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Background Paper

Assessing Opportunities to Accelerate German-Indonesia Energy Transition Finance

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List of Abbreviations

AA	German Federal Foreign Office
ADB	Asian Development Bank
APBN	Anggaran Pendapatan dan Belanja Negara Indonesia (the Indonesian Budget)
BAPPENAS	Indonesian Ministry of National Development Planning
BKPM	Indonesian Ministry of Investment
BMU	German Federal Ministry for Environment, Nature Conservation and Nuclear Safety
BMUV	German Federal Ministry for Environment, Nature Conservation and Nuclear Safety and Consumer Protection
BMWi	German Federal Ministry for Economic Affairs and Energy
BMWK	German Federal Ministry for Economic Affairs and Climate Action
BMZ	German Federal Ministry for Economic Cooperation and Development
BPDLH	Indonesian Environment Fund
CCS/CCUS	Carbon Capture Storage or Carbon Utilisation and Storage
CFPP	Coal-fired power plant
CIF	Climate Investment Funds
CO_2	Carbon dioxide
COP	Conference of the Parties
DEG	German Investment Corporation
DKTI	German Climate Technology Initiative
DRM	Domestic resource mobilisation for sustainable development
EKF	Energy and Climate Fund
ELREN	Electrification through Renewable Resources
EnDev	Energising Development
ETM	Energy Transition Mechanism
ETMCP	Indonesia Energy Transition Mechanism Country Platform
ETMCP CRF	Indonesia Energy Transition Mechanism Country Platform Carbon Reduction Fund
EU	European Union
EUR	Euro
ExploRE	Strategic Exploration of Economic Mitigation Potentials through Renewables
FDP	Free Democratic Party
G7	Group of Seven
G20	Group of Twenty
GCF	Green Climate Fund
GEF	Global Environment Facility
GFANZ	Glasgow Financial Alliance for Net Zero
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoI	Government of Indonesia
GW	Gigawatt

ICCTF	Indonesia Climate Change Trust Fund
IKI	International Climate Initiative
INFIS	Indonesian Nationally Appropriate Mitigation Actions Financing Support
IPG	International Partners Group
IRENA	International Renewable Energy Agency
ISED	Innovation and Investment for Inclusive Sustainable Economic Development
JETP	Just Energy Transition Partnership
KTF	Climate and Transformation Fund
LCORE	Promotion of Least Cost Renewables in Indonesia
LNG	Liquefied natural gas
LTS-LCCR	Long-Term Strategy for Low Carbon and Climate Resilience
MDBs	Multilateral Development Banks
MEMR	Ministry of Energy and Mineral Resources
MoEF	Ministry of Environment and Forestry
MoF	Indonesian Ministry of Finance
NAMAs	Nationally Appropriate Mitigation Actions
NDC	Nationally determined contribution
NZE	Net-zero emissions
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OECD DAC	Organisation for Economic Co-operation and Development/Development Assistance Committee
OJK	Indonesian Financial Services Authority
RE	Renewable energy
PPA	Power purchase agreement
PPP	Public–private partnership
PT PLN	Indonesian State Electricity Company
PV	Photovoltaics
REEP	Renewable Energy for Electrification Programme
RUPTL	Electricity Business Plan
SDGs	Sustainable Development Goals
SETI	Sustainable Energy Transition in Indonesia
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar

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Aerial view of of central business district of Jakarta, Indonesia.

Executive Summary

This paper aims to shed light on the climate financing landscape in both Germany and Indonesia, with a primary focus on climate mitigation, particularly in the energy sector. With regard to Germany, this paper provides an overview of Germany's climate financing flows, structure, and international climate finance trends. Moreover, it also takes into account the recent political discourse in Germany as well as the geopolitical conditions that followed Russia's invasion of Ukraine, and the ensuing energy crisis in Europe. With regard to Indonesia, this paper provides an outlook on Indonesia's climate mitigation targets and achievements, recent trends with regard to energy transition financing in the country, and potential avenues for further provision of international climate finance to support its energy transition. By assessing climate financing trends in both countries, as well as recent developments and past precedents on energy cooperation between Germany and Indonesia, this briefing identifies key aspects of Indonesia's energy transition that are in line with Germany's priorities and highlights further entry points and opportunities to support the energy transition in Indonesia.

Background

Russia's war on Ukraine and the ensuing energy crisis has placed Europe in a tough spot in terms of maintaining balance between energy security, affordability, and sustainability. Across Europe, governments are under increasing pressure to protect households and businesses from high heating and power prices caused by the region's ongoing gas crisis (Appunn, 2022a; 2022b), during which European natural gas prices and Asian spot prices for liquefied natural gas (LNG) spiked to record highs in the third quarter of 2022.[1] Some European Union (EU) member countries have also turned back to fossil fuels as a temporary measure to ensure energy security.[2] Given this, at a time when the EU is also focusing on phasing out fossil fuels to achieve climate neutrality by mid-century, the energy crisis has sparked renewed debate on dependence on fossil fuels and the effect of the energy transition on this dependence.

The EU has emphasised its strong interest in promoting renewable energy (RE) and energy efficiency in partner countries, aligning with its commitment to lead and speed up the global green transition and mitigate energy security risks. It has also been acknowledged that the rise of RE, which will enable the participation of every nation around the world in energy trading, will change the dynamics of the global energy system. Such developments will also be pertinent to avoiding future energy supply shortages and economic turbulence, including in developing countries, from crises such as Russia's aggression in Ukraine (EU, 2022). As a member of the EU, Germany advocates worldwide for a just transition to a climate-neutral society and economy, including by working with developing countries and emerging economies to raise the level of ambition to achieve the 1.5°C target under the Paris Agreement and the Sustainable Development Goals (SDGs) 2030 Agenda (BMZ, 2022a).

Indonesia – Germany's long-standing bilateral development partner and one of the world's largest greenhouse gas emitters – requires a total additional 81 GW of RE by 2030, consisting of solar photovoltaics (PV), hydropower, and geothermal power, to align itself with the 1.5°C scenario, entailing financing needs of around USD 332 billion up to 2030 (IRENA, 2022). Taking into account that international cooperation remains vital to help achieve the 1.5°C goal from the power sector, especially at times of geopolitical strife, this briefing will examine Germany's current climate finance commitments, especially in the energy sector, then provide insights on Indonesia's energy transition financing landscape, in order to facilitate further bilateral cooperation on energy transition between the two countries.

1 Crisis in the natural gas markets is expected to continue throughout 2023 as Russia further reduces natural gas flows to Europe in retaliation against sanctions imposed following its invasion on Ukraine (WEF, 2022; IEA, 2022).

2 In order to reduce dependence on Russian gas exports, several EU countries have resorted to coal consumption (Liboreiro, 2022), buying up oil and gas across the globe (Wettengel, 2022), and leaders of the G7 countries have decided to resort to further investment in the gas sector. Although such measures are still considered to be temporary, it is a setback in the move away from fossil fuels (Kahlen et al., 2022; G7 Germany, 2022a).

1

Germany's International Climate and Energy Transition Financing: National Context and International Financing Governance

Despite the current European energy crisis, Germany's new 'traffic light government', a coalition composed of the Social Democrats, the Greens, and the Free Democratic Party (FDP), which came into power in late 2021, has issued assurances that it would keep its goal of abandoning fossil fuels despite the ongoing energy crisis: 'There must be no global renaissance of fossil energies. Yes, Russia's brutal war of aggression against Ukraine is forcing us to reconnect coal-fired power plants to the grid for a short time. But we are firmly committed to the coal phase-out', Chancellor Olaf Scholz said during his speech at the COP27 Climate Conference (Wettengel, 2022).

As substantiated in Germany's Climate Change Act, the country aims to reduce greenhouse gas emissions by 65% from the country's emissions in 1990, which is 438 million tonnes of CO2 equivalents by 2030 (BMWK, n.d.; Bundesregierung; 2021). Following Russia's war against Ukraine and Germany's change in government, Germany has also further increased its target for RE share in the country's 2030 energy mix from 65% to 80%, and started ramping up hydrogen deployment, implementing grid expansion, and decarbonising heating and transport systems in line with its renewed ambitions to cut emissions by at least 65% by 2030 and become greenhouse gas neutral by 2045 (Appun, 2022c; Amelang et.al, 2021).[3] In addition, Germany has enhanced its ambitions on coal phase-out, aiming to retire coal-fired power plants in the western state of North Rhine-Westphalia by 2030 instead of its previous date of 2038 (Germanwatch, 2022; Reuters, 2022) These renewed commitments demonstrated that the Russian war against Ukraine has accelerated Germany's domestic energy transition (Germanwatch, 2022).

In line with its increased commitments towards climate protection, domestic changes and additions to legal frameworks have been made through two legislative packages intended for reforms: the Easter Package and the Summer Package, each consisting of changes and additions made to its federal domestic laws, including integrating the Energy and Climate Fund (EKF), a federal special fund, into the Climate and Transformation Fund (KTF). According to the draft law for the establishment of a special fund 'Energy and Climate Fund, in the future KTF will support the implementation of climate action both domestically and beyond, with the fund also eligible for use in measures on international climate protection and related environmental measures (Deutscher Bundestag, 2022) These reforms are well in line with Germany's 2021-2025 Coalition Agreement which has made climate action a central task (SPD/ DIE GRÜNEN/ FDP, 2021).

Furthermore, the new government has introduced several changes in institutional arrangements, such as adjusting the previous Federal Ministry for Economic Affairs and Energy (BMWi) to become the new Federal Ministry for Economic Affairs and Climate Action (BMWK), responsible for RE, the power sector, energy networks, and federal climate action law. The Ministry is led by the Green Party. Germany has also committed to implementing a whole-of-government 'Team Germany' – also known as the cloverleaf – approach in its climate policies, both nationally and internationally. In the case of international partnerships, practices in this approach include diplomatic visits that involve ministries besides the Federal Foreign Office (AA), demonstrating efforts to mainstream the climate issue across the German government (AA, 2022b).

