MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

NDA GCF | National Designated Authority
Green Climate Fund
Indonesia

SECTORAL GUIDE FOR ACCESSING CLIMATE FINANCE IN INDONESIA

SEPTEMBER 2025

SUPPORTED BY:

GGGI

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

ABBRIEVATIONS AND ACRONYMS

Abbreviation	Full Form
ADB	Asian Development Bank
AF	Adaptation Fund
AFD	Agence Française de Développement
AGRI3	Agriculture and Forestry Risk-Investment Fund
APBD	Anggaran Pendapatan dan Belanja Daerah (Regional Budget)
APBN	Anggaran Pendapatan dan Belanja Negara (National State Budget)
BEAM	Blue Economy and Adaptation Mechanism
Bappenas	Badan Perencanaan Pembangunan Nasional (Ministry of National Development Planning)
BCAF	Blue Carbon Accelerator Fund
BNI	Bank Negara Indonesia
BPDLH	Badan Pengelola Dana Lingkungan Hidup (Indonesia Environment Fund)
BPPSDMP	Badan Penyuluhan dan Pengembangan SDM Pertanian (Agricultural Extension and Human Resource Development Agency)
BPR	Bank Perkreditan Rakyat
BRI	Bank Rakyat Indonesia
BRGM	Badan Restorasi Gambut dan Mangrove (Peatland and Mangrove Restoration Agency)
CCUS	Carbon Capture, Utilization and Storage
CFI-ADD+	Community-Focused Investments to Address Deforestation and Forest Degradation
CIF	Climate Investment Funds
CI1	Climate Investor One
CI2	Climate Investor Two
COREMAP	Coral Reef Rehabilitation and Management Program
CSA	Climate-Smart Agriculture
CSR	Corporate Social Responsibility
CTF	Clean Technology Fund
DAK	Dana Alokasi Khusus (Special Allocation Fund)
DBH-DR	Dana Bagi Hasil Dana Reboisasi (Forestry Revenue-Sharing Reforestation Fund)
DFIs	Development Finance Institutions
DJPK	Direktorat Jenderal Perimbangan Keuangan (Directorate General of Fiscal Balance)
ECAs	Export Credit Agencies
ENDC	Enhanced Nationally Determined Contribution
ESG	Environmental, Social and Governance
EV	Electric Vehicle
FAO	Food and Agriculture Organization

FKDC	Forum Komunikasi DAS Cidanau
FIP	Forest Investment Program
FIP II	Second Phase of Indonesia's Forest Investment Program
FOLU	Forestry and Other Land Use
GCF	Green Climate Fund
GEF	Global Environment Facility
GEAPP	Global Energy Alliance for People and Planet
GFDRR	Global Facility for Disaster Reduction and Recovery
GoI	Government of Indonesia
GREM	Geothermal Risk Mitigation Facility
GSS	Green, Social and Sustainability
ICAP	International Carbon Action Partnership
ICCTF	Indonesia Climate Change Trust Fund
IEA	International Energy Agency
IEG	Independent Evaluation Group
IFC	International Finance Corporation
IFAD	International Fund for Agricultural Development
IIF	PT Indonesia Infrastructure Finance
INA	Indonesia Investment Authority
IPP	Independent Power Producer
ISLE-2	Indonesia Solar and Wind Expansion Project
JBIC	Japan Bank for International Cooperation
JETP	Just Energy Transition Partnership
KKPE	Kredit Ketahanan Pangan dan Energi
KPEN-RP	Kredit Pengembangan Energi Nabati dan Revitalisasi Perkebunan
KPSP	Kredit/Pembiayaan Sektor Prioritas Pertanian
K-Sure	Korea Trade Insurance Corporation
KSP	Koperasi Simpan Pinjam
KUR	Kredit Usaha Rakyat
KUPS	Kredit Usaha Pembibitan Sapi
LEMTARA	Lembaga Perantara Penyaluran Dana REDD+
LKMAs	Lembaga Keuangan Mikro Agribisnis
LT-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience
MDBs	Multilateral Development Banks
MEMR	Ministry of Energy and Mineral Resources
MFIs	Microfinance Institutions
MoA	Ministry of Agriculture
MoEF	Ministry of Environment and Forestry
MoF	Ministry of Finance
MoT	Ministry of Transportation
MoUs	Memoranda of Understanding

MRV	Measurement, Reporting and Verification
MSMEs	Micro, Small and Medium Enterprises
$MtCO_2$	Million metric tons of carbon dioxide
NDA	National Designated Authority
NAP	National Adaptation Plan
NBS	Nature-Based Solutions
NDC	Nationally Determined Contribution
NIE	National Implementing Entity
NGO	Non-Governmental Organization
NUWSP	National Urban Water Supply Project
ODA	Official Development Assistance
OJK	Otoritas Jasa Keuangan
PDAM	Perusahaan Daerah Air Minum
PES	Payments for Ecosystem Services
PFG	Project Formulation Grant
PIF	Project Identification Form
PII	PT Penjaminan Infrastruktur Indonesia (Indonesia Infrastructure Guarantee Fund)
PKU	Program Pengembangan Kapasitas Usaha
PLN	State Electricity Company (Perusahaan Listrik Negara)
PNM	Permodalan Nasional Madani
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PPCR	Pilot Program for Climate Resilience
PPG	Project Preparation Grant
PPF	Project Preparation Facility
PT SMI	PT Sarana Multi Infrastruktur
PTBAE-PU	Persetujuan Teknis Batas Atas Emisi – Pembangkit Uap
RBPs	Results-Based Payments
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RHL	Rehabilitasi Hutan dan Lahan
RPJMN	Rencana Pembangunan Jangka Menengah Nasional (National Medium-Term Development Plan)
RUPTL	Rencana Usaha Penyediaan Tenaga Listrik (Electricity Supply Business Plan)
RUEN	Rencana Umum Energi Nasional
RWI	Resilient Water Infrastructure Facility
SECO	State Secretariat for Economic Affairs
SiTPAKD	Sistem Informasi TPAKD
SLB	Sustainability-Linked Bond
SMEs	Small and Medium Enterprises
SOEs	State-Owned Enterprises
SPE-GRK	Sertifikat Penurunan Emisi Gas Rumah Kaca

SPV	Special Purpose Vehicle
SRN-PPI	Sistem Registri Nasional-Pengendalian Perubahan Iklim
TA	Technical Assistance
Tani AKUR	Tani Akses KUR
TBS	Toba Bara Sejahtra
TKBI	Taksonomi Keuangan Berkelanjutan Indonesia
TLFF	Tropical Landscapes Finance Facility
ULaMM	Unit Layanan Modal Mikro
USP	Unit Simpan Pinjam
USD	United States Dollar
VGF	Viability Gap Funding

ACKNOWLEDGEMENT

The Global Green Growth Institute (GGGI) Indonesia team expresses its sincere appreciation to all those who contributed to this guidebook. We thank the Ministry of Finance's Director General of Financial Sector Stability and Development and other participating ministries for their guidance and collaboration.

We are especially grateful to the team from Clima Capital Partners, led by Joumana Asso, Hiro Tsubota and Crystal Wong Jee Yong, for their deep expertise in climate finance and technical guidance throughout the preparation of this guidebook.

We would also like to acknowledge the invaluable contributions of our local experts: Natalia Siahaan, Eusebius Pantja-Pramudya and Wilhelmus Yohanes, whose contextual knowledge and analytical inputs greatly enhanced the quality of the guidebook. Special thanks also go to TriHita Consulting, Verena Streitferdt, Julia Rahmi and Gita Purnama for their support in organizing and facilitating the capacity-building sessions, translation work and support of the validation workshop.

Thank you to everyone involved for your collective effort and commitment to advancing climate finance in Indonesia.

DISCLAIMER

This guidebook has been prepared by GGGI Indonesia with support from Clima Capital Partners and contributions from various national and international experts. It is intended to provide general information and practical guidance on mobilizing climate finance in Indonesia across the energy, water, agriculture and food security, and sustainable landscapes sectors.

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EXECUTIVE SUMMARY

Indonesia's ability to achieve its climate and development goals rests on how effectively it can mobilize finance across public, private and international sources. Despite progress in recent years, a significant gap remains. Between 2019 and 2021, Indonesia allocated a total of IDR 286.86 trillion, averaging approximately IDR 93.57 trillion (approx. USD 5.8 billion) per year, to climate-related initiatives, according to the Ministry of Finance's climate budget tagging system.[1] This level of funding is only a fraction of the estimated USD 150–200 billion required each year through 2030 to align with the pathway toward net-zero emissions by 2060.[2]

To close this financing gap, the government has expanded its use of financial instruments through state budget allocations, subsidized credit schemes, sovereign green sukuk and carbon pricing initiatives. It has also established the Indonesia Environment Fund and launched the national carbon exchange. These developments signal growing momentum, but financing remains uneven. Investment is still concentrated in the energy sector, while agriculture, water and land use struggle to attract comparable levels of private capital. This reflects structural challenges: high perceived risks, limited project pipelines and financing models that are not yet tailored to smaller-scale or adaptation-oriented projects.

International climate finance represents another underutilized opportunity. Indonesia has accessed resources from mechanisms such as the Green Climate Fund (GCF), Global Environment Facility (GEF), Adaptation Fund (AF) and Climate Investment Funds (CIF). However, inflows have largely been fragmented, focused on select sectors and often routed through a small number of intermediaries. Grants are spread thinly, and concessional loans have not been consistently leveraged to crowd in private investment at scale.

This guidebook provides a structured overview of Indonesia's climate finance landscape across four key sectors: energy, water, agriculture and food security and sustainable landscapes. It combines mapping of public and private finance flows with analysis of international funding sources, drawing out both gaps and entry points. It also highlights practical pathways for ministries, local governments, state-owned enterprises and project developers to access global climate finance, with particular emphasis on navigating the GCF process.

The findings suggest that the challenge is not only the volume of finance, but also its allocation, coordination and ability to mobilize private sector participation. Addressing these issues will require stronger domestic systems, deeper engagement with multilateral funds and innovative financing structures that make projects bankable. By consolidating lessons and guidance, this guidebook aims to help Indonesia move closer to aligning financial flows with its national climate and development goals.

OBJECTIVES AND SCOPE OF THE GUIDEBOOK

This guidebook was developed to support government agencies, project developers and other relevant stakeholders across the private and public sectors in navigating and mobilizing climate finance across four key sectors in Indonesia: **energy**, **water**, **sustainable landscapes, agriculture** and **food security**.

The aim is to **identify relevant financing channels, design stronger proposals and move projects from concept to implementation.** Ultimately, the goal is to improve the country's ability to access climate finance at scale and accelerate its pathway toward a low-emissions and climate-resilient future.

Objectives

1. **Map Indonesia's climate finance landscape**, outlining key sources and flows of public, private and international finance across the four sectors, and identify gaps and opportunities for scale-up.
2. **Provide practical guidance on accessing international climate finance**, particularly from the GCF, while also covering other multilateral and bilateral mechanisms.
3. **Strengthen local capacity to develop and structure climate-aligned projects** that meet international investment standards, improve bankability and leverage blended finance through public-private collaboration.

Scope

This guidebook presents international climate finance opportunities in a sector-specific manner aligned with Indonesia's national priorities. Though referenced based on sectors, it is important to note that many funding sources, including the GCF, are not limited to these specific sectors. The GCF, for example, is a multi-sector fund that supports country-driven climate strategies aligned with national priorities, whether they involve mitigation, adaptation or cross-cutting themes. What matters most is that the proposed project demonstrates climate rationale, aligns with the GCF investment framework and contributes to nationally endorsed outcomes.

By offering structured, practical insights tailored to Indonesia's climate finance ecosystem, this guidebook aims to help institutions identify relevant financing channels, design stronger proposals and move projects from concept to implementation. Ultimately, the goal is to improve the country's ability to access climate finance at scale and accelerate its pathway towards a low-emissions and climate-resilient future.

I. KEY FINDINGS OF BARRIERS AND CHALLENGES

The barriers and challenges outlined in this guidebook were first identified through an extensive literature review and subsequently validated through two stakeholders consultations held in February and July 2025. Together, these two consultations engaged over 100 participants from government agencies, development finance institutions, commercial banks and other stakeholders across all four key sectors, with sessions conducted in both virtual and in-person modality. Below are the key barriers and challenges identified in the four key sectors.

Energy

Indonesia's energy transition is constrained by a mix of structural, regulatory and financial barriers. Despite ambitious targets under the National Energy Plan (RUEN) and the Just Energy Transition Partnership (JETP), coal still dominates the power mix, accounting for 59% of electricity generation in 2024.[3] Unlocking the country's vast renewable energy potential is slowed by complex permitting processes, particularly on forest land and local community concerns over environmental risks, which can delay or halt projects. On the finance side, commercial banks prefer large-scale, low-risk investments, leaving smaller renewable projects underserved. Currency mismatch between United States dollar (USD)-denominated Power Purchase Agreements (PPAs) and rupiah financing adds further risk. The State Electricity Company (Perusahaan Listrik Negara, PLN) holds a monopoly over generation, transmission and procurement, creating bottlenecks in project approval, whereby projects must be listed in its Electricity Supply Business Plan (Rencana Usaha Penyediaan Tenaga Listrik, RUPTL), and the mandatory majority equity requirement for PLN or its subsidiaries discourages private investment. Additionally, procurement delays and cancellations increase sunk costs for developers, while local content requirements raise capital costs above global benchmarks. The absence of access to carbon credit revenue under current PPAs also removes a potentially important income stream, and with PLN's excess coal capacity limiting new offtake, technically and financially viable projects can be delayed.

Water

The water sector faces persistent structural and financial weaknesses that limit climate finance uptake. Many proposed projects, such as treatment plants, flood defenses or distribution upgrades are not bankable due to missing feasibility studies, business models or revenue projections. Over 74% of local water utilities (Perusahaan Daerah Air Minum, PDAMs) operate at a loss, often due to low tariffs, high leakage and governance challenges, which deters commercial lending.[4] Service coverage remains low, with only 20% of Indonesian households connected to piped water.[5] It is also shared that private sector participation is minimal and largely confined to small-scale corporate social responsibility (CSR) projects, with no established blended finance ecosystem for water infrastructure. Climate risks compound these challenges: the sector lacks measurable adaptation targets within the NDC framework, making it harder to position projects as eligible for international climate funding. Without clear national goals, such as household coverage with climate-resilient systems or quantified flood risk reductions, the sector struggles to attract long-term investment.

Sustainable Landscapes

Land use is central to Indonesia's climate targets yet financing and implementation lag behind other key sectors. Key barriers include the lack of integrated climate and ecosystem risk assessment in lending decisions, leaving banks without tools to screen for high-risk or unsustainable land uses. Without standardized pre-screening filters and risk frameworks, lending may inadvertently support projects vulnerable to climate shocks, undermining both borrower and lender. Conservation financing also faces high upfront costs, e.g., peatland restoration requires expensive infrastructure for water regulation and monitoring, and relies heavily on concessional or grant funding, with limited scalable models. While carbon markets offer potential revenue streams, integration into local conservation projects is hindered by unclear regulations and weak enforcement, particularly in areas experiencing deforestation linked to extractive industries.

Agriculture and Food Security

According to the World Bank, around 43% of Indonesia's population resides in rural areas and nearly 29% of the workforce works in the agricultural sector.[6] Around half of Indonesian farmers are smallholders, earning an average of USD 3.2 per day and vulnerable to climate and price shocks.[7] However, smallholders face systemic financing barriers that hinder the uptake of climate-smart agriculture (CSA), as many lack land titles, credit histories or financial records, making them high-risk borrowers in the eyes of banks. Existing schemes, like People's Business Credit (Kredit Usaha Rakyat, KUR), focus on increasing production through conventional approaches rather than incentivizing adaptive practices such as drought-tolerant crops, improved irrigation or agroforestry. Other models such as cooperative-based lending, group guarantees and warehouse receipt financing exist, but remain small-scale without a national framework to scale them. Access to climate finance is limited by complex application processes and misaligned loan tenors, and many CSA investments require long payback periods that are incompatible with typical commercial lending terms. Pilots supported by NGOs and donors are promising but lack pathways to scale without blended finance or results-based mechanisms.

II. OVERVIEW OF DOMESTIC AND INTERNATIONAL CLIMATE FUNDS

This section presents a comparative overview of seven international climate finance funds, representing a mix of multilateral development funds, bilateral funds and blended finance fund managers.

The comparison is based on three primary sources of input:

(i) A literature review of publicly available fund documentation;

(ii) Validation through multi-stakeholder workshops;

(iii) Responses to a targeted climate finance questionnaire.

