioned risks, there are several principles that need to be ensured while implementing transition projects in the FOLU sector, such as:

- 1 **Procedural justice must be ensured for inclusive and transparent decision-making.** This applies for the affected communities, such as women, youth, and marginalized groups. Communities should not only be consulted but meaningfully engaged in the process of decision-making, from planning, implementing, and reporting. Community-led forums and participatory mapping can be utilized for the process;
- 2 **The affected workers also need to get access to wage parity and decent work,** meaning that the new green jobs must offer fair wages and safe working conditions. This can be ensured by providing upskilling and reskilling for displaced workers and ensuring equal opportunities for all genders and social groups;
- 3 **Incorporating social safety nets to mitigate economic shocks is crucial for social protection.** One of the efforts is to provide temporary income support or microfinance to help communities start new businesses. This action is important for workers in informal sectors;
- 4 **Safeguards must be gender-responsive, as climate impacts affect women and men differently.** Ensuring that women have equal land rights, access to credit, and leadership roles in project governance are important to promote gender equity. Additionally, there is a need to address unpaid care work and support women's economic empowerment.



To implement the just transition, collaboration between public, private, and philanthropy (Public-Private-Philanthropic Partnerships/4P) is crucial to mitigate social and economic impacts. **Philanthropies can act as the “catalytic capital” and a bridge between communities and the private sector.** For example, a philanthropy could fund a multi-stakeholder dialogue to build trust. It then provides a grant or loan to a private company, enabling them to invest in a community-led project with safeguards that have been built. The aim of this model is to guide profit-driven investments with social and environmental principles, preventing a transition that leaves communities behind. **Philanthropies play a unique role by offering flexible, risk-taking, and socially driven approaches that may be too risky or long-term for private investors. Philanthropies can provide seed funding<sup>10</sup> for pilot projects, fund capacity building for communities, and advocate for policy change.**

At the same time, **private sector participation brings financial capital, technology, and business acumen, guided by strong environmental and social standards.** Private sectors invest in sustainable business models, provide technical expertise, and integrate ESG criteria into investments. In conclusion, **a just transition in the FOLU sector, as well as a just climate transition as a whole, is not optional.** Protecting people and equity is as critical as protecting ecosystems. At the same time, an inclusive, cross-sector collaboration is key to ensuring climate actions will benefit those who depend most on the environment and natural resources.

<sup>10</sup> Seed funding refers to initial capital that supports projects in their initial phases.



## 06. Discussion

The discussion highlighted several issues related to financing the just climate transition in Indonesia, particularly:

- 1 Challenges in financing just climate transition in Indonesia;
- 2 Opportunities in strengthening the financing for just climate transition; and
- 3 Transition challenges in the energy sector.

### 6.1 Challenges in Financing Just Climate Transition in Indonesia

Bridging the gap between the supply and demand sides can be achieved through leveraging blended finance mechanisms. However, at present, **blended finance in Indonesia has not yet been well-regulated**. There is a scheme under the Ministry of Finance called Kerja Sama Pemerintah dan Badan Usaha (KPBU), or internationally known as Public-Private Partnership (PPP); yet, the financing scheme is referred to as creative financing rather than blended finance. In addition, **since blended finance is a tailor-made approach, sectoral guidelines are needed**. Going forward, the SCF may facilitate the exploration of regulatory approaches to blended finance in Indonesia.

There has been limited consideration of the cost implications of the “just” element in financing the climate transition, due to the assumption that not all stakeholders are able or willing to bear these costs. For instance, a community that relies on its livelihoods in coastal and sea areas should be relocated due to transition projects. Efforts undertaken are not only to provide financing but also to ensure that the community is supported in relocation and in receiving upskilling and reskilling training, while at the same time ensuring that they do not receive less than before, such as through compensation.

When social and equity components are perceived to reduce financial returns, project developers and financiers may be reluctant to incorporate them fully into investment structures. While development banks have made significant efforts to incorporate just transition principles into their financing approaches, **commercial banks largely lack clear principles or standards to guide their involvement in just transition financing**. As a result, even when overarching standards exist, projects are implemented differently across developers and banks, resulting in fragmented practices.