3 In its NDC, Germany has already pledged to achieve a negative greenhouse gas balance after 2050 and achieve 88% of emissions reduction by 2040 (UNFCCC, n.d.) Germany's new governmentnment has also considered it vital to show that energy transition is ultimately a solution for high energy prices, not an extra burden or the cause of skyrocketing energy prices (Appunn, 2022b).

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Electricity pylons and a solar park in the middle of fields and meadows, Germany.

In addition, Germany's Federal Foreign Office (AA), also led by the Green Party, is now in charge of international climate policy and climate diplomacy, including the UNFCCC climate negotiations (AA, 2022a). At COP27, the Foreign Minister led the German delegation for the first time. The AA has also established three new divisions related to climate, i.e. divisions for climate partnerships, climate security, and climate finance; and, most importantly, the AA has appointed a new Special Envoy on International Climate Action (*AA, 2022b*).

In addition to putting the AA in charge of international climate policy, the new government has also made new adjustments to Germany's International Climate Initiative (IKI).[4] The AA and the Federal Ministry for Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) now closely coordinate with the BMWK, which is the designated authority of the IKI (Donortracker.org, 2022a; BMWK, 2022a).[5]

2

Overview on the Structure of German International Climate Financing

Germany channels its climate-related Official Development Assistance (ODA) through bilateral and multilateral channels. With 80–90% of its global climate funding coming from the Federal Ministry for Economic Cooperation and Development (BMZ), 6.9% of Germany's bilateral ODA was allocated for climate action in the energy sector in 2020 (Donortracker.org, 2022a). The BMZ agrees on its bilateral projects in government negotiations with partner countries. BMZ utilises a partnership-based and decentralised approach in its bilateral cooperation, meaning that implemented projects are those that are of interest to the partner countries and fit into their development plans. The actual amount of BMZ's climate finance budget cannot be accurately forecasted in advance as its commitments are subject to bilateral agreements (BMZ, 2022). These commitments can later also differ from the actual disbursements. In addition, the BMZ mobilises its climate financing through multilateral funds such as the Green Climate Fund (GCF) and the Global Environment Facility (GEF) (BMZ, 2022b). Lastly, Germany also contributes to the global Adaptation Fund: spearheaded by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and the Federal Foreign Office (AA), it has pledged in 2022 to increase its contribution to the global Adaptation Fund by EUR 60 million from EUR 2.6 billion in 2021 (BMUV, 2022).

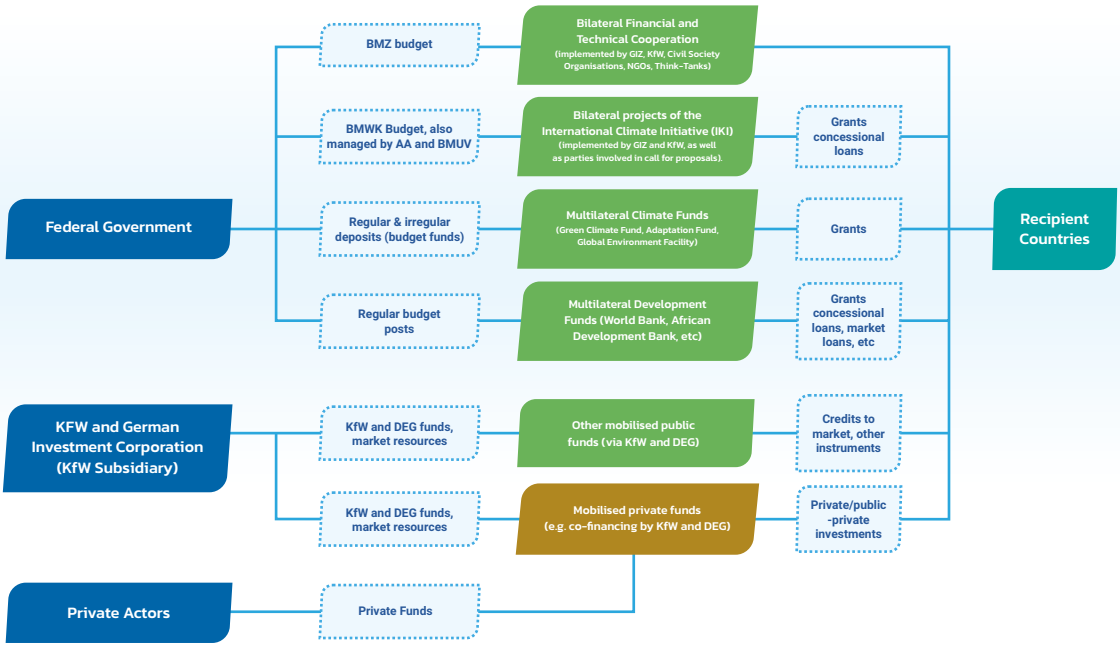

Figure 1. **Germany's international climate finance flows**
Source: Deutscheklimafinanzierung.de (accessed December 2021) (modified)

4 The IKI was previously managed by the Federal Ministry for Environment, Nature Conservation and Nuclear Safety (2022). Since December 2021, the IKI has been the responsibility of the BMWK.

5 The IKI supports approaches in developing and emerging countries to implement and ambitiously develop NDCs. Funding areas of the IKI include those allocated for international climate mitigation, adaptation, and conservation of biological diversity and natural carbon sinks. Currently, there is one bilateral IKI project, that is currently operating specifically in Indonesia in support of its energy sector, namely the GIZ ExploRE project (IKI, 2022a; 2022b; 2022c).

Germany's international development cooperation is structured in three main partnership categories: (1) bilateral partners; (2) global partners; and (3) nexus and peace partners. Specifically for Germany's international financing in the context of the energy sector, the BMZ's 'Reform Strategy BMZ 2030' document designates 'climate and energy' as one of its key focus areas, and this has 'renewable energy and energy efficiency' as one of its action areas (BMZ, 2020). The BMZ has also acknowledged several issues related to the aforementioned action area, which include energy poverty, lack of energy storage capacity, insufficient grid integration of RE, market barriers to a climate-neutral energy supply, sustainable and energy-efficient building, the importance of transformative energy policies and regulatory frameworks in addressing climate protection, and continued dependency on and pressure from fossil fuel suppliers in Germany's partner countries (BMZ, 2021). Comparisons between Germany and other G7 country members in relation to their strategic priorities on climate change and international efforts on energy transition are presented in table 1.

Canada

Strategic Priorities on Climate Change

- Strengthening environmental governance and enhancing women's participation in decision-making;
- Investing in low-carbon and climate-resilient economies;
- Environmental practices that support healthy, resilient, adaptive communities.

Energy transition-specific

Seeks opportunities to increase the use of RE, phase out carbon-based energy, and increase energy efficiency.

France

Strategic Priorities on Climate Change

- All interventions consistent with low-carbon and climate-resilient development, as well as support for countries in developing low-carbon and climate-resilient trajectories;
- Increase the volume of climate finance;
- Contribute to redirecting finance and investment flows; and
- Co-build solutions and exert influence on standards.

Energy transition-specific

Commit substantial RE financing in Africa, support research, policy development, resilience of energy production systems, energy efficiency.

Germany

Strategic Priorities on Climate Change

- Climate protection and adaptation to climate change;
- Renewable energy and energy efficiency;
- Sustainable urban development (mobility, circular economy, waste management).

Energy transition-specific

Energy poverty, energy storage capacities, grid integration of renewable energy, market barriers to a climate-neutral energy supply, sustainable and energy-efficient building, transformative energy policies and regulatory frameworks.

Italy

Strategic Priorities on Climate Change

- Support in formulating and implementing nationally determined contributions (NDCs) and National adaptation plans;
- Increasing capacity to adapt or absorb climate shocks and natural disasters;
- Strengthening ability to capture and sequester emissions;
- Ensuring access to affordable, reliable, renewable and sustainable energy for all.

Energy transition-specific

Prioritising local needs of households, services, and/or productive uses, support energy-related public services through RE e.g., electricity and decentralized power generation (off-grid/mini-grids), the water-energy-food nexus, a balanced energy system, and increased engagement of the private sector.

Japan

Strategic Priorities on Climate Change

- Promoting low or zero-carbon and climate-resilient urban infrastructure;
- Supporting climate policy and institutional development;
- Implementing adequate measures based on climate risk assessments;
- Enhancing conservation and management of forests and other ecosystems.

Energy transition-specific

Renewable energy technology deployment and stability of electricity supply, energy conservation, diversification of energy sources.

United Kingdom

Strategic Priorities on Climate Change

- Working to make sure that the huge growth in infrastructure in developing countries is low-carbon and climate-resilient;
- Using finance to build capacity, unlock more private finance, and lower the costs of a global low-carbon transition;
- Supporting work to stop deforestation

Energy transition-specific

Supporting countries to replace fossil fuels with renewable energy sources, addressing the financial risks of stranded assets (physical and transition risks).

United States

Strategic Priorities on Climate Change

- Scaling-up international climate finance and enhancing its impact;
- Mobilising private finance internationally;
- Ending international official financing for carbon-intensive fossil-fuel-based energy;
- Making capital flows consistent with low-emissions, climate-resilient pathways;
- Defining, measuring, and reporting international climate finance.

Energy transition-specific

Researching, making, and using technologies that cut down on emissions to bring down the costs of both current and future technologies Effective renewables and energy storage implementation; strengthening developing country partners' deployment capacities; identifying ways to further mobilise private sector investment in RE and energy efficiency; and reducing public investments in carbon-intensive fossil-fuel-based energy

Table 1. **List of Strategic Priorities of G7 Countries on International Climate Finance**

Source: : Government of Canada (2022); AFD (2017); BMZ (2021); Italian Ministry of Foreign Affairs (2021); JICA (2022); Gov.UK (2022); Whitehouse.gov (2021)

3

Implementation of Germany's Climate Financing by the KfW Development Bank and GIZ

Aerial view clean energy producing electric windmill, Germany.