The seven international climate finance funds were chosen for comparison as they are among the most commonly accessed by Indonesia and were validated through stakeholder consultations. A total of 18 entities were contacted through a questionnaire distributed to multilateral development banks, bilateral agencies, development finance institutions and international NGOs, at which seven entities responded. The selection is not exhaustive of all international climate finance mechanisms but is intended to provide a representative sample of multilateral, bilateral and blended-finance funds most relevant to Indonesia's context.

Consistent with the practices of many international financing partners, proposals could be encouraged or required to include gender equality and social inclusion (GESI) criteria, gender analysis, gender-responsive activities and sex-disaggregated indicators in the project eligibility and assessment process. This would help ensure that funded projects meet environmental and financial viability requirements while also supporting inclusive and equitable development outcomes.

Key Takeaways from This Section

- ✓ **Clarity on funding options** – Overview of key international climate finance funds, their focus areas and structures.
- ✓ **Better project–fund alignment** – Match the right fund to project objectives, scale and capacity.
- ✓ **Time and resource savings** – Avoid applying to funds that do not fit project scope or eligibility.
- ✓ **Improved proposal success** – Prepare proposals that meet the chosen fund's requirements.

Table 1 consolidates key parameters for each international climate finance source, including institution type, thematic focus, funding envelope, access modalities, proposal format, evaluation criteria, approval timeline, current status and sectors funded.

Table 1. International Climate Funds Accessible to Indonesia

Multilateral Funds									
Fund Name	**Type of Institution**	**Thematic Focus**	**Funding Envelope & Grant/Loan Ratio**	**Access Modalities**	**Proposal Format**	**Evaluation Criteria**	**Approval Timeline**	**Current Status**	**Sectors Funded**
GCF[8]	Multilateral climate fund	Mitigation, adaptation, cross-cutting projects aligned with NDCs	USD 18B+ committed through, Grants (74%), Loans (16%), Equity (10%)	Access to GCF funding occurs through Accredited Entities (AEs), supported by Indonesia's National Designated Authority (NDA)	Standard template across five core funding windows Please access the templates in the Annex: (GCF)	Six investment criteria: - Impact potential - Paradigm shift potential - Sustainable development potential - Needs of the recipient - Country ownership - Efficiency and effectiveness (cost-effectiveness, financial viability)	Typical approval process lasts approximately 9–18 months, covering concept development through to Board decision and final legal agreements	Actively disbursing funds and engaging in project and readiness program development (as of mid-2025)	Energy, Water, Sustainable Landscapes, Agriculture
GEF[9]	Multilateral environment facility	Climate change mitigation and adaptation, biodiversity, land degradation, and enabling activities for national	GEF-8 replenishment (2022–2026) totals USD 5.25 billion, with at least USD 1.5 billion for climate change focal areas, including	Accessed through GEF Partner Agencies (e.g., United Nations Development Program (UNDP), United Nations Environment Program	Use of the GEF Project Identification Form (PIF) for concept submission, followed by a full project document. Templates vary by GEF Agency and	Project scoring considers global environmental benefits, innovation, cost-effectiveness, country ownership, sustainability, and alignment	Medium-size projects: ~6–9 months; full-size projects: ~12–18 months from PIF clearance to Council approval	Actively disbursing through GEF-7 and GEF-8 cycles; Indonesia has received over USD 418 million across more than 100 projects	Energy, Water, Sustainable Landscapes, Agriculture, Biodiversity, Chemicals and Waste

		reporting and planning	grants and co-financed initiatives	(UNEP), World Bank). All proposals require country endorsement from the Operational Focal Point (Indonesia: Ministry of Environment)	modality (Full-size or Medium-size projects) Please access the templates here: GEF Templates	with focal area strategies			
AF[10]	Multilateral adaptation fund	Enhancing adaptive capacity, climate resilience, and reducing vulnerability to climate change in vulnerable communities and ecosystems	The Fund has approved over USD 1.3 billion in grants globally; all financing is via non-reimbursable grants	Countries may access funding through National Implementing Entities (NIEs), Regional Implementing Entities (RIEs), or Multilateral Implementing Entities (MIEs). Indonesia's NIE: Kemitraan	Standardized templates for concepts and full proposals. Project Formulation Grants (PFGs) available for NIEs. Proposals must align with country adaptation priorities Please access the templates here: AF Templates	Proposals are evaluated on: - consistency with national priorities; - cost-effectiveness; - sustainability; - environmental and social risk management; - innovation and replicability	Typically, 6–12 months depending on completeness, review rounds, and AF Board meetings. PFGs can be approved faster	As of 2025, the Fund is actively supporting projects in over 100 countries. Indonesia has received readiness support and PFGs, with full proposals under development	Water, Agriculture and Food Security, Coastal Management, Forests and Ecosystems

CIF[11]	Multilateral trust funds administered through multilateral development banks	Clean tech, forest and land use, and just energy transition	Approved financing of USD 7.4 billion, leveraged to USD 64.6 billion in co-financing	Does not fund directly, works via Multilateral Development Banks (MDBs)	CIF Secretariat issues a call for Expressions of Interest. Countries partner with MDBs to submit proposals for specific CIF programs. Please access the Expression of Interest Information in the Annex: (CIF)	Plans and proposals are assessed on: -Alignment with CIF thematic objectives and national priorities -Co-financing leverage (minimum 10x for sub-projects) -Private-sector mobilization potential -Proof of concept	Typically, 9-16 months, depending on the complexity, country readiness and MDB timelines	Actively disbursing funds across energy, forests, agriculture and coal-transition projects	Energy, Sustainable Landscapes, Agriculture, Water

Bilateral Funds

Fund Name	Type of Institution	Thematic Focus	Funding Envelope & Grant/Loan Ratio	Access Modalities	Proposal Format	Evaluation Criteria	Approval Timeline	Current Status	Sectors Funded
Norfund & Norwegian Climate Investment Fund[12]	Development finance institution	Clean energy transition: coal phase-out and renewable deployment	Up to USD 30 million committed of equity investment announced for Indonesia	Direct equity injections into private companies	Projects must have a minimum investment size of USD 5 million and use proven, scalable technology, which positions Norfund for scale-ready investments rather than pilots or early R&D Please access the investment process in the Annex: (Norfund)	Proven technology required All private sector companies in renewable energy and financial inclusion are eligible	Unknown	Actively injecting equity into Indonesian firms	Water, Agriculture, Sustainable Landscapes, Energy

Switzerland SECO Climate Support [13]	Bilateral donor agency	Mitigation & Policy Support	Grants (mainly to governments), blended finance, guarantees, loans in foreign currencies	Indirect Access via MDBs	Custom by project Please access the templates in the Annex: (SECO)	SECO adopts a flexible, context-dependent approach to project eligibility	Project-dependent	Active	Energy, Sustainable Landscapes, Agriculture
Specialized Funds									
Fund Name	**Type of Institution**	**Thematic Focus**	**Funding Envelope & Grant/Loan Ratio**	**Access Modalities**	**Proposal Format**	**Evaluation Criteria**	**Approval Timeline**	**Current Status**	**Sectors Funded**
Climate Fund Managers (CFM)[14]	Public–private/ blended climate finance manager	Renewable energy, climate-resilient infrastructure, and sustainable resource management through blended finance and private capital mobilization	Primarily utilizes blended finance instruments including equity, mezzanine debt, and concessional finance to de-risk climate infrastructure projects. Typical investment: USD 50–70 million Minimum investment: USD 20 million	Investments typically channeled via direct equity participation and partnerships with project developers and private enterprises. Public-private partnerships are common	Standard Investment procedure (clear financial modelling, market analysis, ESG assessments and robust business case demonstrating scalability) Please access the templates in the Annex : (CFM)	Impact potential across adaptation and mitigation projects. Development status, sponsor profile and capability, timeline, investment ticket size	Negotiated	Actively investing and disbursing capital across emerging markets	Energy, Water

Table 2 highlights key domestic financing institutions that support climate-related projects in Indonesia. It includes commercial banks, microfinance institutions and coordination platforms that provide finance across sectors such as agriculture, energy and water. The table outlines each institution's partners, financing tools, sector focus and eligibility, offering a quick reference for accessing local capital.

Table 2. Domestic Sources of Climate Finance

Name of Institution or Facility	Type of Institution	Domestic Partners / Implementing Agencies in Indonesia	Types of Support Offered	Relevant Grant Facilities	Sector Focus	Access & Eligibility	Funding Modality	Ticket Size	Current Status
Permodalan Nasional Madani (PNM)[15]	State-owned microfinance institution	Bank Rakyat Indonesia (digital banking); Ministry of Finance; local governments	Microloans, group lending and empowerment programs through Mekaar and ULaMM; savings accounts and financial literacy	Women's economic empowerment, micro-entrepreneurship, financial inclusion and resilience	Micro and small enterprises, agriculture, trade and services	Early-stage / pipeline (seed capital & capacity building)	Women and entrepreneurs organized in groups; low-income communities	Small loans (typically IDR 2–20 million)	Continuous; borrowers join Mekaar and ULaMM groups
Financial Access Acceleration Teams (TPAKD)[16]	Regional coordination forum	Provincial government; Financial Services Authority (OJK); local banks and microfinance institutions	Coordinates microfinance programs like One Student One Account, Microfinance Upland (goat & pepper farming), Kredit Mawar zero-interest loans, and inclusive finance for tourism villages;	Financial inclusion, agriculture finance, tourism and SME support	Agriculture, tourism, small enterprises	Early-stage & pipeline	Local residents, farmers and tourism villages participating in regional programs	Small microloans (amounts vary)	Program launches determined by regional TPAKD; ongoing

			provides financial literacy						
Bank Rakyat Indonesia (BRI)[17]	State-owned commercial bank	Ministry of Agriculture; PNM; digital platforms	Provides KUR and commercial loans to agricultural, forestry and fishery businesses	Agriculture finance, MSME development, digital inclusion	Agriculture, forestry, fisheries, microbusinesses	Implementation	Farmers and MSMEs meeting KUR or commercial credit criteria; cluster groups	Micro and small loans (KUR up to IDR 50 m; total agricultural credit IDR 117.54 trillion in 2021)	Loans available year-round through branches and digital channels
Bank Negara Indonesia (BNI)[18]	State-owned commercial bank	State-Owned Enterprises Ministry; ESG investors	Sustainable financing portfolio including loans for renewable energy projects, sustainable water and waste management and MSME empowerment; ESG financing toward net zero goal	Renewable energy, water and waste management, climate change mitigation, ESG finance	Energy, water, waste management, MSMEs	Pipeline & implementation	Corporate clients and MSMEs pursuing ESG aligned projects; eligibility determined by bank	Varies; sustainable financing portfolio reached IDR 190.5 trillion with IDR 13 trillion for renewable energy and IDR 25.1 trillion for water and waste management	Ongoing; bank products available to qualified borrowers

III. TECHNICAL ASSISTANCE AND READINESS SUPPORT

Technical assistance and readiness support are essential for turning climate finance opportunities into bankable projects. While funding sources are increasingly available, many institutions, especially subnational governments, local state-owned enterprises (SOEs), civil society organizations (CSOs), cooperatives and emerging private sector actors, lack the internal capacity to prepare strong proposals, meet safeguard standards or develop financial models. Without adequate TA and readiness support, these actors risk remaining at the concept stage.

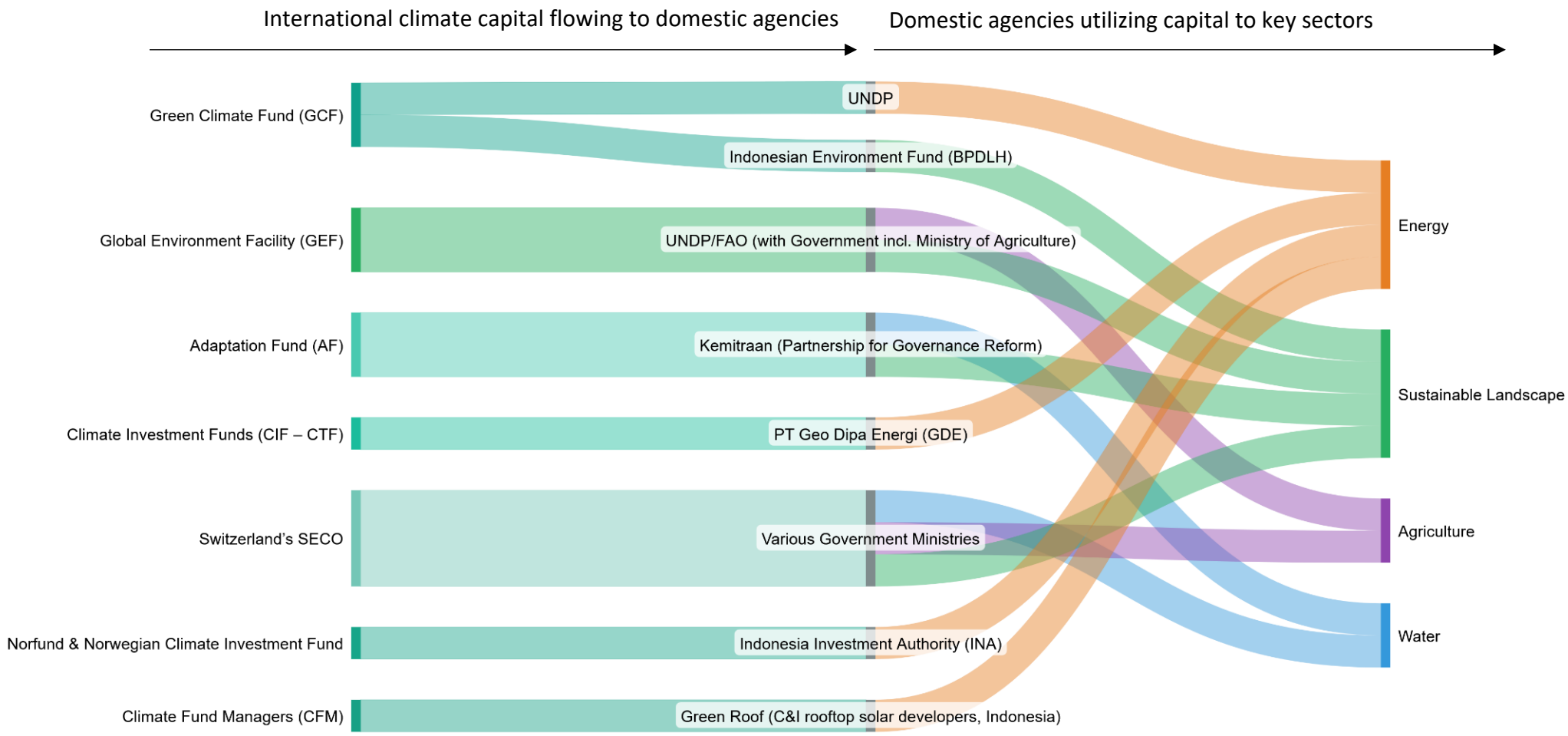
Navigating TA and readiness support can be complex, especially when multiple international and domestic actors are involved. Project proponents often do not know where to begin, which institutions to approach or how global funding channels connect with national and sectoral priorities. This section maps international and domestic TA and readiness providers relevant to Indonesia. It highlights the types of support available, sectors covered and how to access them. The aim is to guide project proponents toward the resources they need to move from ideas to implementation.

Key Takeaways from This Section

- ✓ **Understand where to get help** – Identify institutions that provide technical and readiness support for climate-aligned projects.
- ✓ **Match support to needs** – See which providers offer services in proposal preparation, financial structuring, safeguard compliance and stakeholder engagement.
- ✓ **Know the access process** – Learn the eligibility rules, application channels and funding modalities for TA and readiness grants.
- ✓ **Connect to sector priorities** – Link support opportunities to Indonesia's four key sectors: energy, sustainable landscapes, agriculture and food security and water.

Figure 1 is based on the seven international climate finance sources identified for this guide. It maps these sources to the relevant domestic actors and agencies in Indonesia and shows how support is ultimately channeled to the four key sectors.

Figure 1. Flows of International Climate Finance to Indonesia: Funds, Intermediaries and Target Sectors



How to Read the Flowchart:

The flowchart illustrates how international climate finance is channeled into Indonesia. It is organized around seven key international sources of finance and shows how these resources are implemented on the ground through domestic agencies and partner institutions. Domestic entities that channel climate finance to executing entities and/or utilize the resources themselves have been presented. Therefore, the examples below are not exhaustive but highlight how different funds and investors work with national actors to deliver climate and development outcomes.