## 6.2 Opportunities in Strengthening the Financing for Just Climate Transition

The establishment of a Directorate General for Financial Sector Stability and Development within the Ministry of Finance signals stronger regulatory awareness of investor challenges and the shaping of sustainable finance markets. **Growing recognition that sustainable finance requires coordination among regulators, financial institutions, and investors to close the gap between capital availability and bankable projects, exists.**

There are opportunities for private sectors to finance climate transition, such as investing in off-grid energy systems with renewable energy generation to support industrial decarbonization. Instruments such as blended finance are widely explored by both public and private sectors to participate in financing these projects. However, the current landscape shows that most sustainability-linked instruments, such as green bonds, are still predominantly issued by banks or financial institutions. This indicates that participation from real-sector companies, particularly in the energy sector, remains limited due to high perceived risks, limited bankable projects, and regulatory uncertainty. Therefore, investment instruments need to be more clearly regulated, alongside strengthened de-risking mechanisms, to enhance investment attractiveness and encourage broader private sector participation.

The JETP Secretariat has developed a just transition framework which adopted [IFC's eight performance standards on environmental and social sustainability](#) that have been widely used by the **Multilateral Development Bank (MDB)**. The JETP Working Group on Just Transition then proposed the ninth standard on economic diversification and transformation. The proposed standard seeks to increase the added value to local communities, enabling economic diversification to go hand-in-hand with decarbonization and to extend its impact to the subnational level. This approach shifts attention from project-level compliance toward broader regional economic transformation, requiring collaboration not only with project developers but also with subnational governments.



### 6.3. Transition Challenges in the Energy Sector

In the power sector, [the Electricity Supply Business Plan 2025-2034](#) (Rencana Usaha Penyediaan Tenaga Listrik/RUPTL) serves as the primary operational roadmap for Indonesia's energy transition toward a renewable energy-based electricity system. The RUPTL is already aligned with the long-term planning documents, namely [the General National Electricity Plan 2024-2060](#) (Rencana Umum Ketenagalistrikan Nasional/RUKN) and [Indonesia Long-Term Strategy for Low Carbon and Climate Resilience \(LTS-LCCR\) 2050](#). To support its implementation, the government introduced [Presidential Regulations No. 112/2022 on the Accelerations of Renewable Energy Development for Electricity Supply](#) which aims, among others, to reduce GHG emissions in the electricity supply. [MEMR Regulation No. 10/2025](#) was also developed, which outlines the roadmap for energy transition in the electricity sector. However, **considering RUPTL operates on a five-year cycle, linking short-term planning with Indonesia's long-term just transition goals, remains a key challenge. At present, Indonesia's transition pathways towards the NZE 2060 are often developed in sectoral silos, while a just transition requires long-term and multisectoral planning.**




**Another limitation lies in the lack of clarity regarding the assumptions underlying Indonesia's transition pathways, such as, where the transition starts and lands.** While setting goals is one thing, it is equally important to understand **the socio-economic consequences emerging from raising climate ambition.** For instance, when CFPPs early retirement is included in the NZE 2060 pathways, the government need to ensure that early retirement does not lead to significant increase in domestic electricity tariffs and affects national energy security negatively. Higher electricity tariffs may increase production costs for export-oriented industries, potentially reducing Indonesia's industrial competitiveness. Meanwhile, these industries play an important role in generating Indonesia's economic growth.

**From the investors' perspective, Indonesia's energy transition is progressing in the right direction, but continues to face structural and market-related challenges,** such as the dominance of banks in the green finance market and insufficient policy support to incentivize energy companies to issue green or transition-linked financing instruments. These challenges are further compounded by structural constraints in the power sector, particularly in infrastructure development. Large-scale transmission infrastructure, particularly inter-island "super grid" development, remains primarily under the PLN's mandate, which ensures centralized planning but limit the private sector participation. This constraint shifts the private sector role in areas outside the main grid system. Private sector can therefore make larger contribution to the energy transition through the development of captive and off-grid power systems within industrial parks, particularly in mineral processing zones. However, this adds further complexity to decarbonization planning, as these systems are not always fully integrated into national transition pathways.









Indonesia Research Institute for Decarbonisation (IRID) is a think tank in Indonesia that focuses on decarbonisation efforts and promotes the realisation of a climate-resilient and low-carbon society in Indonesia. Through legal and policy analysis, policy advocacy and capacity building, IRID establishes strategic partnerships with various stakeholders and experts, including the government, the private sector, academics, the media and civil society groups, to seek relevant and feasible recommendations and solutions to support effective policy-making.

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