In line with its partnership framework, the KfW Development Bank also works on behalf of the BMZ in supporting partner countries. KfW has a specific role in assessing projects and programmes previously proposed by partner countries through bilateral negotiations and have been promoted by the BMZ in sectors such as water supply, RE, financial system development, health, and education. KfW operates in Africa, the Middle East, Asia, Latin America, and South Eastern Europe, with Africa receiving 27% of the KfW promotional budget in 2021 and Asia receiving 24% in the same year. The types of projects funded by KfW depend on local needs and conditions, but KfW conducts systematic examinations to ensure the positive climate impacts of all its projects (KfW, 2021).

If a project is deemed developmentally sound and feasible, KfW's experts also assist partner countries throughout the project's entire duration, including working with partner and consulting firms[6] to formulate a feasibility study addressing economic efficiency, developmental impacts, and possible risks. Following these preparatory measures, KfW concludes a financing agreement with the partner country's project-executing agencies, which will have overall responsiblity for the projects themselves and procure goods as well as services to tender and monitor the construction phase. In addition, KfW also provides the German Federal Government with regular progress reports and examines projects after completion for final review[7] (KfW, 2022).

6 As well as collecting initial data and producing feasibility studies, consultants develop plans and tender documents for the project. In addition, consultants may also support project-executing agencies in evaluating bids, managing construction, or training local specialists.

7 KfW assesses whether not a project reaches a certain level of productivity, using analyses of the achieved impacts and cost evaluation.

Box 1. Scope of GIZ Activities

Source: GIZ (2021)

In addition to the KfW's activities, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) also implements programmes and projects commissioned by the BMZ. GIZ is identified as a service provider in the field of international cooperation for sustainable development and international education work. Working with civil society actors, businesses, and research institutions, GIZ seeks to foster successful interaction between development policy and other policy fields and areas of activity. This is done through the provision of expertise in areas such as labour-market-oriented technical and vocational education and training, development partnerships with the private sector, and advisory services from the political to the organisational and technical levels (see box 1) (GIZ, 2021).

4

Recent Trends in Germany's ODA

Reforms that can bolster mobilisation of further international climate finance are welcomed and indeed required. This is especially true given that Germany has announced it will raise its contribution to international climate protection and adaptation to climatic changes in poorer countries to EUR 6 billion annually by 2025, starting from an annual level of around EUR 4.18 billion in grants from budgetary sources and grant equivalents of development loans, as outlined in the 2022 federal budget draft (Kahlen et al., 2022; German Climate Finance, 2022a). In comparison, it is also important to highlight that previously, in 2015, former German chancellor Angela Merkel pledged to increase Germany's funding for global climate protection from EUR 2.0 billion in 2014 to EUR 4.0 billion by 2020 (Donortracker.org, 2022a).

In 2021, Germany allocated a record amount of EUR 5.34 billion (47% of which was bilateral funds in the form of grants) from the federal budget for climate action in developing and emerging countries, with the vast majority of said budget – 80% (~EUR 4.28 billion) – being channelled via direct bilateral cooperation with developing economies.[8] This funding is mainly sourced from and managed by the BMZ (Donortracker.org, 2022b).

Germany's contribution to climate finance also includes mobilisation of additional funds on the capital market, i.e. primarily public loans by Germany's development bank KfW, amounting to around EUR 2.59 billion. In addition, the German Investment Corporation (DEG) mobilised EUR 170 million in private investments in 2021 (BMZ, 2022b; German Climate Finance, 2022b). All in all, Germany's total international climate finance in 2021 was reported to reach a record high of EUR 8.1 billion, the second-highest amount throughout 2012–2021, with the highest amount mobilised previously being EUR 8.5 billion in 2016 (see table 2).

Solar panels in southwest of the country, Germany.

Recent discourse on Germany's international climate financing commitments for 2022–2025 showed that Germany is not on track to meet its goal of providing USD 6 billion annually by 2025, as there are little indications of growth in its medium-term budget planning., which calls into question the growth observed in actual funding. Thus, Germany is falling short of its national pledge to reach its fair share of the global climate finance goal and deliver USD 100 billion per year by 2025 for climate action in developing countries, in line with the outcome of the Paris Agreement. Although Germany allocated EUR 5.3 billion of ODA in 2021, the draft federal budget showed that only EUR 4.32 billion was allocated for its climate budget in 2022 and only EUR 4.25 billion was planned for international finance in the 2023 budget (see figure 2) (Deutscheklimafinanzierung.de, 2022a; Henneberger, 2022).

8 Under the key development priority on climate change and RE, Germany has also channelled international climate finance through multilateral channels. For example, it pledged EUR 80 million to the Climate Investment Funds (CIF) for the Global Energy Storage Program and pledged EUR 1.5 billion (USD 1.7 billion) to the GCF for 2020 to 2023. However, BMZ's regional development focus remains primarily on the Middle East and North Africa Region (Donortracker.org, 2022b; BMZ, 2021).

Year	Budget Funds	Public climate finance	Private climate finance	Total
2012	1,664,000,000	n/a	n/a	1,664,000,000
2013	1,950,290,044	1,473,000,000	n/a	3,423,290,044
2014	2,344,000,000	2,791,000,000	n/a	5,135,000,000
2015	2,683,796,201	4,722,357,694	n/a	7,406,153,895
2016	3,361,809,488	5,172,271,474	n/a	8,534,080,962
2017	3,649,672,056	3,079,931,500	486,155,379	7,215,758,935
2018	3,366,204,614	3,245,778,651	467,637,633	7,079,620,898
2019	4,338,609,124	2,473,183,806	769,959,933	7,581,752,864
2020	5,091,371,454	2,545,556,253	192,149,450	7,829,077,157
2021	5,340,285,126	2,589,725,424	170,109,340	8,100,119,889

Table 2. German Climate Finance (2012–2021) in Euros

Source: BMZ, 2022

Civil society actors have urged the German government to increase its annual funds for climate finance at least in 2023 and 2024, so that Germany can still achieve its EUR 6 billion pledge should the figure for 2022 remain at EUR 4.32 billion. In addition, it has been recommended that Germany should mobilise more grants than loans in the future – continuing to improve trends from 2021, when 47% of Germany's total bilateral funds reached recipient countries in the form of grants, followed by loans at 37.2% (see figure 2).

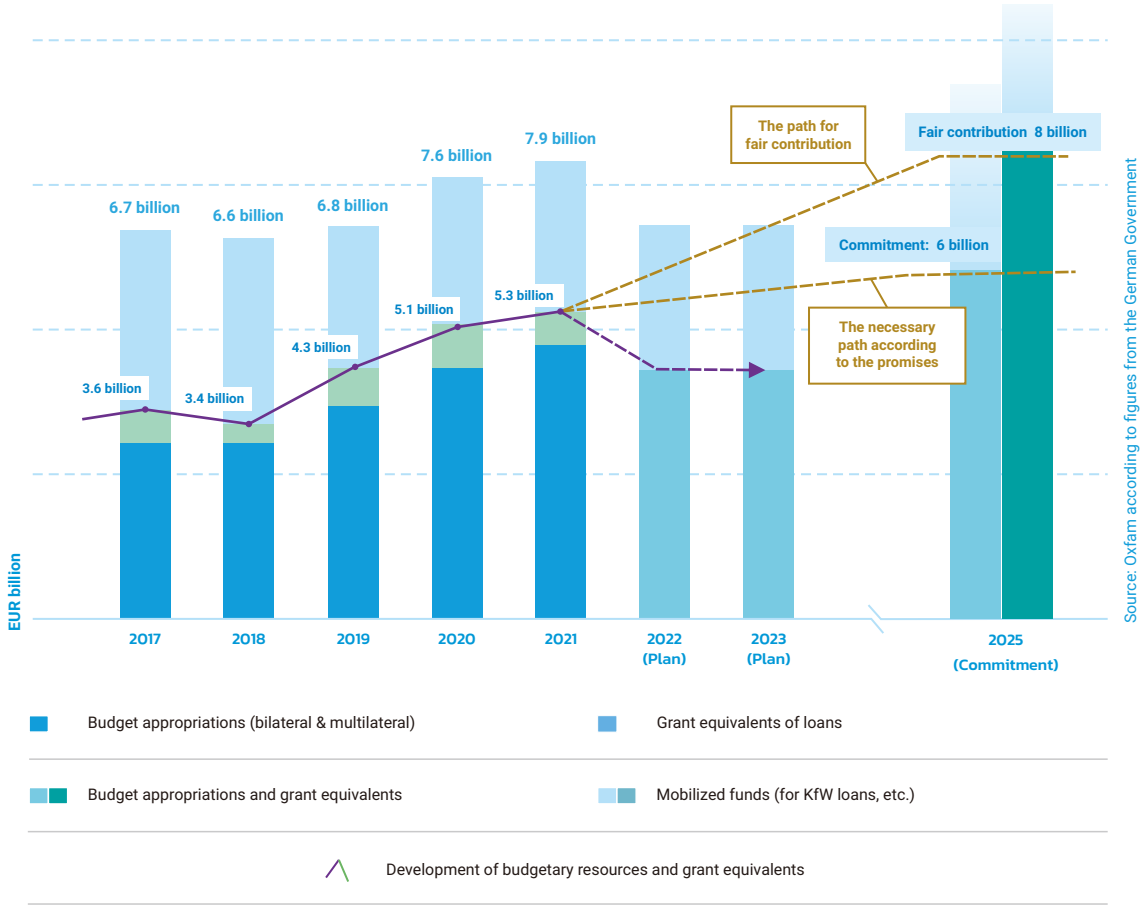

Figure 2. **Germany's International Climate Finance (2017–2025)**

Source: Klimafinanzierung.de (2022)

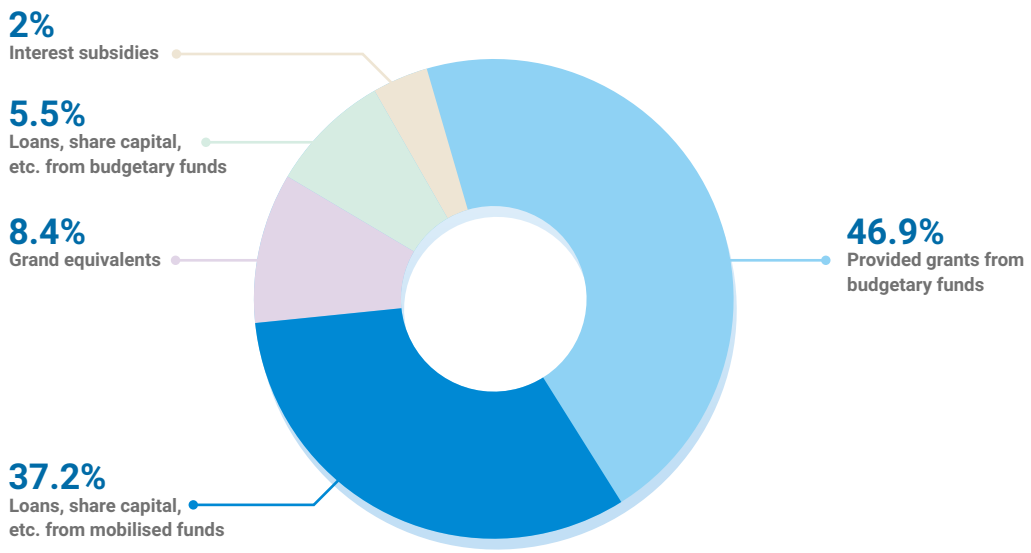

Figure 3. **Germany's Bilateral Climate Finance by Instrument**

Source: Klimafinanzierung.de (2022)

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Aerial view of big biogas plant, green clean energy, Germany.