- ➔ **The GCF's** finance first flows through the UNDP (the Accredited Entity) to Indonesian Environment Fund (BPDLH, the Executing Entity) to finance both sustainable landscapes[19] and energy programs [20] that align with the country's resilience and low-carbon development strategies.
- ➔ **The GEF** partners with UNDP (the Implementing Entity), to provide resources to Coordinating Ministry for Food Affairs, Bappenas, Ministry of Forestry and the Ministry of Agriculture (the Executing Entities). [21] These resources aim to promote sustainable commodity, production, strengthen land governance and conserve biodiversity across the agricultural and sustainable landscapes.[22]
- ➔ **The AF** channels resources via Kemitraan (the National Implementing Entity) for projects such as coastal flood resilience in Pekalongan and integrated watershed management in the Saddang basin.[23] In these examples, Kemitraan locally channels these resources to specialized Executing Entities based on the scope of the project, e.g. delivering benefits for water security and landscape restoration.[23]
- ➔ **The CIFs' Clean Technology Fund** cofinanced the geothermal expansion at Dieng and Patuha with the Asian Development Bank (ADB). PT Geo Dipa Energi (the Executing Agency) borrowed the funds necessary for the project, thereby advancing the Indonesia's energy transition goals.[24]
- ➔ **Switzerland's SECO** channels funding to various ministries of Indonesia supporting capacity building and providing finance through their economic cooperation and development program 2025-2028. [25] One example is SECO's partnership with USAID through the Ministry of Public Works and Housing's IUWASH/PDAM program which strengthens urban water utilities, improves operational efficiency and expands access to safe water.[26]
- ➔ **Norfund and the Norwegian Climate Investment Fund** work with the Indonesia Investment Authority under an Investment Framework Agreement to scale renewable energy through direct investments. [12]

- ➔ **Climate Fund Managers** invested in a portfolio of commercial and industrial rooftop solar projects with local partner Green Roof (Singaporean entity with local presence), further expanding clean energy generation amongst the population.[27]

Together, these flows highlight successful case studies of international climate finance capital being mobilized through domestic implementing and executing entities to effectively drive investment into Indonesia's most urgent climate and development priorities.

Table 3 maps international providers of TA and readiness support accessible to Indonesian stakeholders. It summarizes the institution type, domestic partners, types of support, relevant grant facilities, sector focus, eligibility, funding modalities and application guidance. Use this as a quick reference to identify suitable partners and understand how to access their resources.

Table 3. Accessing International Technical Assistance and Readiness Support: Key Institutions and Modalities for Indonesia

Name of Institution or Facility	Type of Institution	Domestic Partners / Implementing Agencies in Indonesia	Types of Support Offered	Relevant Grant Facilities	Sector Focus	Access & Eligibility	Funding Modality	How to Access
GCF[8]	Multilateral climate fund	National Designated Authority: Directorate General of Financial Sector Stability and Development, Ministry of Finance Direct Access Entity: PT SMI, Kemitraan (Partnership for Governance Reform) Delivery Partner for GCF Readiness – GGGI Indonesia	Prefeasibility and feasibility studies, environmental/social/gender studies, stakeholder engagement plans, risk and climate impact assessments, procurement preparation and financial structuring support through the Project Preparation Facility (PPF). Capacity building, Measurement, Reporting and Verification systems (MRV) and concept note development through the Readiness & Preparatory Support Program	PPF; Readiness & Preparatory Support Program	Energy; Agriculture & Food Security; Sustainable Landscapes; Water	Applicants must work through an Accredited Entity (e.g., PT SMI or international AEs). PPF requests require a concept note approved by the NDA. Readiness proposals are submitted by the NDA or Direct Access Entities; funds are limited to capacity building and prefeasibility activities, not full proposals	Grants, reimbursable grants or equity for PPF; readiness support is grant-funded	Engage with the NDA to endorse a concept note; partner with an Accredited Entity to submit PPF requests. Readiness proposals are prepared by the NDA with support from delivery partners such as GGGI

GEF[9]	Multilateral environment facility	Operational Focal Point: Ministry of Environment Executing Agencies: National Development Planning Agency (Bappenas) and line ministries GEF Agencies: United Nations Development Program (UNDP), United Nations Environment Program (UNEP)among others to oversee project compliance and manage fiduciary responsibilities	Project Preparation Grants (PPGs), project design workshops, stakeholder consultations, safeguard processes, baseline assessments. Enabling activities support national communications and biennial update reports	PPG; Enabling Activities	Energy; Agriculture & Food Security; Sustainable Landscapes; Water	Government agencies and NGOs must partner with a GEF Implementing Agency. A PPG request is submitted with the Project Identification Form (PIF) and is approved by the GEF Council. Projects must align with GEF focal areas	GEF financing is accessed through GEF Partner Agencies (e.g., UNDP, UNEP, World Bank). All proposals require country endorsement from the Operational Focal Point (Indonesia: Ministry of Environment and Forestry)	Coordinate with the national Operational Focal Point and a GEF Implementing Agency to prepare a PIF and request a PPG. Upon Council approval, PPG funds are used to prepare the full project over 12–18 months
AF[10]	Multilateral adaptation fund	Operational Focal Point – Ministry of Environment National Implementing Entity: Kemitraan	PFGs support feasibility studies, stakeholder consultations and environmental/social analyses; risk and vulnerability assessments; baseline assessments and indicator development. Readiness grants and TA Grants provide capacity building for NIEs and executing entities	PFG, Readiness Support and TA Grants	Agriculture & Food Security; Water; Sustainable Landscapes; Disaster risk reduction (adaptation)	Only accredited Implementing Entities (e.g., Kemitraan for Indonesia) may apply. PFGs are requested when submitting a concept note; the amount depends on project size	Grants	Coordinate with Kemitraan to prepare an adaptation project concept and request a PFG. Readiness and TA Grants are accessed through the Adaptation Fund secretariat

CIF[11]	Multilateral trust funds administered through MDBs	Coordination for Engagement: Ministry of Finance and Bappenas projects Implemented through: Multilateral development banks (World Bank, ADB) in partnership with sectoral ministries and subnational governments	Technical assistance and scaled-up financing for readiness reforms and investments to reduce deforestation and improve land management	Forest Investment Program (FIP); Pilot Program for Climate Resilience (PPCR); Clean Technology Fund (CTF); Scaling-Up Renewable Energy Program (SREP)	Energy; Agriculture & Food Security; Sustainable Landscapes; Water (resilience)	Only ODA-eligible countries with active programs at multilateral development banks may access CIF funding	Grants and concessional loans delivered through MDBs; often cofinanced with government and private funds	Indonesia engages with MDBs to design and approve investment plans; MDBs oversee project preparation and implementation with relevant ministries.
Norfund & Norwegian Climate Investment Fund[12]	Development finance institution (bilateral)	Equity injected into: Renewable energy project developers in Indonesia; state-owned or private power companies; local joint ventures	Business Support facility provides grants for technical and professional assistance to strengthen sustainability and development outcomes of Norfund's investments; the facility requires investees to cofinance up to 50 % of project costs. The Climate Investment Fund invests equity (20–35 %) in large renewable energy projects and may support development costs	Business Support Facility (technical assistance grants)	Energy; renewable energy, storage and transmission	Business Support is available only to Norfund portfolio companies; beneficiaries must cofinance project costs. The Climate Investment Fund targets renewable energy projects with deal sizes of roughly USD 25–150 million, requiring strong environmental and social standards	Technical assistance grants with mandatory 50 % cofinancing; equity investments in renewable energy projects	Project sponsors discuss investment and technical assistance opportunities with Norfund. Technical assistance proposals are prepared jointly with Norfund investment teams

Climate Fund Managers (CFM) [13]	Public–private/ blended climate finance manager	Local partners - Renewable energy and water infrastructure developers; local project sponsors seeking private-sector financing	Early-stage technical, environmental and social due diligence construction financing (up to 75 % of project costs) and refinancing through debt or equity instruments	Climate Investor One: Development Fund, Construction Fund and Refinancing Fund; Climate Investor Two (water and oceans)	Energy (renewable energy); Water (desalination, wastewater treatment)	Projects must be in emerging markets and meet CFM's sustainability criteria; typical project sizes range from USD 20–200 million	Development Fund uses donor capital converted into equity at financial close; Construction Fund invests equity; Refinancing Fund provides long-term debt	Project sponsors submit proposals to CFM or engage via partners; there is no formal open call
Switzerland's State Secretariat for Economic Affairs (SECO)[14]	Bilateral donor agency	Implementing partners - UNDP Local partners - Indonesian ministries (e.g., Energy and Mineral Resources, Environment, Forestry, Finance); local governments;	Grants for policy and regulatory reforms, capacity building and pipeline development in renewable energy, peatland restoration and sustainable commodity production; technical assistance for carbon market readiness and Article 6 transfer mechanisms; blended finance instruments including guarantees and loans	Bilateral cooperation programs; trust funds via multilateral development banks	Energy; Sustainable Landscapes (forests, peatlands); Agriculture & Food Security	Support is typically channeled through multilateral development banks or bilateral agreements with Indonesian ministries and local governments; eligibility aligns with Swiss development cooperation priorities	Grants and blended finance (e.g., guarantees, concessional loans)	Government ministries and implementing partners coordinate with the Swiss Embassy or SECO to design programs; there are no open calls for subnational actors
Export Credit Agencies (JBIC, KSure-, Exim China) [28,29]	Foreign export credit agencies	Asian Development Bank; Indonesia Investment Authority (INA); project sponsors (e.g., Itochu, Hyundai–LG); Indonesian ministries	Provide loans, guarantees and insurance to finance Indonesian infrastructure and energy projects	Provides credit facilities	Energy, infrastructure, manufacturing, telecommunications	Largescale projects sponsored by Indonesian or foreign companies in partnership with government or INA; eligibility depends on project viability and exporter involvement	Pipeline & implementation (project finance)	Project-specific agreements; no open calls

Table 4 focuses on domestic TA and readiness support providers within Indonesia. It includes government funds, state-owned financiers, ministries, microfinance institutions and other national entities. Use this as a quick reference to identify domestic actors that either directly provide TA or channel international support to subnational and non-state project owners.

Table 4. Domestic Technical Assistance and Readiness Support Providers in Indonesia

Name of Institution or Facility	Type of Institution	Domestic Partners / Implementing Agencies in Indonesia	Types of Support Offered	Relevant Grant Facilities	Sector Focus	Access & Eligibility	Funding Modality	Ticket Size	Current Status
Indonesia Environmental Fund (BPDLH)[30]	Government fund / environmental fund management agency	NGOs; local governments; and intermediary institutions (LEMTARA)	Manages environmental program funds from government budgets, donors and carbon markets; provides grants and incentives for mitigation programs	Climate change control, sustainable forest management, peatland restoration, social forestry, biodiversity conservation, energy efficiency	Forestry, agriculture, energy, waste management, industry, transportation , marine and fisheries	Implementation & pipeline	Beneficiaries and intermediary institutions selected through capacity assessment	Varies (national fund manages large-scale programs)	Ongoing; calls issued as needed
PT SMI / SDG Indonesia One (SIO)[31]	State-owned infrastructure financier / blended finance platform	Ministry of Finance; ADB; donors; private investors	Provides loans, concessional financing, equity and project development assistance for sustainable infrastructure via the Green Finance Facility (SIOGFF)	Green infrastructure, renewable energy, energy efficiency, waste and water management, health and sustainable urban development	Renewable energy, water,, transport, healthcare	Early-stage, pipeline & implementation	Public and private infrastructure projects aligned with SDGs; projects undergo due diligence	Large (platform raised USD 2.3 bn; ADB loan USD 150 m)	Rolling; proposals accepted year-round

Ministry of Finance (MoF)[32]	Government ministry and fiscal authority	Ministries and agencies; PT SMI; UNDP; UK Green Finance Institute	Issues sovereign Green Sukuk to fund mitigation, adaptation and biodiversity projects; manages climate budget tagging and allocates public funds for climate programs; develops innovative climate finance instruments	Climate mitigation and adaptation, renewable energy, sustainable infrastructure, biodiversity	Energy, environment, infrastructure, biodiversity, cross sectoral	Design, pipeline & implementation	Public projects funded through national budgets; investors purchase Green Sukuk; line ministries access climate allocations through budget tagging	Sovereign Green Sukuk issued in 2018 raised USD 1.25 bn; climate-related spending averaged IDR 89.2 tn (3.2 % of the budget) and totalled IDR 702.9 tn by 2023	Green Sukuk issued periodically; climate budget allocations annually
Ministry of National Development Planning (Bappenas)[33]	Government ministry and planning agency (provides technical assistance / readiness through executing entity or development partners)	Indonesian Climate Change Trust Fund (ICCTF); National Council on Climate Change; donors	Coordinates climate budgeting and low-carbon development planning; manages the ICCTF to channel donations for mitigation and adaptation programs; develops climate policy and budget tagging	Climate finance coordination, low-carbon development, planning and capacity building	Cross-sectoral	Early-stage & planning	Government agencies, provinces and NGOs may access funding through ICCTF; resources depend on donor contributions	Modest; ICCTF has limited capitalization and lacks capacity to engage private sector	Ad hoc calls when funds are available

Ministry of Agriculture (MoA)[34]	Government ministry (provides technical assistance / readiness through executing entity or development partners)	Agricultural Extension & Human Resource Development Agency (BPPSDMP); Ministry of Environment & Forestry; social forestry units (KUPS)	Provides training to farmers and extension workers on optimizing swamp land, water pumping and planting on plantation land	Agricultural productivity, climate adaptation and resilience, social forestry	Agriculture, forestry, fisheries, community enterprises	Implementation & pipeline	Farmers and extension workers; social forestry groups with village decision letters; remote areas targeted; fertilizers purchasable with national ID	Training programs (cost not specified); fertilizer subsidy budget increased by IDR 14 tn; KUPS equipment subsidies reduced to 30 % of planned support	Training and subsidies ongoing; KUPS grants subject to program schedules
PT PII[35]	State-owned guarantee institution for PPPs	Ministry of Finance; contracting agencies (ministries, SOEs, regional governments); international and multilateral institutions	Provides political and contractual risk guarantees to central and local government PPP projects, improving creditworthiness and enabling private sector participation	Infrastructure development, risk mitigation and private investment mobilization	Infrastructure sectors such as water, energy, transport and waste	Pipeline & implementation	Contracting agencies with structured PPP projects; projects undergo appraisal and claim framework	Guarantee amounts vary by project	Applications accepted on a project basis

IV. TYPES OF CLIMATE FINANCING INSTRUMENTS

Climate finance instruments are the tools or mechanisms used to channel funding into projects that address climate change. Table 5 introduces the main types of climate finance instruments and highlights practical examples demonstrating how they have been used in Indonesia. The examples provided show real cases from Indonesia, illustrating how these instruments have been used to finance in the four key sectors.

While each instrument may be linked to specific financing conditions, they can be applied to a wide range of sectors as long as the project meets the eligibility criteria and aligns with the financier's risk appetite. In many cases, the choice of instrument depends on factors such as the project's stage of development, revenue potential and capacity to manage debt or equity.

For a full sectoral breakdown of climate finance instruments refer to Table 8 of the Annex.

Table 5. Climate Finance Instruments and Case Studies in Indonesia

Climate Finance Instruments	Examples
Blended Finance Combines public or donor concessional capital with private investment to de-risk and scale climate-related projects	• **Tropical Landscapes Finance Facility (TLFF) – Sustainable Rubber Finance** — Blended financing for sustainable rubber production with biodiversity protection.[36] • **Geothermal Resource Risk Mitigation Project** — Uses concessional loans and grants blended with commercial finance to reduce exploration risk for geothermal projects.[37] • **GCF-IFC Scaling Resilient Water Infrastructure (RWI) Facility** — Blended technical assistance grants with concessional and commercial loans to finance climate-resilient water infrastructure in Indonesia.[38]
Carbon Markets & Credit Mechanisms Generation and sale of carbon credits from verified emissions reduction projects, used to finance mitigation activities.	• **Katingan Mentaya Project** Avoided deforestation and peatland conservation project selling verified carbon credits on the voluntary market.[39] • **Gunung Salak Geothermal Carbon Offsets** — Carbon finance from geothermal electricity displaces coal-based generation.[40]
Climate Resilience Bonds Thematic bonds focused on adaptation and resilience infrastructure, for water security, agriculture, and coastal protection.	• **PT SMI Resilience Bond Study** — Prefeasibility work on a resilience-themed debt instrument for disaster-prone regions.[41]
Concessional Loans	• **CTF–ADB Geo Dipa Geothermal Expansion** — CTF provided low-interest, long-term financing blended with an ADB loan to reduce costs and risks, enabling PT Geo Dipa Energi to expand geothermal capacity.[42]

Below-market loans/terms (lower rates, longer grace periods) to make clean projects bankable and crowd-in co-finance.	• **KUR Agriculture Scheme** — Government-subsidized loans for smallholder rice farmers in Central Java to finance seeds and fertilizer at below-market interest rates.[43]
Grants Non-repayable funding from multilateral, bilateral, or philanthropic sources to support climate adaptation, mitigation, and resilience. often with strong Technical Assistance	• **IFAD Rural Empowerment and Agricultural Development Project** — Grants to improve smallholder productivity, diversify crops, and enhance climate resilience.[44] • **GEF Coral Reef Rehabilitation and Management Program (COREMAP)** — Supports marine ecosystem restoration and sustainable fisheries management.[45]
Green Bonds Debt securities earmarked for environmentally friendly projects, attracting investors seeking sustainable investments.	• **PT SMI Green Bonds** — Corporate bond issuance to finance sustainable infrastructure, including renewable energy and waste management.[46] • **TLFF Green Bond – Royal Lestari Utama** — USD 95M sustainability bond for sustainable rubber plantations integrating agroforestry and biodiversity conservation.[47] • **IndoAgri Green Bond** — Funds for sustainable agriculture and improved land-use practices.[48]
Green Sukuk Sharia-compliant green financing instrument where proceeds are dedicated to environmentally beneficial projects, popular with Islamic finance investors globally.	• **Government of Indonesia Sovereign Green Sukuk** — Financed renewable energy, sustainable transport, and climate-resilient agriculture projects.[49] • **Project-Level Green Sukuk — Ministry of Finance** — Supported water infrastructure and climate-resilient irrigation.[50]
Microfinance Small-scale loans targeted at low-income households, often coupled with capacity-building	• **PNM Mekaar Program** — Microloans for women-led agribusiness groups in West Java, supporting poultry and vegetable farming.[51] • **Village Revolving Fund (Dana Bergulir Desa)** — Government-managed village microcredit scheme supporting local agricultural and small enterprise financing.[52]
Payments for Ecosystem Services (PES) Voluntary transactions where a buyer pays for the maintenance or enhancement of ecosystem services, often benefiting upstream land stewards.	• **Rimba Raya Biodiversity Reserve** — A REDD+ PES project in Central Kalimantan that sells carbon credits to fund peatland conservation and community development.[53] • **Cidanau Watershed PES** — Water utility–funded payments to upstream farmers for forest restoration in Cidanau, West Java.[54]
Private Sector Investment Direct financing by companies, investors, and commercial banks into climate-aligned projects.	• **C&I Rooftop Solar (Climate Fund Managers)** — Equity investment into commercial and industrial solar developers in Indonesia.[55] • **IFC–GRP Green Steel Financing** — A US $60 million blended finance agreement supporting low-carbon steel production in Indonesia through Electric Arc Furnace modernization and energy efficiency upgrades.[56] • **BP Tangguh UCC Project** — A private-led US $7 billion carbon capture, utilization, and storage (CCUS) initiative in Papua to sequester CO_2 and enhance gas recovery at the Tangguh LNG facility.[57]

V. ENERGY SECTOR FINANCING LANDSCAPE IN INDONESIA

5.1 National Goals and Targets

Indonesia's energy sector released about 650 million tons of carbon dioxide in 2022, making it the world's seventh-largest carbon emitter, according to the latest data available from the IEA.[58] In its Enhanced NDC, Indonesia has increased its mitigation ambition, raising the unconditional emissions reduction target from 29% to 31.89%, and the conditional target from 41% to 43.2% by 2030.[59] The energy sector in particular plays a critical role under the JETP framework given Indonesia is aiming to cap total power sector emissions at 290 million tons of carbon dioxide equivalent from its on-grid power sector by 2030. It also plans to increase the share of renewable energy in its power mix to 34% by 2030, from around 14% in 2021.[60] Both the NDC and the Long-Term Strategy for Low Carbon and Climate Resilience (LT-LCCR) also highlight that the just energy transition should address the needs of vulnerable groups, gender equality and intergenerational equity, ensuring women and other underrepresented groups are included in the just transition.[61]

5.2 Current Financing Landscape

5.2.1 Public Finance

Public finance refers to funding provided or facilitated by the government, either from domestic sources (such as national budgets) or international development partners (such as MDBs and other development finance institutions (DFIs)). The Government of Indonesia also applies a climate and gender double-tagging system in its budgeting processes, in place since 2016 at the Ministry of Energy and Mineral Resources (MEMR), Ministry of Transportation (MoT) and the Ministry of Environment (formerly known as Ministry of Environment and Forestry (MoEF)) to track both climate and gender relevance.[62]

a) Direct Funding: Budget Allocations to Ministries and State-Owned Enterprises

In Indonesia, direct public finance for the energy sector is mainly channeled through budget allocations to line ministries and SOEs, especially MEMR. These allocations are determined annually through the national budget process (APBN), guided by national development priorities set by Bappenas and approved by Parliament. Within its allocation, MEMR funds various clean energy programs, including small-scale geothermal, rural electrification and solar photovoltaic installations for low-income households and public institutions.

b) International Fund Managed by Government Entity

PT SMI – SDG Indonesia One

PT SMI operates the SDG Indonesia One blended-finance platform, which de-risks and attracts private capital for sustainable infrastructure, including renewable energy. In February 2022, the ADB provided a USD 150 million, 20-year financial intermediation loan through its Green Finance Facility. This loan is expected to support approximately ten green sub-projects totaling USD 423 million and aims to mobilize and leverage up to eight times that amount in private

capital. The facility includes technical assistance to strengthen PT SMI's capacity in green project appraisal, ESG safeguards, gender consideration and SDG-aligned financial structuring.[63]

5.2.2 Private Finance

Private finance refers to commercial capital mobilized through equity, debt or quasi-equity instruments by independent power producers (IPPs), financial institutions and private investors, without reliance on government balance sheets or sovereign guarantees. In Indonesia, private finance enters through two primary structures: corporate finance, where companies use their own balance sheets to invest in projects; and project finance, which involves the creation of special purpose vehicles (SPVs) to raise funds based on the project's expected cash flows. Both approaches are used, depending on the nature of the technology, project size and risk allocation.

a) Green Bond and Capital Market Instruments

The Financial Services Authority (OJK) has supported the issuance of labelled bonds and relevant capital market instruments through its Sustainable Finance Roadmap Phase II (2021–2025)[64] which classifies renewable energy and energy efficiency as one of the sustainable business activities categories. In particular, the Indonesia Taxonomy for Sustainable Finance (TKBI)[65] has started with the energy sector as the first focus sector in 2024, with enabling activities such as Carbon Capture and Storage (CCS), research, development and innovation for CCS technologies, and energy conservation/ efficiency services.

Between 2015 and 2021, market-rate debt was the dominant private financing instrument, particularly for large on-grid renewable energy projects such as geothermal, hydro and utility-scale solar. Commercial banks and institutional investors provided loans directly to project companies or through syndicated structures, often supported by DFIs and MDBs. In most project finance transactions, equity is provided by IPPs or developers, while debt is secured from commercial lenders and, in some cases, blended with concessional funding from DFIs offered at preferential terms or from philanthropic investors.

Notable examples include the Tanah Laut Wind Power Plant, which combined USD 33.5 million in senior debt with a USD 10 million B-loan from the IFC, and concessional co-investments from the Global Energy Alliance for People and Planet (GEAPP) and CIFs.[66] Other projects such as Cirata Floating Solar PV and Sambelia Solar PV obtained financing from commercial banks without the involvement of DFIs, reflecting growing investor appetite for certain technologies. Conversely, high-risk technologies such as geothermal and waste-to-energy often require credit enhancements or guarantees to unlock private finance.

b) Export Credit Agencies and Institutional Investors

ECAs provide long-term loans, insurance and guarantees to support national exporters and international contractors involved in Indonesian renewable energy projects. They play a critical role in de-risking large-scale infrastructure projects by absorbing political or currency-related risks. Past examples include the Batang Toru Hydropower Plant, supported by China Exim Bank, and other major power projects with support from Japan's JBIC and Korea's K-Sure. While these

were traditionally for fossil-based infrastructure, ECAs are increasingly exploring clean energy portfolios in Indonesia.

Indonesia's capital markets also offer potential for mobilizing private finance, particularly through corporate bonds issued by IPPs and developers. However, the market remains underdeveloped. Only 2% of corporate bonds are currently guaranteed, which limits investor confidence and inflows. [67] Initiatives under the JETP and Indonesia's Sustainable Finance Roadmap aim to increase issuance of green, social and sustainability (GSS) bonds, including transition bonds, and to enhance investor interest through credit enhancement and tax incentives.

Institutional investors such as pension funds and insurance companies remain a largely untapped source of long-term private capital. While regulatory and risk barriers exist, they may be addressed through ongoing reforms in the capital market ecosystem and by expanding product offerings that meet ESG criteria.

c) Credit Enhancements and Guarantee Mechanisms

Private finance in high-risk segments such as geothermal and waste-to-energy is often unlocked through credit enhancements, including partial risk guarantees, exploration insurance and first-loss mechanisms. For example, the Geothermal Risk Mitigation Facility (GREM), managed by PT SMI with World Bank support, provides exploration insurance to address upfront geological risk in geothermal projects. Similarly, the PT PII offers partial risk guarantees to support PPP transactions.

Other ongoing initiatives include guarantee facilities under development by the Gesellschaft für Internationale Zusammenarbeit (GIZ) (Germany) and Agence Française de Développement (AFD) (France), as well as early-stage interest from UNDP. These guarantee schemes help commercial banks reduce their risk exposure and improve terms for borrowers. By absorbing specific categories of risk, they can support a more diversified and competitive private finance market.

d) Role of IPPs and Private Developers

IPPs remain central to Indonesia's renewable energy development. Both local players such as Medco Power, TBS Energy, and Adaro Power, and international firms such as Masdar, ACWA Power, have developed or co-financed renewable energy projects through either balance-sheet investments or SPV-based project finance.

Many of these IPPs form joint ventures or consortia with local partners to secure permits, land, and grid access, while also spreading financial risk. Larger IPPs with diversified portfolios and access to international financing are generally better positioned to absorb regulatory uncertainties and currency volatility.

Private developers may also leverage quasi-equity instruments, such as convertible loans or mezzanine debt, especially in early-stage or smaller-scale projects. In addition, developers with access to carbon markets may improve project bankability through forward sales of carbon credits, especially under Indonesia's voluntary and compliance carbon frameworks.

e) Carbon Markets

Indonesia's carbon pricing framework sits on Presidential Regulation 98 of 2021 on the Economic Value of Carbon. It defines the instruments, the national registry, and linkages to the NDC. In the power sector, implementation is guided by MEMR rules for pricing and compliance.[68] The emissions trading system for power began in 2023 with grid-connected coal plants and widened in 2024 to include units down to 25 MW.[69] In early 2025, Indonesia inaugurated international carbon trading on IDXCarbon. Authorities authorized about 1.78 million tCO_2e from five PLN energy projects for cross-border sale, including Priok Blok 4 and mini-hydro Gunung Wugul.[70] In May 2025, Indonesia signed a Mutual Recognition Arrangement with Gold Standard. The MRA is intended to enable alignment between national MRV and Gold Standard processes and facilitate project recognition in SRN-PPI.[71]

5.2.3 International Climate Finance

Catalytic Capital: Sovereign, Concessional, Non-Concessional Loan and Equity (MDBs & DFIs)

Catalytic capital includes public sector funding provided by MDBs and bilateral agencies, delivered in forms that span sovereign and non-sovereign, concessional and non-concessional loans, grants, technical assistance, guarantees, and equity. Even when priced at market rates, these instruments often offer better terms than purely private financing, playing a key role in crowding in private capital and supporting early-stage or high-risk energy projects.

Key financing modalities include:

- **Grants and Technical Assistance**: Institutions such as CIFs support diverse climate-related programs. For instance, approximately USD 270,000 was allocated in 2021 through the CIF Technical Assistance Facility to build climate-resilient capacities among smallholder farmers in Indonesia.[72] That same year, Indonesia was chosen as one of the first four pilot countries under the Accelerating Coal Transition (ACT) program, making it eligible for up to USD 500 million. In addition, the World Bank's "Scaling-Up Green and Sustainable Finance for Indonesia's Energy Sector" initiative received a USD 370,000 grant.[73] These public resources are typically deployed through country dialogues facilitated by MDBs in partnership with government agencies.

- **Concessional Loans:** Loans offered at below-market terms, typically with longer tenors and lower interest rates, are intended to improve the bankability of climate-related projects. The ADB approved a USD 300 million concessional loan to PT Geo Dipa Energi (GDE), a state-owned entity, to expand geothermal capacity by 110 megawatts in Java.[74] In parallel, ADB is also managing a USD 35 million loan from the CTF for the same project.

- **Non-Concessional Loans:** Market-rate loans offered by MDBs or DFIs that do not receive subsidy or preferential terms but may carry longer tenors or absorb political risks compared to private finance. Under the Indonesia JETP, MDBs and bilateral agencies committed USD 1.59 billion in non-concessional loans to support the country's energy transition.[75]

- **Equity Investments**: Direct capital contributions by DFIs or impact investors to support early-stage companies or infrastructure developers. As part of Norway's Climate Investment Fund, Norfund committed USD 25 million in equity to Xurya, a leading rooftop solar provider in Indonesia's commercial and industrial sector.[12]

- **Blended Finance:** In June 2025, the World Bank approved a USD 2.128 billion blended finance package, including a USD 1.5 billion policy reform loan to improve financial sector resilience and enable renewable energy procurement. This also includes the ISLE-2 project, supported by a USD 600 million International Bank for Reconstruction and Development (IBRD) loan,[76] USD 28 million in grants, and the first use of the Bank's step-up loan product to scale solar and wind power while expanding electricity access.[77] Equity-based financing, particularly when blended with concessional capital, is becoming increasingly relevant for private sector engagement in energy. For example, Climate Fund Manager operates blended finance vehicles such as Climate Investor One (CI1), that focuses on renewable energy, combines development-stage funding with commercial equity.

(See Annex for detailed summaries of international climate finance sources.)

VI. WATER SECTOR FINANCING LANDSCAPE IN INDONESIA

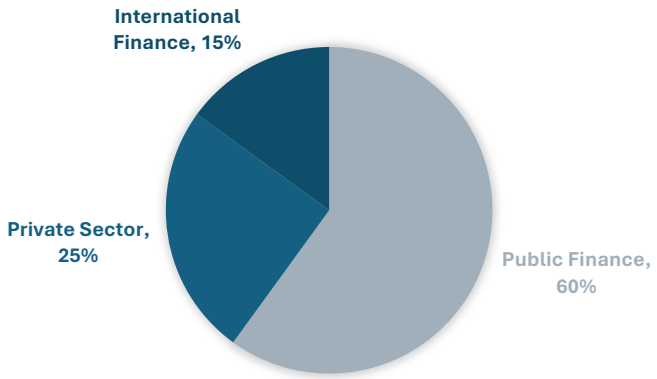
6.1 National Goals and Targets

Indonesia's water sector plays a critical role in the country's broader climate adaptation strategy. Under its Enhanced NDCs, there are no specific numerical targets for water adaptation, and primarily outlines general strategies and frameworks for achieving climate resilience through reduction in flood-prone areas, improvement in irrigation efficiency and watershed restoration. By 2030, the government aims to expand climate-proof infrastructure in vulnerable urban areas, restore degraded watersheds and modernize irrigation systems to improve both climate resilience and agricultural productivity. These goals are reinforced by the National Adaptation Plan (NAP) and national development plans coordinated by Bappenas, which highlights the need to integrate Nature-based Solutions (NbS), disaster risk reduction and water governance reform into climate adaptation. While the NAP's water sector measures do not explicitly reference gender, Indonesia's broader adaptation frameworks, including its Enhanced NDC and national development plans, recognize the importance of GESI mainstreaming to ensure equitable access, participation, and benefits across sectors

6.2 Current Financing Landscape

Figure 2 shows the distribution of funding, which highlights the importance of leveraging multiple sources to achieve Indonesia's ambitious water adaptation targets. Public finance ensures baseline support for national priorities, while private sector contributions bring innovation and scalability. International funding not only supplements these efforts but also provides a platform for global collaboration and knowledge sharing.