Furthermore, in box 2 it can be seen that Germany's total ODA for all sectors is projected to decrease throughout 2021–2023; the BMZ-managed ODA 2022 budget has also decreased to EUR 12.3 billion from its previous budget of EUR 13.7 billion in 2021. In terms of climate finance to be allocated by the BMZ, the BMWK, the AA, and the BMUV (see table 3), it can be seen that there is a shift in finance allocation away from bilateral financing towards multilateral channels planned for 2022–2023, in which planned bilateral climate financing under BMZ is set to decrease during 2022–2023 while multilateral financing has seen a steady increase. In a similar context, an apparent trend that is expected to continue is the 'pooling' of German ODA with funds from other donors and contributors through platforms such as the Just Energy Transition Partnership (JETP) (AA, 2022b), which requires partnerships with other countries and stakeholders in order to pull in various financing instruments.

All in all, despite the recent trends in Germany's climate ODA, the international community can trust that Germany will still be a major provider of development finance and that its continued contribution to international climate finance is not at risk: Germany's recent institutional and regulatory changes have strengthened the country's current whole-of-government approach to prioritising climate action, as well as its renewed commitments on international climate finance. Moreover, Germany's actual climate finance surpassed its planned climate finance budgets in both 2020 and 2021. In addition, Germany's expected success in its domestic energy transition efforts should also reduce barriers on climate diplomacy: if, by contrast, Germany did not fulfil its domestic targets, it would be more difficult for it to advocate for others to do more. Hence, fulfilment of its domestic climate ambition is also important for Germany's international climate cooperation efforts (AA, 2022b).

Germany's Total ODA (2021-2023)

- Germany's total ODA 2021 (All Sectors): USD 32,2 billion (~EUR 30, billion)
- Germany's total ODA 2022 (All Sectors): EUR 23.0 billion
- Germany's total ODA 2023 (All Sectors): EUR 22.4 billion (draft)

Germany's BMZ–Managed ODA (2021-2022)

- BMZ-Managed ODA (All sectors) 2021: EUR 13.7 billion
- BMZ-Managed ODA (All sectors) 2022: EUR 12.3 billion (budget)
- BMZ-Managed ODA (All sectors) 2023-2025: Data has not been made public

Germany's Total Climate Action ODA (2021-2022)

- Climate Action ODA 2021: EUR 5.34 billion
- Climate Action ODA 2022: EUR 4.3 billion (planned)
- Climate Action ODA 2023: EUR 4.25 billion (planned)

Box 2. Overview of Germany's Official Development Assistance

Sources: donortracker.org (2022); BMZ (2022b); German Climate Finance (2022a, 2022b, 2022c).

Item	Budget	2021	2022 (Planned)	2023 (Planned)
Bilateral Climate-Relevant*	BMZ	5340	2562	2511
Multilateral Climate Funds and Programmes	BMZ		787	831
Multilateral development programmes	BMZ		265	280
International Climate Initiative	BMWK/BMUV/AA		691	696
Total		5340	4305	4318

Note: It must be highlighted that the numbers for 2021 is the budget realised, while 2022 and 2023 are the planned budget.
*Including special initiatives, funds for private organisations, as well as the grant equivalents of concessionary loans

Table 3. Federal Funds for Climate Finance (2021–2023) (In EUR million)

Source: German Climate Finance, 2022; Bundestag, 2022.

5

State of Indonesia's Energy Policies and Energy Financing Trends

Under its first nationally determined contribution (NDC) and updated NDC, Indonesia pledged to reduce emissions from 2020 to 2030 by 29% below business-as-usual (unconditionally) and 41% with international support (conditionally). With its recently submitted Enhanced NDC, the Government of Indonesia (GoI) has further raised its commitments by raising its emissions reduction target by 2030 to 31.89% unconditionally and 43.20% with international support. For Indonesia's energy sector to achieve its 41% conditional Enhanced NDC target, Indonesia needs to install 20.9 GW of RE including 15.4 GW of off-grid RE technologies, including solar rooftop and hydropower, as well as implementing energy efficiency measures to save 15.1 gigawatt hours (GWh) of electricity by 2030 (MoEF, 2022).

Solar panel energy in the maumere Flores, Indonesia

Indonesia's Enhanced NDC also reiterates RE targets previously set through Government Regulation (GR) No.79/2014 on National Energy Policy, which sets the target of transforming the primary energy supply mix (as shown in table 4). The GoI has also promulgated President Regulation No.22/2016 on National Energy Plan, which adds further importance to achieving 23% RE in the national energy mix by 2025 and 1% reduction in energy intensity per year. In addition, Indonesia's State Electricity Company (PLN) plans to add 51.6% of RE in its 40.6 GW of additional energy capacity throughout 2021–2030, based on its Electricity Business Plan (RUPTL) 2021–2030.

Energy Supply	2025	2050
New and Renewable Energy	23%	31%
Oil	Less than 25%	Less than 20%
Coal	Minimum of 30%	Minimum of 25%
Gas	Minimum of 22%	Minimum of 24%

Table 4. Indonesia's Primary Energy Supply Mix Targets (GR 79/2014)

In terms of institutional arrangements and the flow of funds for climate mitigation and adaptation efforts (see figure 4), the channelling and management of international public or donor funds can be done in three ways: (1) channelled to, and managed directly by trust fund institutions such as the Indonesia Climate Change Trust Fund (ICCTF) (specifically for climate adaptation and blue financing)[9]; (2) channelled directly to implementing institutions (off-budget, off-treasury), i.e. sub-national governments, civil society actors, ministries, and agencies implementing adaptation and mitigation programmes, as well as through public–private partnerships with state-owned enterprises such as PT PLN[10] (in the case of the electricity subsector); (3) recorded and channelled through the state budget (APBN) mechanism to three ministries with key roles in budgetary management and coordination on climate financing, i.e. the Ministry of Finance (MoF), the Ministry of National Development Planning (BAPPENAS),[11] and the Ministry of Environment and Forestry (MoEF) (MoF, 2019). Meanwhile, international private funds, e.g. green lending, private equity, and banks' investments, are regulated by the Indonesian Financial Services Authority (OJK). Lastly, the Indonesian Ministry of Investment (BKPM) is responsible for private foreign investments in business lines that are commercial in nature[12] (BKPM, 2021).

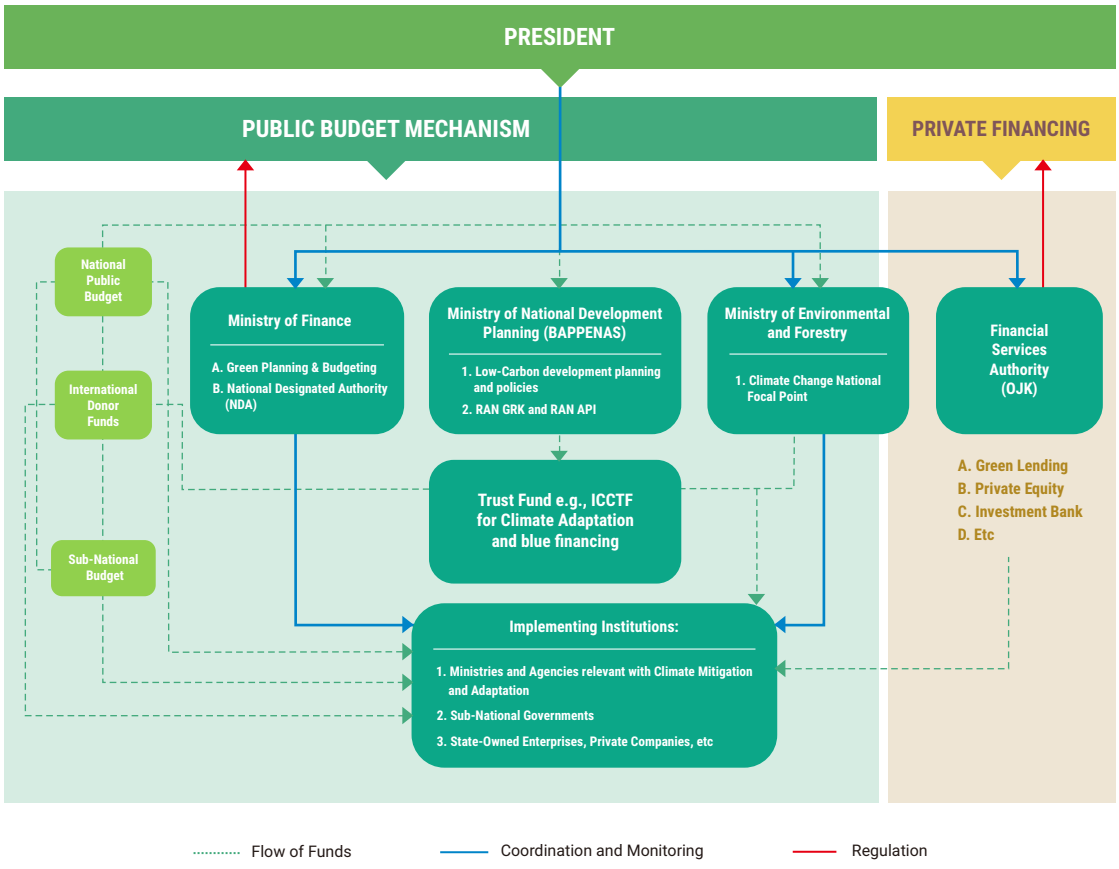

Figure 4. **Indonesia climate finance management structure**

9 Indonesia's Sustainable Blue Financing aims to utilise financing instruments to further develop Indonesia's maritime sector sustainably. This includes funding initiatives such as marine protection and conservation, sustainable fisheries, marine tourism, and ocean-based RE.