Figure 2. Funding Allocation for Water Adaptation in Indonesia (2024)



Sources: Various sources including OJK (2024), GCF (2023), Adaptation Fund (2022). and ADB (2020)

6.2.1 Public Finance

According to the latest data available, an estimated USD 10 billion in public funds was allocated to the water sector under Indonesia's RPJMN 2015–2019 (National Medium-Term Development Plan). Despite this, resources still fell short of achieving RPJMN targets. For instance, only about 68% of the new irrigation target, which is 1 million hectares as outlined in the Ministry of Public Works and Housing's strategic plan was met by 2019.[78]

a) State Budget (APBN)

Indonesia's central government contributes to major urban water infrastructure investments primarily through the APBN. One of the examples is under frameworks like the National Urban Water Supply Project (NUWSP). NUWSP was developed in partnership with the World Bank to improve access to and the quality of piped water services in urban areas, especially for low-income communities.

During the NUWSP period, total investment in urban water supply development is expected to be in the range of USD 600 million, of which around USD 185 million comes from central and local government budgets (APBN and APBD). The rest, which is roughly USD 100 million from the World Bank loans and some USD 317 million from other sources like commercial borrowing, the private sector, and other domestic government programs, which complement the public contributions.[79]

In essence, the APBN underwrites a significant portion of the urban water service expansion, especially through NUWSP, by directly funding infrastructure and capacity-building efforts, often operating in concert with international partners like the World Bank. However, according to a report covering Indonesia's participation in the 10th World Water Forum in May 2024, the APBN is only capable of covering about 37% of the country's total water infrastructure funding needs.[80] The remaining investment must come through other channels.

b) Special Allocation Fund - Dana Alokasi Khusus (DAK)

DAK are transfers from the central government to sub-national governments earmarked for specific priorities, including water supply and sanitation. In the water sector, DAK is used to finance activities such as expanding household and communal water connections for low-income communities, providing access to safe water in underserved areas, and improving sanitation facilities to support public health outcomes. These funds typically require a minimum 10% matching contribution from local governments,[81] which helps ensure local ownership of the investments. While DAK provides an important channel for targeted investment at the local level, the World Bank notes that implementation has been uneven, with some allocations not fully utilized and there is limited evidence that the funding consistently addresses capacity gaps or reaches the most vulnerable communities.

6.2.2 Private Finance

Private finance in Indonesia's water sector remains limited but plays a role in supplementing public resources, particularly in large-scale infrastructure where state budget allocations cannot fully meet investment needs. Private capital is most visible through Public-Private Partnerships (PPPs), capital market instruments, such as green bonds, and blended finance mechanisms.

a) Green Bond and Capital Market Instruments

The Financial Services Authority (OJK) has supported the issuance of labelled bonds and relevant capital market instruments through its Sustainable Finance Roadmap Phase II (2021–2025)[82] which classifies water and wastewater infrastructure as one of the sustainable business activities categories. It is also important to note that green bonds and other sustainable finance instruments in Indonesia, such as SDG Bonds and Blue Bonds, now increasingly incorporate GESI criteria into their eligibility and evaluation frameworks. For example, PT Indonesia Infrastructure Finance (IIF) issued a USD 150 million Sustainability Bond in 2021, with proceeds financing drinking water supply projects that provided clean water access to about 159,000 households, in collaboration with the World Bank Treasury, which provided technical assistance for the issuance.[83]

b) Public-Private Partnerships

Indonesia uses PPPs to co-finance major water infrastructure projects, including raw water supply, multipurpose dams and irrigation schemes. These arrangements operate under Presidential Regulation No. 38/2015 and Ministry of Finance regulations on viability gap funding (VGF)[84] and availability payments, often supported by risk guarantees from the PT PII. The

Umbulan Bulk Water Supply Project in East Java remains a flagship example, combining provincial sponsorship, central government support, and private operator involvement under a long-term concession.[85]

Case Study: Umbulan Springs Bulk Water Supply PPP, East Java

The East Java Provincial Government sought to address gaps in water coverage, as the existing supply system served only 75% of the population. To meet demand in Surabaya and surrounding cities, it initiated the USD 200 million Umbulan Springs Bulk Water Supply Project, a 95 km transmission pipeline to deliver 4,000 liters per second of potable water to 260,000 connections across two cities and three districts.

Procured as a PPP, the project faced a major bankability challenge: local water utilities, the intended off-takers, were financially weak, raising concerns for timely payment to the private partner. To mitigate this, the PT PII provided a payment guarantee, contingent on governance and operational reforms within the provincial water business unit. Support from Castalia Advisors included appraising the guarantee request, recommending VGF from the central government and preparing a business plan, budgeting framework and process improvements to strengthen institutional capacity.

With these measures in place, PT PII issued the guarantee in July 2016. The project reached financial close in December 2016 and began construction in July 2017. Beyond infrastructure delivery, the project demonstrates how structured guarantees, VGF and capacity-building can enable subnational governments to mobilize private finance for large-scale water adaptation and resilience investments.

2.2.3 International Climate Finance

Catalytic Capital: Sovereign, Concessional, Non-Concessional Loans and Equity (MDBs & DFIs)

Indonesia receives sustained support from international financing institutions for large-scale water adaptation investments. This includes concessional loans, grants, and technical assistance from entities such as the World Bank, ADB, and partners operating under CIF, GCF, and the SECO.

- **Concessional loans and sovereign financing:** Multilateral institutions such as the World Bank, ADB and CIF have provided concessional and sovereign-backed financing for a range of water adaptation initiatives. These include watershed rehabilitation, flood mitigation, and resilient urban infrastructure. For instance, the GCF has committed USD 632.1 million across nine projects in Indonesia, with several focused on watershed management and urban resilience. CIF support has been channeled through MDBs to implement ecosystem-based adaptation projects, such as integrated forest and water governance in Kalimantan. SECO's concessional financing complements this by enabling policy reform and infrastructure development in secondary cities.

- **Equity and non-concessional finance:** Although less frequently used in the water sector, equity and non-concessional instruments emerge as viable options for adaptation finance. Norfund, while traditionally focused on clean energy, presents opportunities for financing decentralized water supply and treatment models, particularly where climate resilience and private sector delivery intersect. CFM through its Climate Investor 2 (CI2) platform, offers equity and mezzanine financing for urban water access, stormwater control, and flood protection. While not yet active in Indonesia's water sector, CFM's pipeline and investment model are relevant for adaptation-aligned infrastructure.

- **Grant financing and technical assistance***:* Grants remain critical for de-risking early-stage adaptation projects and building institutional readiness. GCF Readiness funding has helped strengthen Indonesia's capacity to prepare bankable proposals for the water sector. CI supports urban drainage and coastal watershed projects through grant-funded pilots and is currently developing a GCF proposal (BEAM) that aligns with Indonesia's blue economy priorities. SECO also provides grant-based support for upstream policy reforms and structuring blended finance vehicles to expand municipal service delivery and flood resilience.

(See Annex for detailed summaries of international climate finance sources).

VII. SUSTAINABLE LANDSCAPES SECTOR FINANCING LANDSCAPE IN INDONESIA

7.1 National Goals and Targets

Indonesia aims by 2030 to restore 2 million hectares of peatlands and rehabilitate 12 million hectares of degraded land as set out in its Enhanced NDC.[86] Indonesia has also pledged to continue to work on Article 5 of the Paris Agreement that sends clear political signal on the recognition of forest and REDD+, which remains as an important component of the NDC target.[86] To reach the FOLU Net Sink 2030 target of −140 $MtCO_2$, priority measures include reducing emissions from deforestation and forest degradation, enhancing carbon sequestration in natural forests and other land systems, lowering emissions from fires and peat decomposition and strengthening law enforcement.[86] Integrating GESI into peatland restoration and land rehabilitation ensures that women, Indigenous Peoples and local communities participate and share benefits, is an explicit national commitment and is being mainstreamed in practice (e.g., Gender Mainstreaming Task Force for Peatland and Mangrove Restoration Agency (BRGM)'s gender-focused work).[87]

7.2 Current Financing Landscape

7.2.1 Public Finance

a) Special Allocation Fund - Dana Alokasi Khusus (DAK) – Bidang Lingkungan Hidup dan Kehutanan (LHK)[88]

Under Regulation of the Minister of Environment and Forestry (Permen LHK) P.68/2017, DAK Fisik Penugasan Bidang Lingkungan Hidup dan Kehutanan (LHK) channels APBN funds to provinces and districts/cities for a limited "menu" and pre-set locations aligned with national priorities. The regulation covers two sub-fields: Lingkungan Hidup (e.g., pollution and waste control) and Kehutanan. The Kehutanan sub-field includes three menu groups:

(i) land and forest rehabilitation (rehabilitasi hutan dan lahan – RHL) - both vegetative works and civil/engineering measures such as check-dams and gully plugs;

(ii) strengthening management of KPH/TAHURA/Hutan Kota (including basic facilities to support management and nature-based recreation); and

(iii) productive economic facilities for Kelompok Tani Hutan and perhutanan sosial groups.

b) DBH-DR (Dana Bagi Hasil Sumber Daya Alam Kehutanan–Dana Reboisasi)

DBH-DR is Indonesia's forestry revenue-sharing transfer earmarked for reforestation and land rehabilitation. Under PP 35/2002 it was restricted to rehabilitasi hutan dan lahan (RHL) only. To reduce idle balances and expand regional flexibility, the central government broadened eligible uses starting in the 2018 budget year via MoF Reg. 230/PMK.07/2017 and DJPK Reg. PER-1/PK/2018. [89] These allow producing provinces to fund the full RHL cycle (planning, implementation, monitoring, evaluation) and supporting activities such as forest protection, prevention and control of forest and land fires, nursery and seed systems, research and development, training and extension, and community empowerment.

How it differs from DAK: DBH-DR is a revenue-sharing transfer tied to forestry receipts and allocated chiefly to producing provinces, whereas DAK is a special-allocation grant with predefined sector "menus" and locations governed by technical guidelines.

7.2.2 Private Finance

Based on the latest available data, land use received more than half of climate-aligned lending and investment by Indonesian commercial banks. This is drawn from POJK 51 sustainability reports for 2019–2021 from a sample of banks covering over 60% of total banking assets. Most flows within land use went to agriculture, particularly Indonesian Sustainable Palm Oil (ISPO) and Roundtable on Sustainable Palm Oil. Particularly (RSPO)-certified sustainable palm oil.[90]

a) Green Bond and Capital Markets Instruments

The Financial Services Authority (OJK) has supported the issuance of labelled bonds and relevant capital market instruments through its Sustainable Finance Roadmap Phase II (2021–2025),[91] which classifies sustainable natural resources and land use as one of the sustainable business activities categories. Another key update is the expansion of coverage of TKBI Version 2 which includes Agriculture, Forestry and Other Land Use (AFOLU), This is reflected in the inclusion of

activities specifically on forestry and palm oil plantations. sequestration in production and conservation forests.[92]

Since land use and forestry were only formally included in TKBI Version 2 in February 2025, private sector financing in this sector is still at an early stage. Nonetheless, several pioneering examples illustrate its potential. One was the issuance of a USD 95 million sustainability bond by the TLFF to support sustainable rubber plantations on degraded land through PT Royal Lestari Utama.[93] Although this project was eventually terminated in 2022, it demonstrated an early model for deforestation-free investment. On the corporate side, Bank Rakyat Indonesia (BRI) issued IDR 5 trillion in green bonds in 2022 under its Sustainable Finance Framework, with part of the proceeds directed toward smallholder support in sustainable palm oil and forestry,[94] with part of the proceeds directed toward smallholder support in sustainable palm oil and forestry. However, the adoption of sustainability-linked bonds (SLBs) in land-use sectors is still underdeveloped due to lack of standardized performance metrics, high verification costs and weak investor confidence.

b) Carbon Markets, REDD+ and Payment for Ecosystem Services

As of mid-2025, nature-based projects had not yet been admitted for domestic exchange trading, though the government signaled plans to launch forestry-based carbon offset trading and to integrate independent standards. [95] Indonesia runs REDD+ at project and jurisdictional scales with MRV and registration through National Registry System SRN-PPI,[96] and has attracted results-based payments. Payments include about USD 56 million from Norway for verified 2017 reductions[97] and a further USD 60 million announced in December 2024 for 2019-2020 results.[98]

Beyond tradable credits and RBPs, Indonesia uses PES to finance watershed and forest stewardship. The Cidanau Watershed PES in Banten[99] is a standard example. The buyer is Krakatau Tirta Industri, the utility that abstracts water downstream. A multistakeholder forum, FKDC, intermediates contracts with upstream farmer groups. Contracts link payments to land management performance, including a requirement to maintain at least 500 trees per hectare during the contract period, monitored annually. This is a useful model when crediting is paused or eligibility is uncertain.

7.2.3 International Climate Finance

A range of DFIs and MDBs are actively deploying catalytic capital to support sustainable land use and forest conservation in Indonesia. These financing instruments include concessional loans, equity, guarantees, and blended finance structures designed to de-risk projects and mobilize private co-financing.

- **Concessional financing**: Concessional public finance has supported forest governance and community-based resource management in Indonesia. Under the Climate Investment Funds' Forest Investment Program (FIP), Indonesia implemented about USD 48.6 million through the World Bank and ADB operations that strengthened forest management units and community partnerships.[100] The ADB's Community-Focused Investments to Address Deforestation and Forest Degradation (CFI-ADD+) provided a USD 17 million grant to the

Government of Indonesia to address institutional, technical and capacity barriers for REDD+ in West Kalimantan.[101] Another example is the FIP II program supported by the World Bank, funded by the CIFs and implemented by Indonesia's Ministry of Environment and Forestry since 2016, which helped community groups develop sustainable livelihoods, including an ecotourism initiative in Mandala Traditional Forest where visitor numbers rose by about 50 percent after site rehabilitation.[102]

- **Equity and blended finance structures:** Equity-based financing, particularly when blended with concessional capital, is becoming increasingly relevant for private sector engagement in forestry and agroforestry. CFM also operates a blended finance vehicle on forestry or land-based adaptation under Climate Investor Two (CI2), provided projects meet minimum bankability thresholds. Typical investment sizes range from USD 20 million to USD 70 million, with project developers expected to contribute equity and secure offtake arrangements.

- **Grants and technical assistance:** Grants remain an important catalytic instrument, particularly for early-stage project preparation, policy engagement, and capacity-building. Conservation International's proposed BEAM project is seeking USD 75 million in GCF grant financing to support marine conservation, coastal resilience and landscape-based adaptation. The project includes components relevant to watershed management and ecosystem-based agriculture, which fall under Indonesia's FOLU and NDC priorities. Grant financing is also used to pilot approaches that can later be scaled through blended structures.

- **Guarantees and risk-sharing instruments:** Guarantee mechanisms are less common in Indonesia's landscapes sector but remain a potential tool to crowd in commercial finance. Norfund's investment model, while primarily equity-based, requires strong project fundamentals and often leverages co-financing or credit enhancement from local entities such as PT SMI or BPDLH. Though Norfund does not provide grants, its concessional capital can be layered with public funds or guarantees to manage risks associated with forest-based or agroforestry ventures, particularly in areas with unclear land tenure or long investment horizons.

These instruments demonstrate that catalytic capital for the FOLU sector extends far beyond traditional fiscal transfers. Ministries and local governments can accelerate access by co-developing scalable investment plans, ensuring regulatory clarity, and building credible project pipelines in collaboration with DFIs.

(See Annex for detailed summaries of international climate finance sources).

VIII. AGRICULTURE AND FOOD SECURITY SECTOR FINANCING LANDSCAPE IN INDONESIA

8.1 National Goals and Targets

Indonesia's current goals for agriculture and food security aim for a climate-resilient, inclusive and circular food system by 2045 with healthy, diverse diets for all.[103] In the RPJMN 2025–2029 plan, the government prioritizes achieving national food self-sufficiency within four years and sets near-term actions that include promoting climate-smart agriculture through guidelines and capacity building, advancing low-emission and water-efficient cropping, increasing the use of organic fertilizer and better livestock-waste management, strengthening food traceability and labeling, and reducing food loss and waste through regulation and public education.[104]

8.2 Current Financing Landscape

8.2.1 Public Finance

a) Budget Allocations and Producer Support

The GoI allocates substantial funding toward agricultural development, particularly through producer subsidies, market price support (MPS) and general services. In 2022 public funding reached USD 8.89 billion, with USD 7.57.5 billion channeled to producer support and USD 1.45 billion to general services. Rice and maize remain leading beneficiaries of price support, with fertilizers continuing to dominate input subsidy allocations of USD 3.28 billion. Within general services, irrigation infrastructure received USD 675 million and R&D USD 65 million.[105] While these allocations reflect strong sectoral support, they do not fully integrate CSA or long-term adaptation measures.

b) Government-Supported Credit and Loan Programs

To enhance financial accessibility, the GoI has introduced targeted credit programs aimed at lowering borrowing costs and mitigating risks for smallholder farmers. The Food Security & Energy Credit (KKPE) program provides low-interest loans to support food production and energy-efficient farming practices, promoting both agricultural productivity and sustainable energy use. Similarly, the Credit for Energy Development & Plantation Revitalization (Kredit Pengembangan Energi Nabati dan Revitalisasi Perkebunan, KPEN-RP) initiative offers long-term financing for sustainable plantation expansion and energy-efficient agricultural projects, strengthening Indonesia's agricultural value chains while reducing environmental impact. Additionally, the Business Credit for Cow Breeding (Kredit Usaha Pembibitan Sapi, KUPS) scheme provides guaranteed financing for cattle breeding initiatives, supporting livestock farmers and improving food security. However, adoption rates for KUPS remain low due to administrative bottlenecks and complex application procedures.

c) Kredit Usaha Rakyat

Among Indonesia's most prominent agricultural credit programs is Kredit Usaha Rakyat (KUR), a government-backed initiative launched in 2007, where the GoI has been actively promoting KUR access for women farmers through targeted training and empowerment programs.[106] KUR provides concessionary capital to commercial banks, encouraging them to extend loans to Small and Medium Enterprises (SMEs) and farmers at concessional interest rates. The Ministry of Cooperatives and SMEs subsidize interest rates, while the Ministry of Agriculture (MoA) actively encourages banks to allocate more funding to agriculture.