10 A complete guideline and elaboration of investment schemes, as well as the specific procedures and arrangements between PLN and independent power producers (IPPs) for projects under the electricity sector, can be accessed at: https://www.bkpm.go.id/images/uploads/printing/PANDUAN_INVESTASI_SEKTOR_KETENAGALISTRIKAN_DI_INDONESIA_Print.vr.pdf.

11 BAPPENAS is responsible for formulating short-, medium-, and long-term policies on climate control in the national development plans and synergising policies on climate into duties and responsibilities of ministries and agencies. BAPPENAS and the MoF are also responsible for streamlining climate policies into the action plans and budgets of ministries and agencies (MoF, 2019).

12 Guidelines on private investment procedures are available in BKPM's *Indonesia Investment Guidebook:* https://www.bkpm.go.id/images/uploads/printing/Indonesia_Investment_Guidebook.pdf.

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Solar panel field in Gili Air, Indonesia

In addition to the pre-existing public and private financing mechanisms formally recognised under the government structure (figure 4), new mechanisms such as the JETP utilise a management structure beyond the pre-existing management structure presented in figure 4. However, implementation of the JETP is most relevant in relation to flow of funds from international donors channelled to implementing institutions, given that the JETP involves an investment plan that is managed directly by the JETP Secretariat in the Ministry of Energy and Mineral Resources (MEMR), which coordinates with the JETP's IPG Task Force (MEMR, 2023).

In terms of political commitment, Indonesia's MoEF has also released a Long-Term Strategy for Low Carbon and Climate Resilience (LTS CCR) 2050. However, the LTS CCR document has been perceived as less ambitious, given that the GoI only aims to reach carbon neutrality by 2060 or sooner rather than 2050 – this shows that further support in terms of policymaking is required to jumpstart Indonesia's climate protection measures (IESR, 2021).

Increased commitment under its Enhanced NDC further amplifies Indonesia's need to finance its climate ambitions. To achieve its 29% unconditional target through 23% RE in the energy mix by 2025, the MEMR has estimated,
Indonesia requires investment of at least USD 8 billion per year or USD 36.95 billion in total by 2025 (IISD, 2022). Furthermore, PLN has stated that it requires low-interest financing and project collaboration to achieve targets under its 'Green RUPTL', to add 51.6% of RE to its total added capacity by 2030. To achieve this, PLN has estimated that it will require energy investments of up to a total of USD 500 billion (CNBC, 2022).

Although the Indonesian government's current plans still fall short of its commitment to achieve net-zero emissions (NZE) even by 2050, the MEMR has stated that, in order to reach NZE by 2060, Indonesia would need USD 1 trillion in total or USD 29 billion of investment per year (MEMR, 2022). In comparison, IESR has estimated that Indonesia would need USD 20–25 billion of investments annually up to 2030 for the country to be on course to achieve NZE by 2050 through 100% of RE in the energy mix, with 88% solar energy (1,500 GW) and 12% hydropower and geothermal power (60 GW). Furthermore, to reach NZE by 2050, Indonesia would need USD 40–60 billion per year from 2030 to 2050, with solar PV as the backbone of the energy system from 2030 onwards (IESR, 2021).

Note: Value is in USD Billion

** USD 0.58 billion of Investment realisation in 2022 is an accumulation as per June 2022.

Compiled Sources: MEMR, 2022; MEMR, 2021; MEMR, 2017; International Institute

Figure 5. **Indonesia Investment Targets and Realisation for Renewable Energy (2017–2022)**

In addition, IRENA has recommended that in order to assist Indonesia in aligning with global NZE by 2050, investments in renewable capacity, grids, storage, and other enabling infrastructures must be prioritised, particularly those that can further leverage private sector participation in their development (IRENA, 2022).

Indonesia's average annual investment realisation in the RE sector over the last five years (2017–2021) has been only USD 1.62 billion. Investment realisation for RE reached only USD 0.58 billion as of Q2 2022, despite it having USD 3.91 billion as the investment target for the same year. Moreover, since 2018 its RE investment realisation has fallen short of its annual targets (see figure 5) (IESR, 2022). Therefore, an enormous financing gap still exists for Indonesia to achieve NZE in the power sector by 2050.

Relevance of Available Financing Schemes with International Support on Indonesia's Energy Transition

Bilateral Financing

RE project finance in Indonesia is typically provided by international commercial banks, multilateral development agencies, and export credit agencies (IRENA, 2022). However, Indonesia is also an active recipient of bilateral financial support through investments, technical assistance, grants, technical cooperation, and projects. The OECD dataset for 2020, published in 2022, showed that climate-related bilateral development finance from DAC member countries to Indonesia accounted for a total of USD 1.9 billion, and Germany ranked as the second-highest contributing country to Indonesia for all climate-related sectors (17.7% of total DAC countries' climate-related development finance) but ranked first in mitigation and energy-specific bilateral financing to Indonesia: 54.7% and 89.7% respectively of the total contribution from DAC countries.

Country	Total Amount (Climate-Related)	Total Amount (Mitigation)	Energy-Specific	Energy support area
Australia	USD 71,457,000	USD 44,746,000	USD 105,000	Address barriers to private sector finance and investments in RE.
Belgium	USD 1,613,000	USD 1,613,000	n/a	n/a
Canada	USD 26,000	USD 26,000	n/a	n/a
Czech Republic	USD 133,000	USD 47,000	USD 47,000	Small water electric plant
Denmark	USD 6,586,000	USD 6,586,000	USD 5,822,000	Institutional capacity development supporting low-carbon development.
Finland	USD 81,367,000	USD 149,000	USD 104,000	Biofuel
France	USD 379,842,000	USD 151,922,000	n/a	n/a
Germany	USD 351,201,000	USD 348,661,000	USD 304,277,000	Local island grids, solar PV, Geothermal, RE pilot projects, RE education
Hungary	USD 992,000	USD 992,000	n/a	n/a
Italy	USD 107,000	USD 57,000	n/a	n/a
Japan	USD 988,060,000	USD 632,000	USD 1,882,000	Details not available in OECD Dataset
South Korea	USD 35,463,000	USD 21,830,000	USD 19,007,000	Government capacity building, rural electrification, solar energy, energy conservation and demand efficiency.
Netherlands	USD 3,669,000	USD 2,697,000	n/a	n/a
Norway	USD 38,713,000	USD 38,649,000	n/a	n/a
Spain	USD 3,000	USD 3,000	USD 3,000	Electric systems in extreme climate conditions
Switzerland	USD 7,987,000	USD 7,987,000	USD 6,922,000	RE skills development.
United Kingdom	USD 825,000	USD 825,000	USD 641,000	Policy development, leveraging private investments, RE business case development.
United States	USD 14,996,000	USD 9,374,000	USD 328,000	Biofuel-fired power plants.

Table 5. OECD–DAC Members Bilateral ODA Towards Indonesia in 2020

Source: OECD (2022)

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Safety officer inspects rooftop solar power project, Indonesia.

Looking solely at Germany's bilateral climate finance mobilisation to Indonesia in 2020, it can be seen that Germany mobilised USD 348.6 million in grants and debt instruments to support mitigation actions in Indonesia. This includes USD 7.7 million of debt instruments provided through the Results-Based Loan Sustainable Energy Access in Eastern Indonesia program, and USD 290.7 million of grants provided for the development of solar PV, geothermal, enablement of environments through the Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE) project, and grants for energy research (OECD, 2022a). Although the country- and sector-specific data for 2021 and 2022 are not yet available, preliminary OECD DAC data indicated that Germany mobilised USD 21.9 billion in ODA bilateral grants globally, an increase compared to the USD 19.4 billion in bilateral grants mobilised in 2020 (OECD, 2022b).

Blended Financing: Indonesia Energy Transition Mechanism Country Platform (ETMCP)

Indonesia has also recently launched its flagship ETMCP. The ETMCP is a blended finance mechanism that will acquire financing from the state budget and donors, philanthropists, bilateral and multilateral institutions, and private investors to phase out CFPPs and deploy RE in parallel. Specifically, ETM aims to (1) achieve an optimum energy mix according to national energy policy; (2) reduce greenhouse gases to achieve the NDC and NZE in Indonesia's electricity sector; (3) shorten the economic performance of CFPPs; and (4) accelerate investments for RE power plants. It is important to note that ETM will support CFPP phase-out and RE deployment based on Indonesia's RUPTL 2021–2030, which aims to achieve 51.6% RE and 48.4% fossil fuels in the national energy mix by 2030 (MoF, 2022). In addition, the GoI prioritises the provision of concessional loans and equity that incur a low cost to support the ETMCP Carbon Reduction Fund (CRF) platform to phase out CFPPs.