KUR is distributed through two primary channels: Direct Distribution, where farmers, SMEs, and cooperatives access loans through state-owned banks such as Bank Rakyat Indonesia (BRI), BNI, and Bank Mandiri; and Indirect Distribution, where smallholders obtain financing through microfinance institutions (MFIs), cooperative savings and loan units (KSP and USP), and other linked financial programs.

To further improve access, the Agricultural KUR scheme is supported by the Agricultural Extension and Human Resource Development Agency (Badan Penyuluhan dan Pengembangan Sumber Daya Manusia Pertanian, BPPSDMP), which provides financial literacy training to help farmers optimize credit utilization. The Millennial Farmers with KUR Access (Tani AKUR) initiative further encourage young farmers to use KUR for business development, rather than relying on high-interest informal loans. Despite its success in expanding credit access, KUR faces challenges in implementation, including low penetration in rural areas, reliance on traditional banking institutions, and delays in disbursement.

d) Indonesia Climate Change Trust Fund

The Indonesia Climate Change Trust Fund (ICCTF), managed by Bappenas, was designed to channel international climate finance into national mitigation and adaptation priorities. While it has supported land-based mitigation and energy projects, its contributions to CSA and food security have been minimal. Despite its potential, the ICCTF has struggled with slow disbursement and limited project execution capacity. Initially funded with USD 11 million, it has yet to secure accreditation with the AF or GCF, restricting its ability to attract large-scale international financing for agriculture and food security initiatives.

e) Other Public Finance Initiatives

Women and micro-entrepreneurs in Indonesia can access affordable financing through PT Permodalan Nasional Madani (PNM) primarily via two programs:

Mekaar (Membina Ekonomi Keluarga Sejahtera)

This is a group-based microfinance program designed **exclusively for women**, especially those running ultra-micro businesses with limited or no access to formal banking. Loans are disbursed in small amounts without requiring collateral, and borrowers receive not only credit but also training and mentoring on financial literacy and business skills. By 2025, Mekaar has reached

more than **15 million women across Indonesia**, making it the country's largest women-focused microfinance scheme.[107]

ULaMM (Unit Layanan Modal Mikro)

For women who graduate from ultra-micro to small-scale enterprises, ULaMM provides larger individual loans, up to **IDR 300 million**, with tenors of up to five years. Unlike Mekaar, which is group-based, ULaMM is tailored for entrepreneurs seeking working capital or investment financing. While men also participate, women still make up a substantial share of borrowers.[108]

Capacity Building and Support

Both programs are coupled with Pengembangan Kapasitas Usaha (PKU) or business capacity development, which provides mentoring, sector-specific training (such as food processing, retail, or honey farming), and guidance on product branding and marketing. This training element is crucial for helping women not only access credit but also strengthen business sustainability and competitiveness.[109]

f) Structured Framework – Agricultural Priority Sector Credit/Financing Scheme Model

The Agricultural Priority Sector Credit/Financing Scheme (Kredit/Pembiayaan Sektor Prioritas, KPSP), introduced by OJK in 2021, offers a formal model to scale financing across the agricultural value chain. It facilitates coordination among regulators, banks, cooperatives, insurers, and off-takers. The model includes MoUs among actors; business planning support; credit monitoring via the Information System for Regional Financial Access Acceleration Teams (SiTPAKD); and risk mitigation through crop/livestock insurance and guarantees. However, uptake is still at an early stage.

8.2.2 Private Finance

a) Commercial Bank Lending and Agricultural Loans

Private sector lending to agriculture totaled USD 376 million in 2016, with USD 368 million provided as debt by commercial banks and USD 8 million from private foundations such as the Packard Foundation.[110] Bank Mandiri was the largest lender, allocating USD 249 million to a single bioenergy and crop revitalization project. Despite this, agriculture remains a low-priority sector for banks, with most financing focused on palm oil, bioenergy, and large-scale plantations. According to Bank Indonesia, the sector accounts for only USD 26 billion of the USD 400 billion total loan market, leaving smallholders largely underserved. Around 50 million Indonesians work in agriculture, but many lack access to formal credit. Lending remains concentrated among the top ten banks, with average interest rates for agricultural loans ranging from 12 to 15%.[111]

b) Specialized Banks and Membership-Based Institutions

Over 1,500 rural banks (BPRs) and hundreds of MFIs support smallholders with high-interest, short-term credit. Many operate under informal or semi-formal structures. Farmer groups (Gapoktan) and their upgraded counterparts (LKMAs) serve as microfinance vehicles at the

community level. However, few are legally recognized, and only a minority have transitioned into cooperatives or been registered by OJK.

c) Agricultural Microfinance and Digital Payments

MFIs and rural banks are complemented by fintech platforms such as Crowde. Crowde disburses farm inputs through kiosks, charging variable interest rates. Despite innovations in credit scoring and mobile-based loans, fintech platforms remain financially constrained, facing high default risks and operational costs.

d) Blended Finance and Sustainability Bonds

Blended finance vehicles such as the Tropical Landscapes Financing Facility (TLFF) and AGRI3 Fund are testing new models. TLFF raised USD 215 million for sustainable rubber. AGRI3, a partnership between UN Environment and Rabobank, targets USD 1 billion for sustainable agriculture and deforestation-free supply chains.

8.2.3 International Climate Finance

While international climate finance has traditionally focused on mitigation sectors such as energy and forestry, there is increasing recognition of agriculture's role in building resilience and achieving Indonesia's Enhanced NDC targets. However, funding for agriculture often flows indirectly through broader land-use, water, or rural development programs, creating overlap with other sectors. To maintain clarity, this section focuses on financing instruments and international funds that directly support agriculture and food security, or that can be adapted for these purposes.

a) Concessional Loans: Multilateral climate funds such as CIF and the GCF offer concessional loans for climate-aligned development, but only a fraction of this financing has been directed toward agriculture. Under the CIF's FIP, USD 42 million was allocated to support community-based forest management in Jambi and East Kalimantan.[72] While not strictly agricultural, the landscape-level approach incorporated agroforestry, sustainable land management, and local food systems. These cross-sectoral projects illustrate the potential for future concessional lending to be more explicitly structured around CSA outcomes.

b) Grants: Grant financing remains the most accessible international funding instrument for the agriculture sector, especially for early-stage CSA initiatives, pilot projects, and policy readiness. Indonesia has received USD 7.6 million in GCF Readiness funds, some of which supported the enabling environment for agriculture-related climate planning.[112] Conservation International's upcoming BEAM project, currently under GCF review, seeks approximately USD 75 million in grant funding to support ecosystem-based adaptation in coastal areas, with planned activities including climate-resilient agriculture and water management.[113] Switzerland's SECO also provides grant-based assistance, often through MDBs, to support upstream policy reforms, including those related to sustainable land management and agricultural transition. However, these grants tend to be modest in volume and require close alignment with SECO's strategic focus areas.[13]

c) Blended Finance: Blended finance is currently the most promising model for scaling CSA investments. The AGRI3 Fund, a partnership between UN Environment and Rabobank, is designed to crowd in private capital for sustainable agriculture globally, including Indonesia. [114] The fund blends concessional and commercial finance to support climate-resilient coffee, cocoa and aquaculture value chains, but implementation has been limited. Nonetheless, it provides a strong model for structuring CSA-aligned investment vehicles in Indonesia. The country's earlier experience with the TLFF, though focused on sustainable rubber, demonstrates how sustainability bonds can be structured to leverage public and private finance in land-based sectors. This approach could be extended to agricultural supply chains if supported by stronger policy alignment and project preparation capacity.

(See Annex for detailed summaries of international climate finance sources).

IX. CONCLUSION

Indonesia's ability to achieve its climate and development goals depends on how effectively it can mobilize international climate finance and align it with domestic systems. This guidebook has introduced the major international sources of finance; comparing their modalities, sector priorities and engagement approaches, while also highlighting complementary technical assistance and readiness support that can help move projects from concept to implementation.

These international climate finance sources are also mapped against domestic partners and implementing agencies, illustrating the pathways through which international resources flow into Indonesia. The guidebook also presented the main climate finance instruments, such as various debt instruments, concessional loans, blended finance, among others, explaining how each can be applied in Indonesia's context.

Best practices across sectors are also included to demonstrate how to access international climate finance. In the energy sector, concessional and blended finance have proven effective in reducing project risk and crowding in private capital. In the water sector, PPPs combined with sovereign guarantees enabled subnational utilities to tap MDB-backed finance. In sustainable landscapes, channeling CIF and GEF resources through trusted intermediaries has supported restoration and conservation while strengthening local institutions. In agriculture and food security, smallholder access has been enhanced through group-based lending models and donor-backed pilots that integrate concessional loans with technical assistance. These experiences highlight the importance of risk-sharing, strong domestic intermediaries and alignment with national systems to make international climate finance more accessible and impactful.

To provide a clearer picture, the guidebook reviewed the national goals and financing landscape across key sectors including energy, agriculture and food security, water, and sustainable landscapes. These overviews combine national targets with examples of public, private and international sources of finance, giving readers both context and practical entry points. Finally, it is important to note that the guidebook has also included references to GESI, given major international climate financing mechanisms incorporate GESI as core principles.

Looking ahead, Indonesia's aspiration is not only to access a wider pool of international finance but to also channel these resources into transformative investments that strengthen resilience, accelerate decarbonization and create inclusive growth. By doing so, Indonesia can deliver on the targets set in its enhanced NDC while advancing its broader national development agenda. The country's ability to align financial flows with its national development priorities will determine how effectively it turns commitments into results, while ensuring that climate action delivers lasting benefits for communities, the economy, and the environment.

X. ANNEX

1. Green Climate Fund

The GCF is the world's largest dedicated fund for climate action. As of February 2025, the Fund's overall portfolio comprises 297 projects, with total GCF funding amounting to USD 16.6 billion and a combined total of USD 62.7 billion with co-financing. Investment is mostly via grants (74%), supplemented by loans (16%) and equity (10%). The investment by region is as follows: Africa (38%); Latin America and the Caribbean (32%); Asia Pacific (27%); and Eastern Europe, Central Asia, and the Middle East (3%). Of the total adaptation envelope, 63% will go to Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African countries.

- **Funding of climate action in Indonesia**

GCF finances climate change mitigation and adaptation projects and programs in Indonesia. To date, nine projects have been approved with a total funding commitment of USD 632.1 million. In addition, five readiness support activities have been approved, amounting to USD 7.6 million. These funds have contributed to strengthening institutional capacity, advancing climate change mitigation and adaptation initiatives, and supporting Indonesia's pathway toward low-emission and climate-resilient development.

> ✓ Learn more about GCF-funded projects and programs here: greenclimate.fund/countries/indonesia

- **Empowering countries to directly access GCF**

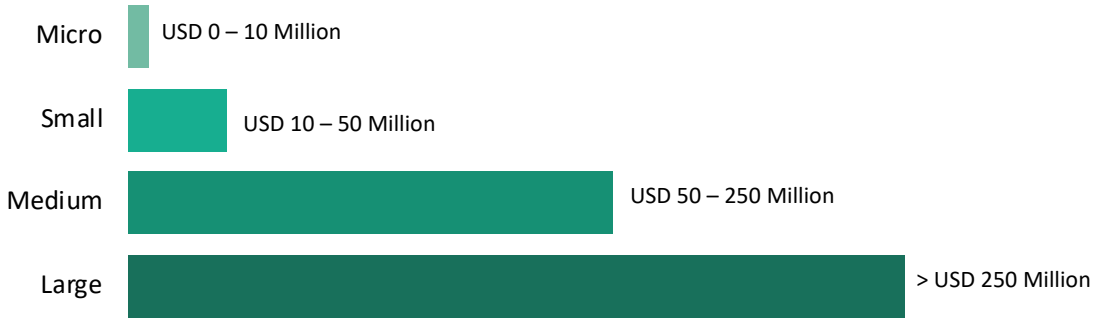
GCF provides countries with direct access to the Fund and supports readiness and preparatory activities to enhance country ownership and access. The Readiness Program provides resources for strengthening institutional capacities of countries, supporting both National Designated Authorities (NDAs) and Direct Access Entities (DAEs).

> ✓ Learn more about Indonesia's Readiness Program here: greenclimate.fund/document/enhancing-indonesias-access-international-climate-finance-and-private-sector-investments

- **What is the typical size of projects financed by the GCF?**

Proposed projects or programs submitted will fall into one of four GCF project size categories.

Figure 3. GCF Funding Categories by Project Size and Investment Amount



- **GCF Funding Mechanisms and Application Processes**

The GCF offers five funding streams, with distinct funding application processes.[115]

Figure 4. GCF Proposal Approval Process

i) Conventional GCF Funding Proposal and Approval Process

Accredited Entities (AEs) access GCF financing through a six-step approval process for conventional funding proposals:

- **Step 1: Proposal Generation.**
- **Step 2: Concept Note Development (Recommended).** AEs can voluntarily develop a concept note to get feedback from the GCF Secretariat. This helps ensure the proposal aligns with the GCF's objectives and mandate before full preparation.
- **Step 3: Joint Submission.** The AE, Executing Entities (EEs), and the NDA jointly develop and submit the full proposal.
- **Step 4: Analysis and Recommendation.** The GCF Secretariat and an independent Technical Advisory Panel analyze the proposal and provide recommendations.
- **Step 5: GCF Board Decision.** The GCF Board makes a decision on the proposal.
- **Step 6: Legal Arrangements.** If approved, legal arrangements are executed between the GCF and the AE.

✓ Learn more about the project and program cycle here: https://www.greenclimate.fund/document/updated-project-and-programme-cycle

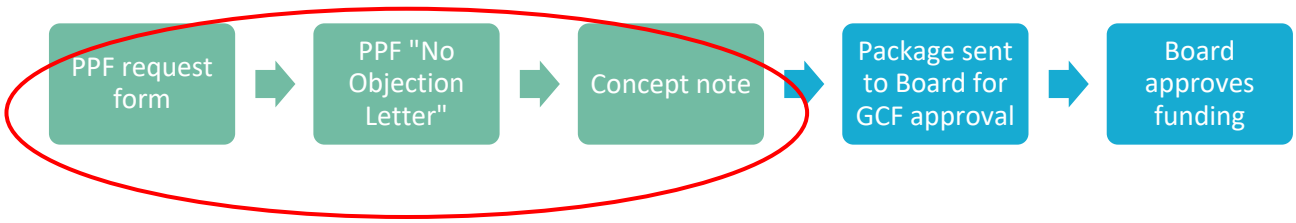
All proposals need approval in the form of a "No-objection Letter" from the NDA.

ii) The Project Preparation Facility

The second funding stream is the Project Preparation Facility (PPF), which is tailored to support project preparations such as feasibility studies, risk assessments, and development of funding proposals. PPFs can grant up to **USD 1.5 million for each project proposal.**

The PPF application is designed to provide technical and financial support to developing countries during the project preparation cycle, facilitating access to climate financing. Funding is intended for all AEs, but especially for DAEs in preparation of micro- or small-size projects. Support is typically provided through grants and reimbursable grants, while equity is also considered for private sector projects. The funding proposal must be submitted to GCF within two years of PPF approval. To complete a PPF submission, the AE must submit three documents:

Figure 5. PPF Application Process



✓ Learn more about the PPF and how to apply for project preparation support: https://www.greenclimate.fund/projects/ppf

iii) The Simplified Approval Process

The third funding stream is a fast-track approval process, also known as the Simplified Approval Process (SAP), which is tailored to **small investment projects requiring funding equal or below USD 10 million.**

The SAP is a pilot financing approach that aims to reduce the volume and complexity of the process and paperwork that is required to submit a funding proposal to the GCF. Over time, the scheme aims to allocate at least 50% of its portfolio to DAEs. A key driver behind the SAP

mechanism is its focus on projects that have no known environmental and social risk factors, or where such risk factors are minimal, well understood, and are clearly addressable.