The GoI has faced several challenges in the implementation of the ETMCP. Most importantly, with the current oversupply condition of Indonesia's electricity system, Indonesia finds it necessary to prioritise phasing out existing CFPPs in order to make room for renewables deployment under the ETM. However, ETMCP fund manager PT SMI has stated that fewer investors and donors are willing to financially support CFPP phase-out than to invest in RE deployment. All in all, the current investment trend indicates a mismatch between investors' or lenders' appetites vis-à-vis the GoI's priority to phase out CFPPs (IESR, 2022a). If this challenge is taken into account, further investment directed primarily towards the CRF facility can serve as an appropriate channel for further international finance mobilisation in line with Indonesia's current priorities and needs.

Wind turbines in the mountains near the sea, Indonesia.

JETP

During the G20 Summit in November 2022, Indonesia, along with international partners such as the EU and leaders of the International Partners Group (IPG), i.e. the United States, Japan, Canada, Denmark, France, Germany, Italy, Norway, and the United Kingdom, launched a JETP for Indonesia (iEU, 2022). The JETP includes an accelerated power sector emissions reduction pathway to net zero by 2050, consisting of early retirement of high-emitting assets and investment to support the energy transition, including investment in RE (at least 34% of all power generation by 2030) as well as related grid infrastructure. This aim will be supported by a critical mass of finance aggregated from various sources including climate finance donors and private sector investors (Gov.UK, 2022; Government of Canada, 2022; EC, 2022a). In February 2023, the Indonesian government announced that the JETP would not fund carbon capture storage or carbon utilisation and storage (CCS/CCUS). However, the GoI will still propose non-renewable energy investment such as the conversion of diesel power plants to gas power plants for funding by the JETP (Indonesia Stock Exchange Channel, 2023).

As outlined in the Joint Statement between the GoI and the IPG members, JETP will mobilise USD 20 billion (EUR 19.4 billion) over the next 3–5 years using a mix of grants, concessional loans, market-rate loans, guarantees, and private investments (EC, 2022a, 2022b). With USD 10 billion of public money sourced from the IPG members and at least USD 10 billion of private money mobilised and facilitated by the Glasgow Financial Alliance for Net Zero (GFANZ) Working Group, the largest amount ever pledged to a single country (Gov.UK, 2022; BMZ, 2022). The JETP Joint Statement also outlined the partnership's utilisation of the USD 20 billion funds to continue making improvements to Indonesia's policies and enabling environment, including accelerating the development of a local industry in RE and energy efficiency. As a member of the IPG, the EU will support the JETP through EUR 25 million in earmarked grants and technical assistance. It should be noted that funds from the EU will be channelled from funds under the management of the European Commission, not those allocated by respective EU member countries. The EU will also channel funds via the European Investment Bank with funds up to EUR 1 billion to support eligible projects contributing to decarbonisation through the development and integration of RE (EC, 2022a).

Recent Updates on Germany–Indonesia Energy Transition Cooperation

As previously mentioned, Germany's international development cooperation is structured in three main partnership categories: (1) bilateral partners; (2) global partners; and (3) nexus and peace partners. It is important to highlight that Indonesia is considered one of the countries that are of strategic importance in the 'global partners' category (BMZ, 2022b), in which global partnership is primarily focused on strategic cooperation on tackling issues of the 'global good', including the climate and environment, as well as energy (BMZ, 2021). Global partnerships are mainly achieved through loans, and through leveraging additional money market funds (BMZ, 2020). The OECD recorded that Germany's total climate-related ODA to Indonesia in 2020 for all sectors was USD 351.2 million, which included funding channelled through country-based donors, central government funds, public corporations, international non-government organisations, teaching institutions, and research institutes or think tanks. Putting it into perspective, Germany's climate-related ODA for Indonesia is 4.2% of Germany's total climate-related ODA globally (USD 8.3 billion) (OECD, 2022a).

Specific to bilateral development finance from the BMZ, Germany had committed a total of EUR 4.5 billion from 2010 up to December 2022, consisting of EUR 2 billion in grants and concessional loans as well as EUR 2.5 billion in promotional loans, making Germany one of the largest bilateral donors in Indonesia (BMZ, 2022). In the energy sector, BMZ has channelled EUR 467.94 million for RE deployment and grid development in Indonesia through bilateral development projects (see table 6). Placing this in context, EUR 467.94 million (USD 497.8 million) is 0.57% of Indonesia's energy transition needs of USD 82 billion, according to IRENA (2022); BMZ support also includes support addressing policy and regulatory frameworks, institutional capacity building, engagement with the private sector, and the development of supporting power infrastructure. The BMZ has stated that in the context of further bilateral cooperation with Indonesia, there are three areas that Germany considers of particular importance in the coming years: (1) the development of regulatory frameworks; (2) investments in RE capacity, grid, and storage development; and (3) the just element of the energy transition process, including

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Aerial view from the dam at Lake Schluchsee, Germany

the societal costs of the transition, with poverty reduction as its main driver. Lastly, the BMZ has also stated that it will not fund any infrastructure that is linked to gas, oil, or coal, including carbon capture, usage, and storage (CCUS) (BMZ, 2022).

As a technical implementer for the BMZ as well as other ministries such as the BMWK, GIZ has implemented a total of nine projects that have recently been completed and/or have recently started implementation (see table 6). Three of these projects were funded under the IKI programme, and five projects were funded by BMWK and BMUV budgets. The majority of energy-sector-specific projects are mostly implemented in partnership with or on behalf of the MEMR as a GIZ project partner or client, given that most of these projects are in line with the MEMR's goal of achieving 100% electrification, and that these projects prioritise RE deployment in rural areas. Moreover, it has been identified that these projects have mostly been commissioned by the BMZ (four projects), followed by the BMWK (three projects). In addition, one project was implemented through a public–private partnership scheme between the Federal Government, represented by GIZ, and Schneider Electric, represented by PT Schneider Electric Indonesia. Both parties of the public–private partnership (PPP) work in cooperation with the Provincial Government of Nusa Tenggara Timur.

	Project Name	Period	Commissioning Ministry (DE)	Indonesian Partner/Client	Project Value (EUR)	Focus
IKI	Strategic exploration of economic mitigation potentials through renewables (ExploRE)	2018-2023	BMWK	Ministry of Energy and Mineral Resources (MEMR)	3,850,000	RE Deployment
	Promotion of Least Cost Renewables in Indonesia (LCORE)	2012-2018	BMWK	Ministry of Energy and Mineral Resources (MEMR)	5,545,000	RE Deployment
	Sustainable Energy Transition in Indonesia, International Climate Initiative (SETI)	2022-2023	BMWK	Ministry of Energy and Mineral Resources (MEMR)	680,000	RE Deployment, Energy efficiency
Non IKI	Energising Development (EnDev)	2009-2019	BMZ	Ministry of Energy and Mineral Resources (MEMR)	460,429,723	RE Deployment (mini-grids)
	Electrification through Renewable Resources (ELREN)	2016-2021	BMZ	Ministry of Energy and Mineral Resources (MEMR)	2,518,067	Off-grid RE Deployment support through capacity building, partnership and coordination facilitation
	1,000 Islands – Renewable Energy for Electrification Programme (REEP)	2017-2020	BMZ	Ministry of Energy and Mineral Resources (MEMR)	5,000,000	RE Deployment, (Island grids)
	Green Chillers and Industrial Energy Efficiency Program	2014-2022	BMWK	Ministry of Energy and Mineral Resources (MEMR)	4,981,690	Energy Efficiency
	Solar Energy Centre of Excellence in the Province of Nusa Tenggara Timur in Indonesia (DeveloPPP – Schneider) (Public-Private partnership)	2021-2023	Federal Government (PPP)	Government of the Province of Nusa Tenggara Timur	N/A (PPP)	Local RE industry (capacity building-specific)
	Innovation and Investment for Inclusive Sustainable Economic Development (ISED)	2021-2024	BMZ	Ministry of National Development Planning (BAPPENAS)	11,250,000	Green jobs in the RE sector

Table 6. Recent GIZ Projects Specific to Indonesia's Energy Sector (non-regional/global projects)

Sources: GIZ databases (https://www.giz.de/projektdaten/region/2/countries/ID(show:project/201190362); https://mia.giz.de/esearcha/browse.tt.html)

Looking at the specifications of the projects presented in table 6, it can be seen that the majority of GIZ-implemented projects specific to the energy sector focus mostly on the deployment of various RE technologies such as solar PV, mainly through the EnDev,[13] REEP, and ELREN projects, along with the deployment of biomass and biogas technologies through the LCORE project. Although these projects prioritised the deployment of RE, they also sought to address barriers that can arise throughout the phases of RE pilot project development, from feasibility to construction, through the provision of handbooks and guidelines, training, business tours, and studies. For example, the LCORE project also addressed aspects such as barriers to financing of RE projects and linkages between RE projects and policies in the context of its RE pilot project implementation. In addition, projects such as GIZ EnDev also address the operation and maintenance aspect of renewables, i.e. solar PV, through the delivery of knowledge management products (guidebooks, training modules, and PV mini-grid management modelling) (EnDev, 2017). After conducting an evaluation of recently completed pilot projects on RE technology deployment, some recommendations from the EnDev project were given as lessons learned from the project's implementation for further improvements on several fronts (see box 3).

Catalysing Economic Development (Alignment between energy and Economic Development)

- Plan to develop productive use of energy have to be included early in the energy access planning.
- Pursue multi-stakeholder collaboration to lay out the strategy to achieve targets in economic development. Partnering with various ministries and private sectors is key to share the role in developing the economy through universal energy access. Set of regulation frameworks are also required to enable such working condition.
- Any rural support programmes are advised to include peer learning activities in their training to support local governments to maintain a clear focus and able to visualise their rural economic development.
- Local governments should be able to identify value chain on their products and commodities.

Technology Innovation and Transfer

- Adoption process of technologies should include a comprehensive survey to obtain more useful information and involving prospective users during the development of technologies.
- Technology and demand creation should be developed in parallel to ensure the future adoption of products.
- Share the results from the development and implementation process of technologies with relevant stakeholders and continue to update them
- Fill knowledge gaps on technology design and manufacturing processes. Close facilitation is also required in the technology adoption process.

Collaboration with Public and Private Institutions

- PPPs should come about as early as the project planning stage, before the PV mini-grid installation.
- PPPs should go beyond merely contracting a private company to install the PV mini-grid system, to tackling challenges such as the financial capability of the government as project initiator, quality of installation, and weak village management teams.
- An innovative PPP business approach is required for PV installation in rural areas, e.g. cooperation between the private sector and local cooperatives or village-owned enterprises. Direct financial funding from the state and provincial budgets should also be optimised to enable direct investment from the private sector to local community business entities

Quality Assurance

- Consideration should be given to service agreements with third-party maintenance services to address any technical issues after project commissioning.
- An efficient handover process from the MEMR or any project owners to the mini-grid management team and/or designed owner of the system is needed.

Box 3. Summary of key recommendations from implementation of the EnDev Project

Source: EnDev (2020).

13 In addition to providing support for solar PV implementation in rural areas, the EnDev project also supports the implementation of mini-hydro RE deployment through the provision of guidebooks (EnDev, 2017).

Project Name	Status	KfW Rating	Project	German Contribution (million)
Power Grid Development Program Sulawesi and Nusa Tenggara (RBL)	Active	-	2020-2024	EUR 255.1
Sustainable Hydropower Phase 1	Active	-	2018-2026	EUR 85
Sustainable Hydropower Phase 2 (Investment)	Active	-	2017-2025	EUR 225.0
Sustainable and Inclusive Energy Programme (SIEP), subprogramme 1	Completed	Reported by ADB	2017	EUR 186.6
Sustainable and Inclusive Energy Programme (SIEP), subprogramme 2	Completed	Reported by ADB	2017-2018	EUR 200
1,000 Islands Renewable Energy for Electrification Programme Phase 2	Active	-	2018-2026	EUR 69.7
Geothermal 1, Kamojang Rehabilitation	Completed	Not published	2015-2021	EUR 60
Geothermal 1, Ulumbu and Mataloko Development	Active	-	2018-2026	EUR 150
Development of Geothermal Resources in Seulawah Agam	Completed	Unsuccessful	2017-2021	EUR 7

Table 7. List of Projects Implemented by KfW Development Bank in Indonesia (Post-2018)

Source: CIF (2022); KfW (accessed December 2022)

Table 7 outlines energy-related KfW projects that have been implemented in Indonesia since 2015 and are listed in the KfW projects database, including projects that have been completed and those that are currently still active. The results of KfW's evaluation of completed projects, such as the Kamojang Geothermal Power Plant development project, are not all currently accessible in the KfW database, but the results of one project, the development of the Seulawah Agam Geothermal Power Plant, are available: it was rated as unsuccessful, with early termination in 2017 due to 'low chances of successful implementation within an acceptable time frame'. However, it should be highlighted that the project does not have plans to move forward to an exploration and feasibility study phase, despite having completed pre-negotiation for a power purchase agreement (PPA), tender preparation, and the conclusion of a public–private partnership (PPP) agreement. This is because the provincial government made it very hard to get approval and the money needed for fees and the public partner's minimum share capital. Moreover, it was also reported that the provincial government gave unclear and contradictory political signals related to the development of the geothermal site (Kfw, 2021b).

The IKI, one of the main channels for Germany to achieve its international climate finance commitment, has supported energy transition globally through its four pillars (see box 4), with around 120 projects and more than EUR 1 billion of funding. With Asia receiving about one third of the IKI's total global support, Indonesia has been one of the IKI's priority partner countries and is currently being supported by 50 ongoing IKI projects with a total financial value of EUR 463.6 million across all IKI sector categories, consisting of 11 bilateral projects and 39 regional or global projects.[14] At the ministerial level, IKI political partners in Indonesia include the MEMR, BAPPENAS, the MoEF, the MoF, the Ministry of Industry, and the Ministry of Trade (IKI, 2022).

Expanding on the IKI's track record in Indonesia throughout 2008 to 2022 in the energy sector, it can be seen in table 8 that there are 17 energy-sector-related IKI projects in Indonesia that have included Indonesia as one of its recipient countries, totalling EUR 68 million, and there is one ongoing bilateral project, the ExploRE project, valued at EUR 3.85 million. Looking ahead, the 2023 draft federal budget has allocated EUR 685 million for the BMWK, the BMUV, and the AA to support projects through the IKI that will start implementation in 2023 globally for all climate-related sectors, an increase of 14.9% from the IKI's total budget in 2022 (EUR 596 million).

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Residential using solar panel system as green energy in Indonesia.

Management and logistics

- **Enhancing policy and regulatory frameworks to create an enabling environment;**
- **Capacity development of financial institutions such as national development banks and private banks;**
- **Supporting the development of bankable projects through project preparation facilities;**
- **Mobilising private sustainable investments through de-risking instruments, e.g., structured funds.**

Box 4. **Four Pillars of IKI Engagement to Mobilise Climate Finance**

Specifically for the energy sector, the 2023 federal budget draft allocated EUR 589 million towards project funding for applied research and development of energy technologies (Bundestag, 2022; BMWK, 2022a). Specifically for Indonesia, in Q4 2022, the BMWK has stated, the IKI substantially increased its financial commitments for Indonesia, these now total EUR 50 million, which includes EUR 25 million for the continuation of successful projects such as CASE Southeast Asia and new projects such as the Sustainable Energy Transition in Indonesia (SETI) project,[15] valued at EUR 15 million. Along with the upcoming Innovation Regions for a Just Energy Transition project, which includes EUR 5.3 million in commitments for Indonesia[16] (IKI, 2022), Germany has also agreed to give ADB's Energy Transition International Mechanism (ADB, 2022; IKI, 2022d) EUR 25 million in grant money that was set aside by the AA through the IKI. This was done as part of the JETP.

14 Global and regional projects are those that are concurrently implemented in other countries besides Indonesia.

15 The SETI project is set to be implemented in 2023–2028 and will directly support the JETP through support in relation to (1) the regulatory framework; (2) leveraging access to finance; (3) demonstration of business ideas and technologies; and (4) upscaling and replication of the demonstrations.

16 The Just Energy Transition (JET) project is set to be implemented in 2022–2026, covering just transition in Kalimantan and South Sumatra. The process will involve tripartite dialogue processes between government, private companies, and labour unions, as well as exchange of shared experiences between countries involved in the JETP (South Africa, Indonesia, and India).

Project Name	Term	Amount (EUR)	Countries
Strategic and conceptual support of the autonomous village energy program ("Desa Mandiri Energi" DME)	11/1/2008 to 9/30/2009	249,964.27	Indonesia
Biogas initiative for improved agriculture in Bali and Flores	8/1/2021 to 7/31/2022	49,089.00	Indonesia
Strategic development of economic reduction potentials through the use of renewable energies (ExploRE)	11/1/2018 to 6/30/2023	3,850,000.00	Indonesia
Energy Efficiency for Sustainable Tourism in Pangandaran, Indonesia	12/15/2010 to 5/31/2014	1,217,391.00	Indonesia
Pilot test project of the Global Bioenergy Partnership criteria and indicators for sustainable bioenergy in a target group of developing countries	10/1/2011 to 9/30/2014	870,187.19	Colombia, Indonesia
Consumer Financing for Access to Clean Energy Technologies in South and Southeast Asia (FACET) (2010-2015)	9/1/2010 to 8/31/2015	1,564,735.98	Indonesia, Vietnam
100% renewable energy in cities and regions for climate change mitigation	3/1/2019 to 12/31/2023	3,979,586.16	Argentina, Indonesia, Kenya
Global influencers initiative on shifting financial flows	5/1/2018 to 10/31/2019	2,236,996.00	Indonesia, Philippines, Vietnam
Advisory facility for cities and municipalities to finance mitigation measures in the field of sustainable energy supply FELICITY	3/1/2017 to 12/31/2022	13,350,000.00	Brazil, China, Ecuador, Indonesia, Mexico
Sustainable land use for biomass production	2/15/2010 to 6/30/2014	2,525,925.84	Brazil, Colombia, Indonesia
Green Banking - Capacity Building to finance renewable energies and climate protection	11/1/2015 to 12/31/2022	4,549,304.22	Colombia, Costa Rica, El Salvador, Guatemala, Honduras, India, Indonesia, Nicaragua, Panama, Peru, Philippines, Thailand, Vietnam
Clean Energy Finance Innovation Program	10/5/2009 to 12/31/2014	1,815,606.92	Cambodia, China, India, Indonesia, Mongolia, Nepal, Pakistan, Philippines, Singapore, Tonga, Vietnam
Capacity Development on Renewable Energies and Grid Integration (CapREG)	1/2/2014 to 12/31/2018	2,357,989.90	Ecuador, Indonesia, Mexico, Peru, Philippines, Thailand, Vietnam
Strategic environmental dialogues	01/2014 to 02/2024	9,350,000.00	Argentina, Brazil, China, Colombia, India, Indonesia, Morocco, South Africa, Thailand, Uruguay, Vietnam
Clean, Affordable and Secure Energy for Southeast Asia (CASE)	3/1/2020 to 2/29/2024	19,950,000.00	Indonesia, Philippines, Thailand, Vietnam
Orientation of infrastructure investments towards the goals of the Paris Agreement and Agenda 2030 in Central and Southeast Asia (SIPA)	10/1/2021 to 9/30/2025	19,677,943.00	China, Indonesia, Kazakhstan, Mongolia, Philippines, Thailand, Uzbekistan
South East Asia Energy Transition Partnership	11/26/2021 to 12/31/2025	4,000,000.00	Indonesia, Philippines, Vietnam

Table 8. List of IKI-Funded Projects Implemented in Indonesia Relevant to the Energy Sector

Source: IKI Project Database (accessed December 2022)

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Aerial View of Cirata Dam, Hydro Electric Power for Java and Bali, Cianjur, West Java Indonesia

A Brief Look at Indonesia–Germany Cooperation on the Financial Aspect of Energy Transition and Climate Mitigation

This study has identified that Germany has provided regular support for Indonesia in addressing the financing aspect of sustainable development, climate targets, and the energy transition. As seen in table 9, at least eight commissioned programmes dating back to 2009 have been relevant in the aforementioned context. Despite not having a project exclusively designed to address the mobilisation of domestic and international finance to directly support Indonesia's energy transition efforts, several programmes have sought to improve existing structures and mechanisms relevant to financial resource mobilisation for the energy sector.