The SAP has three project eligibility requirements, which are:

1. The project/program is ready for scaling up and has the potential for promoting a paradigm shift to low-emission and climate-resilient development;
2. The project requires GCF financing of up to USD 10 million of the total project cost;
3. The environmental and social risks and impacts are classified as minimal to none.

- ✓ Learn more about the SAP here: https://www.greenclimate.fund/projects/sap
- ✓ Learn more about SAP proposals here: https://www.greenclimate.fund/document/simplified-approval-process-funding-proposal

iv) GCF Requests for Proposals

The fourth funding stream involves GCF Requests for Proposals (RFP). **These are specific calls issued by the GCF to which AEs and EEs can apply to implement projects.**

In addition to making requests directly to the GCF via an NDA, it is also possible for AEs to respond to RFPs released by the GCF. To date, the GCF has three separate RFP funding streams:

1. REDD+ Results-Based Payments Pilot Program (REDD+)
2. Enhancing Direct Access (EDA)
3. Micro- Small-, and Medium-Sized Enterprises Pilot Program (MSME pilot program)
4. Mobilizing Funding at Scale Pilot Program (MFS)

The RFPs are constantly evolving and can provide alternative opportunities for institutions and AEs to access GCF financing. Keeping abreast of these RFPs is also an important role for NDAs.

- ✓ Learn more about REDD+ here: greenclimate.fund/redd
- ✓ Learn more about EDA here: greenclimate.fund/eda
- ✓ Learn more about MSME pilot program here: greenclimate.fund/msme
- ✓ Learn more about MFS here: greenclimate.fund/500m
- ✓ Learn more about RFPs here: https://www.greenclimate.fund/projects/rfp

v) The Private Sector Facility

Finally, there is the Private Sector Facility (PSF), which is **tailored to private sector entities**.

The PSF is a GCF initiative that aims to encourage institutional investors, such as banks, pension companies and insurance companies, to co-invest alongside the GCF. Furthermore, GCF works with local MSMEs in developing countries to unlock innovative solutions for tackling climate change. The PSF uses a flexible range of financial instruments, including debt, equity, and guarantees.

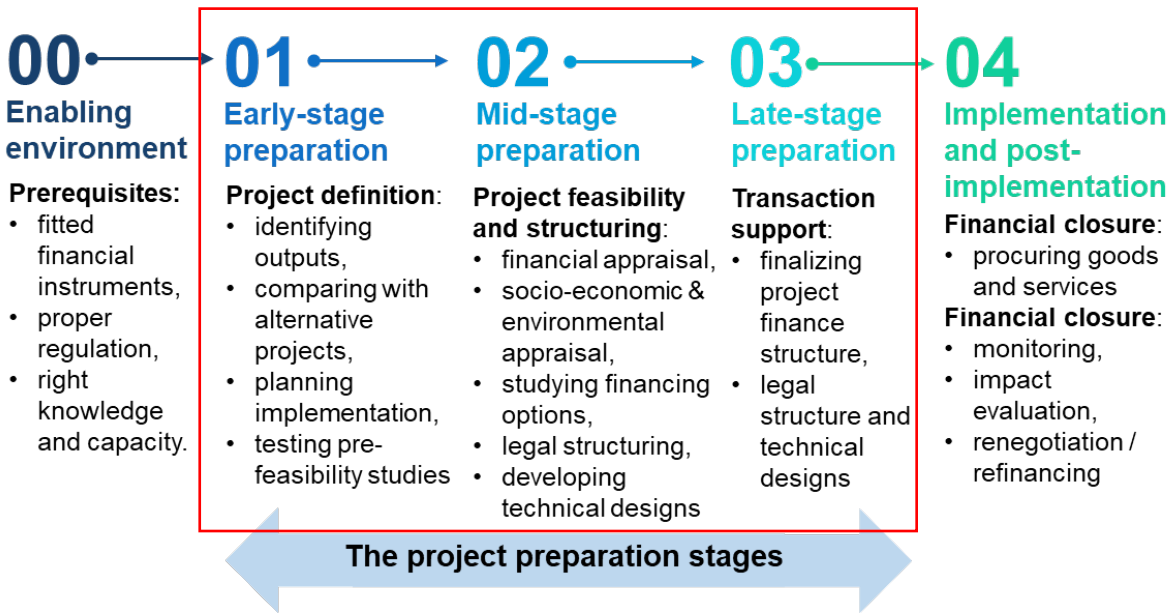
To qualify for this financing stream, the entity must have three years of operational history and can either apply to become an AE or partner with an existing AE in the country. The PSF applicant must also demonstrate that they meet the six project investment criteria outlined by the GCF.

- ✓ Learn more about PSF here: greenclimate.fund/sites/default/files/document/green-climate-fund-s-private-sector-facility_0.pdf
- ✓ Access PSF proposals here: https://www.greenclimate.fund/document/gcf-request-proposals-private-sector-facility

- **Project Appraisal to Determine Bankability of Climate Projects**

The information presented in this section serves as high-level guidance to green project developers, in particular SMEs, concerning the steps involved in improving the bankability of their projects.

Figure 6. Project Preparation Cycle



The project preparation stage is crucial for developing a bankable proposal and is highly important for the project's future success because:

- **Risk Mitigation:** Sufficient technical and financial support provided at this stage helps to avoid many future risks and difficulties.
- **Documentation and Data Support:** A successful preparation stage enables SMEs to provide necessary financial, strategic, and accounting documentation and data at future stages.

Project preparation costs vary depending on the total project cost, but many studies estimate they typically range between 2% to 10% of the total project cost.

- **Project definition**

Project definition concerns **the early-stage preparation** of the project. It covers the key topics that are required for preparing a successful project. This mainly includes defining (i) project rationale and (ii) the pre-feasibility study.

- **Project summary**

The project summary document should clearly and concisely lay out the overall funding proposal. It can be prepared in-house by the project developer and should ideally not be more than five pages. An example of a project summary template highlighting the various assessments to be included is provided in the figure below:

Figure 7. Project Summary Template

Project Summary Template	
Project Presentation:	
SME Name:	**Legal Status:**
Employees:	**Turnover:**
Economic Sector:	**Activity:**
Budget of the Project:	**Implementation Date:**

1. Project Rationale: Answer the questions of WHO, WHAT, WHY and HOW? - Explanation of the current situation and the need/opportunity for the project - Objectives of the project - Explanation of the required technology - Benefits of the project
2. Financial Overview: - Investment costs - Costs estimation - Revenues estimation
3. Brief on Current Regulation: - Present regulation and legislation impacting SMEs and environmental projects
4. Risk Analysis and Assessment: - Identify major risks linked to the project (e.g., risk assessment, demand, cash collection, operating costs, planning approvals, competition) - Present risk mitigation solutions
5. Non-financial Assessment: - Estimated environmental impact - Estimated social impact

Economic Summary	
Total project cost estimate (USD)	
Operation and maintenance costs (USD)	

- **Pre-feasibility Study**

The objective of the pre-feasibility study during the early project preparation stage is to identify the best possible approach for building a business case. It can be carried out in-house by the project developer, but preferably by external consultants for transparency, technical expertise, and credibility. A typical pre-feasibility study for SME projects requires around one to two months to complete, once all the required data has been collected.

An example of a typical pre-feasibility study structure and content is provided below:

1. Executive Summary This section provides a high-level overview of the entire study, covering:
- Explanation of the problem and how it was identified.

- Concise summary of the analysis conducted.
- Key issues or findings highlighted during the study.
- Recommendations derived from the study.

2. Overview

This section establishes the context for the study and includes:

- **Aim of the Document:** Clarifies the purpose, often focused on different projects an SME could implement to improve its capacities and growth.
- **Project Introduction:** Details who initiated the study, who executed it, the methodology used, and the estimated costs of project implementation.
- **Terms and Abbreviations:** A glossary of any specialized terms or acronyms used throughout the study.
- **References:** Citations for market information, dates, related feasibility studies, technology reports, and any other relevant sources.

3. Background

This section explains the foundational aspects of the project:

- **Primary Focus:** A clear explanation of the project's main objective and the key issues it will address.
- **Project Approach:** A brief description of how the project is planned and to be conducted.
- **Prerequisites and Outcomes:** A list of conditions necessary for the project, the main reasons for undertaking the project, and its desired results.

4. Objectives and Outcomes

This section details the expected benefits:

- A comprehensive presentation and explanation of the planned benefits of the solution, including identification of its beneficiaries.

5. Scope

This section defines the boundaries of the study:

- **Included Scope:** A detailed description of what aspects are included in the study's scope.
- **Excluded Scope:** A clear outline of what aspects fall outside the study's scope.
- **Problems Faced:** Any challenges encountered during the study.
- **Assumptions Made:** Any assumptions that were necessary for the study.

6. Options

This section evaluates all viable options for the project. For each option, the study should present:

- **Technical Feasibility:** An assessment of how difficult it is to implement, considering whether internal resources have the necessary knowledge and technology.

- **Advantages and Benefits:** The positive aspects of the project and expected benefits.

- **Disadvantages:** Any anticipated disadvantages or problems.

Options Comparison
This section compares the options to the project's objectives.

Project Objectives	Do Nothing	Option 1	Option 2
OBJECTIVE 1	Does not meet criteria	Partially meets criteria	fully meets criteria
OBJECTIVE 2	Partially meets criteria	Does not meet criteria	fully meets criteria
Recommended Option Based on the comparison, the recommended option is presented here.			

7. Project Costs
This section details all project expenses, including:

- Licensing; land; building; construction; equipment; technology; labor working capital; interest during construction; and other operating costs. Where known, indicate who is funding each cost.

8. Project Organization
This section outlines the project's structure and timeline:

- **Key Stakeholders:** List key stakeholders and their responsibilities in implementation (e.g., the project developer, technical partners, technology providers, raw materials/ feedstock suppliers).
- **Implementation Timeframe:** Provide the project's overall timeframe, including the construction period.

9. Risks and Mitigation Measures
This section provides a detailed analysis of all risks associated with the project and the corresponding mitigation measures. This includes, but is not limited to:

- Market risk; technology risk; macro/political risk (if applicable); construction risk; feedstock supply volume risk (if applicable; management risk.

- **Project Financing Process Across Project Preparation Cycle**

The financial sources checklist applies to **the mid-stage of the project preparation cycle** and briefly covers the steps typically occurring between initial identification of sources of finance to finalizing a financial package. There are four main types of financial instruments:

- **Grants:** Grants offer non-repayable financial support. This can include direct funding, tax incentives, and technical assistance given by one entity to another. They are mainly provided by government agencies and international and national financial institutions.
- **Debt:** Debt refers to borrowed money that must be repaid. This includes debt instruments such as commercial loans, concessional loans and subordinated loans. Both public and private banks are common providers of debt financing.
- **Equity:** Equity represents ownership in a project or asset, often with associated debts or liabilities. Examples of equity instruments include direct equity, preferred stock, redeemable shares, and mezzanine financing. Investors such as private equity firms, venture capitalists, and impact investment funds are key holders of equity.
- **Guarantees:** Guarantees are contractual promises where a guarantor (investor) assumes responsibility for another entity's debt if that entity fails to meet its payment obligations. Examples include partial guarantees for SME loan collateral, currency risk coverage, and political risk insurances. Banks and insurance companies are the primary providers of guarantees.

Figure 8 below maps various financial instruments and their corresponding key financial actors across the different stages of the project preparation cycle.

Figure 8. Mapping of Financial Instruments

Mapping of Financial Instruments

National Government · Banks and Private Equity & Venture Capital funds · Owner, family & friends · International financial institutions · Impact investments

Instruments Stages	1 - Early Stage Preparation	2 - Mid-Stage Preparation	3 - Late-Stage Preparation & Implementation
Grants (For technical & financial assistance)			
Owner's equity / family & friends' funds			
Tax instruments			
Guarantees & insurance			
Local currency bank loans			
Concessional credit lines supported by public sector			
Private equity investment through PE funds			

It is important to note the considerations below when choosing the appropriate financial instruments:

- **Grants are crucial early on.** They provide a **catalytic impact**, helping attract other types of financing in later stages.
- **Accessing loans can be difficult in the early stages.** However, concessional debt financing from International Financing Institutions (IFIs) and development banks might be easier to access, especially as the project moves towards its mid-stages.
- **Equity is a higher risk instrument,** which means it is more difficult to secure for early-stage projects. It is more common in later stages when the project is more developed.
- **Guarantees improve a project's investment risk return profile,** making it more attractive to other investors. IFIs and development banks often provide guarantees.

In addition to traditional financing instruments, several innovative business models have emerged to support SMEs. These often address common challenges faced by smaller businesses, such as limited collateral or inconsistent revenue:

- **Leasing:** A form of debt where the asset being financed, such as equipment, serves as its own collateral. This is particularly helpful for SMEs that lack significant collateral, stable revenue streams, or credit history. However, leasing is limited to moveable assets and requires insurance, which adds to the overall costs.
- **Diversification of funding sources:** This strategy involves securing multiple loans from various lenders. It gives credibility to the project, strengthens an SME's negotiating power, and can lead to better loan terms.
- **Impact investing:** Focuses on investment intended to generate positive environmental or social impact alongside financial returns. It is a growing sector with increasing investors interest in sustainable and socially responsible projects, especially in developing countries. However, while beneficial, these investments are primarily directed at projects in their growth or mature stages, and can incur higher short-term costs due to rigorous extra-financial reporting requirements.
- **Revolving credit:** A flexible line of credit that SMEs can draw on depending on their cash flow needs. It allows SMEs to maintain a single loan facility, ensuring funds are available when needed, making it ideal for companies with irregular revenues. However, accessing revolving credit often requires high-quality accounting documentation from the SME and can be more costly due to interest expenses and commitment fees.
- **Factoring:** This involves a financial intermediary purchasing a company's accounts receivable (money owed by customers) for a commission. This provides SMEs with immediate cash, eliminating delays from waiting on customer payments. However, it can be costly, involves intensive paperwork, and is usually limited to solving short-term cash-flow issues, making it inefficient for purchasing larger assets such as equipment.

Gender Action in Practice

The GCF has been at the forefront of mainstreaming gender equality in climate finance. Its Gender Policy, first adopted in 2015 and updated in 2019, ensures that gender and social inclusion are systematically integrated across project design, implementation, and monitoring.

How the policy works in practice:

When Accredited Entities (AEs) submit funding proposals to GCF, they are required to include gender documentation during the project planning and preparation stages. This includes:

- An initial gender and social assessment, which provides a snapshot of the gender equality situation in the project area, identifies key gender issues, and outlines opportunities to bring about positive change for both women and men.
- A gender and social inclusion action plan, which details the gender-responsive activities the project will undertake. The plan must include performance indicators, sex-disaggregated targets, timelines, responsibility lines, and budget allocations for each activity.

This requirement to submit a gender and social inclusion action plan is a unique feature of the GCF's funding proposal process. Going forward, both the initial assessment and the action plan are intended to become obligatory for all funding submissions.

Practical tool:

To support AEs, the GCF provides a Gender Assessment and Action Plan (GAP) template, which includes guiding questions and a structured format for integrating gender equality into projects. The template covers impact, outcome, and output statements, gender-responsive activities, indicators and targets, timelines, responsibilities, and budgets.

- ✓ Access the GAP template here: https://www.greenclimate.fund/document/gender-assessment-and-action-plan-annex-8-funding-proposals.

2. Climate Investment Funds

The CIFs have provided Indonesia with a powerful platform to access international climate finance. With USD 550 million in approved funding and over USD 5.37 billion in expected co-financing, CIF exemplifies how government ministries and agencies can operationalize country priorities through structured investment plans and partnerships with MDBs.

The CTF is one of the two multi-donor trust funds within the wider CIF. The CTF was established in 2008 to provide emerging economies with scaled-up financing for the demonstration, deployment, and transfer of low-carbon technologies with a significant potential for long-term greenhouse gas (GHG) emissions savings.

Indonesia has developed three formal investment plans under the CIF, demonstrating strong national ownership and alignment with sectoral climate priorities:

1. CTF Investment Plan for Indonesia
2. FIP Investment Plan for Indonesia
3. CTF-ACT Indonesia Country Investment Plan

Below are some of the examples of government access to CIF in Indonesia, and how similar engagement mechanisms can be leveraged for future proposals.

1. CTF Investment Plan for Indonesia

Under the CTF Investment Plan, Indonesia's Ministry of Energy and Mineral Resources co-developed the USD474 million investment plan targeting geothermal development. This included five flagship geothermal projects, supported by MDBs such as the ADB and the World Bank, with CTF providing concessional finance and risk capital.

- **How can the Government access CIF?**

The Ministry submitted an Expression of Interest (EOI) and co-developed an investment plan with CIF in coordination with ADB and WB, as part of the CTF programming cycle.

- **What are some project examples?**

1. The Sarulla Geothermal Project:[116] Co-financed by the CTF and ADB, this project mobilized private investment through risk mitigation strategies with government participation.
2. Geo Dipa geothermal expansion (Java): [117] This expansion was supported by a USD 300 million ADB sovereign loan and a USD 35 million CTF concessional loan, along with technical assistance aimed at strengthening Geo Dipa's Environmental, Social, and Governance (ESG) policies and reporting.

2. Forest Investment Program for Indonesia

Indonesia's Forest Investment Program (FIP)[118] involved a USD 42 million plan to strengthen forest governance and community-based forest management, which enhanced institutional capacity, supported indigenous and local communities, and improved land-use integration across sectors.

- **How can the Government access CIF?**

Ministries such as the Ministry of Environment and Forestry (KLHK) can coordinate with CIF's MDB partners (e.g., World Bank) to integrate sustainable land-use policies into project proposals submitted to the CIF Trust Fund Committee.

- **What is a project example?**

Community-Focused Investments to address Deforestation and Forest Degradation (CFI-ADD) in Jambi and East Kalimantan,[119] jointly implemented with the KLHK and the World Bank.

3. CTF-ACT Indonesia Country Investment Plan

Through the CIF-Technical Assistance Facility, approximately USD 270,000 was programmed for technical assistance activities in 2021. The programs covered an array of activities to support climate adaptation and mitigation, through climate-resilient capacity-building for smallholder farmers. In 2021, Indonesia was chosen as one of the first four pilot countries for the ACT program and can receive up to USD 500 million in financing for program implementation.

- **How can the Government access CIF?**

Government agencies can propose technical assistance programs through MDBs under CIF readiness and resilience initiatives. Ministries involved in energy policy and state-owned enterprises can also develop country investment plans with CIF and MDB support.

- **What is a project example?**

These technical assistance programs often originate from country dialogues facilitated by CIF/MDBs in coordination with ministries. The World Bank's program Scaling-Up Green and Sustainable Finance for Indonesia's Energy Sector[120] received USD 0.37 million in grant funding.

Table 6. Steps for Government Ministries to Access CIF Funding

Step	Action	Responsible Actors
1.	Identify national priorities aligned with CIF thematic areas	Line ministries, Bappenas, NDA
2.	Engage MDB partners (WB, ADB) to draft concept notes or investment plans	Ministries, MDB focal points
3.	Submit investment plan or Expression of Interest to CIF Trust Fund Committee	Ministries, MDBs
4.	Develop detailed proposals with co-financing arrangements	Ministries, MDBs, co-financiers
5.	Implement and monitor projects with CIF and MDB oversight	Implementing agencies, local governments

- ✓ Learn more about CIFs here: cif.org

3. Norfund & the Norwegian Climate Investment Fund in Indonesia

The Norwegian Climate Investment Fund, managed by Norfund, is emerging as a key player in Indonesia's clean energy transition. As part of Norway's contribution to the JETP, Norfund has committed up to USD 250 million for investments that help reduce coal dependency and accelerate renewable energy deployment in Indonesia.

Unlike multilateral funds, Norfund operates as a development finance institution that provides equity and market-based capital to private sector-led clean energy solutions. While it does not directly finance government projects, public agencies can still play a critical enabling and convening role, especially when projects align with national policy priorities (Investment Process and partner requirements).

Case Study: Norfund's Investment in Xurya – Expanding Rooftop Solar for Indonesia's Commercial and Industrial Sector

As part of Norway's Climate Investment Fund, Norfund has made its first direct equity investment in Indonesia through Xurya, a leading local provider of rooftop solar solutions for the commercial and industrial (C&I) sector. This investment highlights how international climate finance can be mobilized through equity instruments to accelerate private sector participation in Indonesia's clean energy transition.

- Initial Norfund investment: USD 25 million in equity
- Total 2024 funding round: USD 55 million (co-investors include BII, Swedfund, SEACEF II, AC Ventures)
- Primary model: Rooftop solar rental for businesses (factories, malls, warehouses, etc.)
- Technological edge: Uses Internet of Things (IoT) and machine learning to manage solar operations remotely
- Footprint: Over 170 rooftop projects installed across Indonesia
- Impact: Estimated emissions avoided – 370,000 to 500,000 tons CO_2e per year

Sectoral Focus and Analysis

1. Energy – Rooftop Solar and Decentralized Grids

Norfund's headline investment in Xurya, an Indonesian rooftop solar provider, addresses the commercial and industrial segment, which is one of the fastest-growing markets for renewable energy in Indonesia. The rent-to-own model allows firms to bypass high upfront costs, accelerating adoption. This is especially relevant in cities with high electricity tariffs and industrial estates seeking ESG-aligned energy use.

- Ministries such as the MEMR (ESDM) and the SOE Ministry can collaborate with Norfund by facilitating regulatory approvals, streamlining rooftop solar licensing, and expanding incentives under Perpres 112/2022.
- Municipal or provincial governments can work with Xurya or Norfund-backed platforms to integrate rooftop solar in public buildings or economic zones.

2. Island Electrification – Solar + Battery Mini-Grids

In partnership with EMITS, Norfund is also exploring solar-battery solutions for remote islands. Given Indonesia's geography, decentralized clean energy is crucial for energy access and emissions reduction. Over 4,000 diesel-powered mini-grids offer a strong retrofit opportunity.

- The Directorate General of New and Renewable Energy (EBTKE) and PLN can incorporate Norfund-backed solutions into the RUEN and RUPTL targets for island electrification.
- Local governments (Pemda) in provinces such as NTT, Maluku, and Papua can submit feasibility studies for hybrid solar-battery systems as part of their regional energy planning.
- Ministries could also direct JETP Secretariat resources toward pipeline development for this segment.

3. Hydropower – Small-Scale, Decentralized Projects

Norfund and Tinfos, a Norwegian hydropower company, aim to develop 1 TWh of small-scale hydropower by 2032. Tinfos has experience in Indonesia since 2007, making this a credible long-term venture.

- Ministry of Public Works (PUPR) and local governments can identify river basin authorities (BBWS/BWS) to support micro-hydro development in rural irrigation systems.
- MoEF and local conservation agencies can support site access for hydro in protected areas by ensuring alignment with ecosystem safeguards.
- MEMR can include these projects in renewable energy auction pipelines or issue Requests for Proposals (RFPs) aligned with Norfund's investment criteria.

Unlike multilateral funds, Norfund operates as a commercial equity investor, but with a strong public mandate. Ministries cannot access it as grantees, but they can access the following strategies and proposed actions:

Table 7. Steps for Government Ministries to Access Norfund Funding

Access Strategy	Action	Relevant Stakeholders
Policy Enablers	Streamline licensing, net metering, and rooftop PV incentives	MEMR, BKPM, local governments
Project Facilitation	Identify viable government-linked C&I sites, rural mini-grid zones	EBTKE, PLN, regional energy offices
Public-Private Pipeline Building	Incorporate Norfund and partners into JETP Investment Planning or Regional Energy General Plan (RUED) consultations	JETP Secretariat, Bappenas, Coordinating Ministry for Maritime Affairs
Co-financing Opportunities	Pair Norfund equity with concessional loans from PT SMI, Indonesia Environment Fund, or MDBs	MoF, PT SMI, MoEF

- ✓ Learn more about Norfund here: norfund.no
- ✓ Learn more about Norfund's investment process here: https://www.norfund.no/investment-process/
- ✓ Learn more about Norfund's partner requirements here: https://www.norfund.no/partner-with-us/

4. Climate Fund Managers

Climate Fund Managers (CFM), through its Climate Investor One (CI1) platform, plays a catalytic role in Indonesia's renewable energy transition. As a multi-country facility blending development funding with equity investments, CFM

addresses early-stage financing barriers that typically hinder independent power producers (IPPs) and commercial and industrial (C&I) solar developers.

While CFM operates across Asia and other emerging markets, Indonesia is a priority country under its CI1 investment scope. The fund's blended approach, combining concessional development funding and commercial equity, supports the Government of Indonesia's goals to diversify energy sources and attract private capital into renewables.

Case Study: CFM's CI1 Investment in Indonesia[121]

Through a 2021 investment round, CFM committed a total of USD 46 million (USD 4M in development funding and USD 42M in equity) to finance C&I solar PV projects in Vietnam and Indonesia, with support from its development partner Green Roof.

Expected impact in Indonesia and Vietnam (combined estimates):

- 110 MW of new installed renewable energy capacity
- 175 GWh/year of clean electricity generation
- 81,180 tCO_2eq/year in emissions avoided
- 457 construction jobs created and over 146,000 people reached

The C&I solar business model is highly relevant in Indonesia's context, where factories, malls, and commercial complexes increasingly seek rooftop solar to reduce energy bills and emissions, especially given regulatory progress under Perpres 112/2022 and the broader JETP push for distributed generation.

Note on Water Sector Investments in Indonesia

While CFM has a clear global mandate for water and ocean-related investments under its Climate Investor Two (CI2) facility, the available data indicates that CFM's active investments in Indonesia are currently focused on the energy sector under Climate Investor One (CI1). This includes direct equity financing for commercial and industrial solar projects.

As such:

- No active CI2 projects have been publicly reported in Indonesia at the time of writing.
- The USD 15 million disbursed in Indonesia relates to renewable energy, not water or sanitation.

However, government agencies working in the water and sanitation sectors (e.g., Ministry of Public Works and Housing, subnational water boards) may still engage with CFM to:

- Explore eligibility for future CI2 funding opportunities,
- Co-develop project pipelines for adaptation/resilience in coastal or urban water systems,

- Align upcoming investments with CFM's blended finance approach, especially through co-financing with MDBs or public investment windows such as BPDLH

✓ Learn more about Climate Fund Managers here:
climatefundmanagers.com

5. Switzerland's State Secretariat for Economic Affairs (SECO)

SECO Switzerland's State Secretariat for Economic Affairs (SECO) identifies Indonesia as a priority country in its economic cooperation and development strategy. As Southeast Asia's largest economy and a G20 member, Indonesia holds strategic importance in SECO's global programming, which aims to advance sustainable, resilient, and inclusive economic transformation. Under the Cooperation Program 2025–2028, SECO will align its efforts with Indonesia's national development agenda, including the Golden Vision 2045 and the RPJMN 2025–2029, to address both structural economic reforms and environmental sustainability.

Positioning for Climate-Aligned Development

While SECO is not a climate fund in the traditional sense, its work often intersects with green economy objectives, including:

- Strengthening regulatory frameworks for green finance and ESG integration,
- Financing technical assistance programs through MDB trust funds that support clean energy and sustainable land use,
- Supporting municipal resilience and infrastructure finance aligned with climate adaptation priorities.

SECO's role as a grant provider and policy influencer makes it a valuable partner for Indonesian ministries seeking upstream reforms and technical input to design bankable, climate-aligned programs.

Learn more about SECO here:
seco-cooperation.admin.ch/en

6. Climate Finance Instruments by Sector

Table 8 demonstrates a snapshot of climate finance instruments available across the four key sectors.

Table 8. A Snapshot of Climate Finance Instruments by Sector

Energy		
Source	**Instrument Type**	**How to Access**
Public	Budget Allocations to ministries/SOEs (MEMR, NPPA)	Submit technical and climate-aligned proposals to MEMR/NPPA through open calls or procurement; evaluated on sector and climate criteria[122]
	Government Guarantees (IIGF under RUPTL)	Apply to IIGF for projects listed in PLN's RUPTL; approval requires PLN, MoF, and IIGF screening[123]
	PT SMI (SIO Window) – Blended finance facility	Respond to open calls via SDG Indonesia One platform; partner with MDBs/DFIs; projects undergo thorough financial and environmental screening[124]
Private	Debt & Equity from banks/institutional investors	Secure financing through IPP tenders, PPPs, or direct negotiations; bankability depends on obtaining robust offtake agreements and fulfilling due diligence[125]
	Export Credit Agencies (e.g., JBIC, K-Sure, China Exim)	Coordinate with project sponsors; ECA support typically tied to equipment/tech procurement and structured by sponsor agreement[28,29]
	Guarantees & Credit Enhancements (PT SMI, WB, GIZ, AFD)	Apply through facilities/programs; approval based on project preparation, risk assessment and alignment with green finance standards[125]
	Independent Power Producers (IPPs)	Secure project finance after negotiating PPAs with PLN or credible private offtakers; bankability depends on confirmed PPAs[126]
Water		
Source	**Instrument Type**	**How to Access**

Public	State Budget (APBN) & Special Allocation Fund (DAK)	Submit climate- and technical-justified proposals to Bappenas and sector ministries; selection prioritizes development and climate alignment[127]
	Indonesia Environmental Fund (BPDLH/IEF), climate/environmental grants (REDD+, BioCarbon Fund, Forest Carbon Partnership Facility)	Apply via BPDLH funding windows, often requiring partnership with approved intermediaries; proposals reviewed for environmental impact and compliance[127]
Private	Public-Private Partnerships (PPPs)	Compete in PUPR/local government tenders for water, sanitation, or flood projects; PPPs may seek IIGF guarantees for bankability[127]
	Green Bonds & Sukuk	Issue bonds in line with OJK's Green Bond/Sukuk Framework and taxonomy; proceeds restricted to verified environmental projects, subject to third-party review[128]
Sustainable Landscapes		
Source	**Instrument Type**	**How to Access**
Public	Ecological fiscal transfers (DAU, DBH, DID, Dana Desa, TAPE, TAKE)	Receive automatic transfers based on ecological indicator performance; for additional funds, apply through Bappenas/local finance office using validated criteria[129]
	Sovereign Green Sukuk (reforestation, peatland and conservation)	Align with MoF/PT SMI green sector criteria; submit project info for inclusion in sovereign sukuk programs, with documentation of climate/environmental impacts[130]
Private	Corporate or Sustainability-Linked Bonds	Structure issuance to comply with OJK sustainability standards, third-party ESG verification and reporting[125]
	Carbon Markets & Payments for Ecosystem Services (REDD+, PES, etc.)	Register with Verra/Plan Vivo; work with BPDLH-vetted intermediaries (e.g., LEMTARA); payments awarded on results-based verification and compliance[131]
Agriculture		
Source	**Instrument Type**	**How to Access**
Public	Budget Allocations & Subsidies, for irrigation, fertilizer, R&D and extension services	Access via MoA/MoF with allocations distributed through local agricultural offices and aligned with national development priorities

	Government Loan Schemes (KKPE, KPEN-RP, KUPS), low-interest loans for food, plantation and livestock	Apply with partner banks (BRI, BNI); technical assistance and literacy via BPPSDMP; eligibility depends on sector/scheme criteria[132]
	Kredit Usaha Rakyat (KUR), concessional loans for SMEs and farmers	Apply at state banks, cooperatives, MFIs; promoted by regional agri offices, Tani Akur; streamlined process with controlled interest rates[133]
	PNM Microfinance (Mekaar, ULAMM), group-based loans for underserved farmers, especially women	Women/farmer groups apply through group mechanisms, showing ID/training/income docs; managed on-site by PNM field officers[134]
	Agricultural Priority Sector Financing (KPSP), targeted credit with risk-sharing via OJK	Group proposals coordinated through OJK/TPAKD, requiring group eligibility and compliance with official credit models[127]
Private	Commercial Bank Lending, for large-scale plantations and agribusiness	Apply directly with required collateral and formal docs; available for plantations/agribusiness at market rates[125]
	Rural Banks, MFIs & Cooperatives, short-term community-level loans	Get short-term local loans via OJK-certified or village lenders; some lenders are informal but consumer protection applies for registered banks[135]
	Agri-Fintech Platforms and mobile-based input financing	Apply via smartphone app or kiosk; rapid access with higher interest/default risk—best practice to use OJK-registered platforms[136]

Note: The examples in Table 8 are illustrative rather than exhaustive, and do not imply any form of endorsement or approval.

ENDNOTES

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