Projects	Commissioning Ministry	Period	Indonesian Partner	Energy Transition Financing / Sustainable Financing Aspect
Strategic partnership for supported nationally appropriate mitigation actions (NAMAs) and climate finance – support for the ICCTF (INFIS)	BMU	2013-2017	BAPPENAS, MoF, OJK, ICCTF	Institutional development of the ICCTF, including support to secure access by Indonesia's local public and private sectors to international climate financing, e.g. through analysis on the barriers for RE and energy efficiency projects, as well as the development of adjusted financing mechanisms that provide sufficient incentive for mobilising the potential of the private sector.
Domestic resource mobilisation for sustainable development (DRM)	BMZ	2019-2023	MoF, (BKF DJP)	Improving the formulation of fiscal policy with the aim of increasing government revenue and improving the quality of government spending. Exploring new revenues from carbon tax, and supporting long-term fiscal strategy through green reforms within the Energy Transition Mechanism (ETM), climate finance, the carbon pricing mechanism and targeted subsidies. The DRM project has also published a study in 2020 on the optimisation of the Indonesian Environment Fund (BPDLH) for RE development.[17]
Clean, Affordable and SecureEnergy for SEA (CASE)	BMWK	2020-2024	OJK, BAPPENAS	Although CASE's focus is not specifically on the financing aspect of energy transition, the programme has conducted research relevant with sustainable finance and renewable energy financing to address aspects such as de-risking tools for RE investment. In addition, CASE is set to conduct multi stakeholder dialogue on green taxonomy and review of the Green Taxonomy Document.
Strategic Exploration of Economic Mitigation Potentials through Renewables (ExploRE)	BMWK	2018-2023	MEMR	Creating synergies between key stakeholders from the government, private companies, financial institutions, and international organisations. Supports mechanisms and improved financing instruments that offers new options and opportunities for RE deployment. This is done through studies on government fiscal support for RE project financing and on innovative financing for RE projects. ExploRE also organises capacity building activities on Indonesian Public-Private Partnerships or *Kerjasama Pemerintah dan Badan Usaha* (KPBU) and supports the credit guarantee concept for supporting RE projects.

17 Link to GIZ Study on BPDLH: https://fiskal.kemenkeu.go.id/files/berita-kajian/file/kajian%20BPDLH.pdf.

Green Economy Transformation (GET) in cooperation with the Partnership for Action on Green Economy (PAGE)	BMU	2019-2022	MoF	Advised the Ministry of Finance in the implementation of green fiscal policy. Capacity on the development of fiscal policy is achieved through institutional improvements and capacity building – for example, through modernisation of tax databases, optimisation of public revenues, and identification of new sources of public revenues to support achievement of the SDGs 2030 through evaluation and development of subsidy and fiscal incentive programmes.
Regional Economic Development Program (RED) (Green Economy Component)	BMZ	2014	OJK	Support to the OJK in developing a comprehensive study, Proposition for a Definition of Sustainable Finance in Indonesia. The study recommended the definition of sustainable finance be contextualised for Indonesia and recommended that only the projects that comply with all existing environmental regulations, including the appropriate environmental impact assessment, and applicable standards (e.g. PROPER), can be considered for sustainable financing. In addition, the study recommended further actions on sustainable finance such as the formulation of sustainable credit guidelines, capacity development, involvement of the insurance industry, and involvement of professional energy-service companies.
Monitoring, Reporting and Verification for Mitigation Measures in Indonesia (MRV-MMI) Project	N/A	2019-2021	BAPPENAS	Support to BAPPENAS to assess options on how the government´s COVID-19 stimulus packages can benefit the green economy and best provide co-benefits of green investments – improved economic, social, and environmental benefits. This support is a contribution to the NDC Partnership.
Policy advice for environment and climate change (PAKLIM)	BMZ	2009-2015	MoEF	GHG reduction and improved energy efficiency in industry. The programme promotes mutually supportive collaborations with private industry using a number of different financing mechanisms, such as development partnerships with the private sector, as well as through the preparation of NAMAs.

Table 9. List of Programmes Supporting the Financial Aspect of Indonesia's Energy Transition, Climate Action, and Sustainable Development

To elaborate on these examples: firstly, the German government, through GIZ, and dating back to 2014, has released several studies related to sustainable financing and optimisation of existing funding mechanisms to support RE development. Notable examples include support for the development of a comprehensive study commissioned by the OJK, Proposition for a Definition of Sustainable Finance in Indonesia, which also delves into available financing instruments and frameworks applicable for the Indonesian banking sector, and suggests sustainable finance activities specific to the energy sector including low-emission energy generation, supply, and energy efficiency investments, as well as providing a list of sectors that need environmental performance improvements.

Furthermore, a more recent study published in 2020 by the MoF supported by the GIZ DRM project has also sought to optimise the existing funding structure of the Indonesian Environment Fund (BPDLH) in the context of supporting RE development. This study proposed a 'Renewable Energy Task Force' under the existing BPDLH structure, down to its tasks and responsibilities. Besides providing a guideline for BPDLH on the stages of RE project development, the study also thoroughly elaborated on a myriad of financing instruments that may be applicable for use by BPDLH to support RE projects in three categories: (1) project development funding (three instruments); (2) credit enhancement facility (nine instruments); and (3) technical assistance (three instruments). In addition, the GIZ ExploRE project also involves the delivery of studies on innovative financing and fiscal support for RE project financing. Although detailed information on renewables financing mobilised through the BPDLH throughout 2019–2021 is not available, BPDLH has channelled IDR 23 billion of grants from the Sustainable Energy Fund (SEF) to solar PV installation incentives in cooperation with the UNDP (UNDP, 2022).

Aerial View of Jatiluhur, the Largest Dam in Indonesia.

Secondly, expanding on table 9, support has also been delivered through several projects designed to improve the mobilisation of financial resources. These can be divided into two categories: firstly, those related to the optimisation and mobilisation of public finance through improvements in fiscal mechanisms and policies, e.g. support through the DRM project, the PAGE project, and the MRV-MMI project; and secondly, projects that support further provision and mobilisation of private financing, which includes projects such as PAKLIM, INFIS, and ExploRE. The INFIS project focuses on the incentivisation of the private sector through institutional development of the ICCTF and adjustments in financing mechanisms, while the ExploRE and PAKLIM projects have sought to mobilise private finance through partnerships and collaboration via financing mechanisms including PPPs, along with relevant financing instruments.

Assessing the depth of contributions of completed projects such as INFIS, RED, MRV-MMI, and PAKLIM to aspects of sustainable financing, it can be seen that these projects have mostly provided technical assistance to the GoI, backed by comprehensive guidelines and manuals specific to those organisations that can be operationalised at the institutional level, training and educational materials, research materials, and development of software to be used by government personnel. To elaborate on the outputs of several projects: firstly, the INFIS project has previously supported ICCTF institutional development, particularly in the context of NAMAs, through the provision of recommendations on legal options for improved governance of the ICCTF, the ICCTF grant channelling procedure, an accounting manual and business plan, and assessment of the compliance of the ICCTF with the GCF standards. Moreover, the project has also conducted analysis and stakeholder discussions on the barriers to investment in RE and energy efficiency projects, as well as producing a study identifying factors inhibiting local banks from employing project finance for RE projects (GIZ, 2017).[18] Despite provision of support towards ICCTF specifically for NAMA, including RE financing, the MoF recorded that the ICCTF had contributed to only 10 energy-related projects throughout 2010–2019, nine of these channelling funding to a total value of USD 3.2 million,[19] with no new energy-related projects supported post-2019 (MoF, n.d).

Wind farm Indonesian electric technology.

Secondly, the RED project published a study in 2014 that went into detail about sustainable financing in Indonesia and gave examples of how it could be used in the energy sector. This study explored sustainable financing by evaluating the level of depth of guidance for the financial services industry to assess sustainable lending qualification, giving suggestions on sustainable finance classifications and reporting systems based on the OJK's research, taking lessons learned from other countries on regulatory frameworks for sustainable financing, and examining available international sustainable banking standards (GIZ & BAPPENAS, 2015). Although research on sustainable finance classification and reporting system involving financial service stakeholders has been available since 2014, Indonesia's Green Taxonomy Document was released only in February 2022. Moreover, the current version of the Green Taxonomy Document still requires further improvements, particularly on how the financial services sector can implement the taxonomy for classifications of their portfolios and loan books (IESR, 2022).

18 Besides the outputs listed, the INFIS project has also conducted capacity building for the ICCTF on RE finance, international climate finance, the GCF, grant channelling, and project cycle management. (GIZ, 2017).

19 The bulk of grants for mitigation actions in the energy sector channelled through the ICCTF lies in a project implemented in 2010–2011, namely the Energy Conservation and CO2 Emission Reduction in Industrial Sector project, which was valued at USD 2.2 million (MoF, n.d.).

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Solar power plant on the island of Bukulimau, East Belitung.

Conclusion and Recommendations

In sum, there are three key findings worth highlighting. *Firstly*, although Germany's planned public budget for international climate finance for all sectors for 2022 and 2023 has been much lower than its actual realisation in 2021 (EUR 5.34 billion), this does not guarantee that the upcoming budget realisation for 2022 and 2023 will also decrease. This is evident considering that Germany planned EUR 4.27 billion of climate finance from the federal budget in 2021, yet the budget realisation for that year reached EUR 5.34 billion, a 25% increase on what was planned.

Secondly, in line with this context, Germany's renewed commitments, as well as its recent institutional arrangements relevant to its climate cooperation and climate diplomacy efforts, may only strengthen its role on the international stage, given that there are now four ministries involved in international climate finance and striving to push the Federal Government to honour Chancellor Scholz's commitments to provide EUR 6 billion annually by 2025. Fortunately, these changes have also been followed by positive signs in the federal budget for 2022 and 2023, where the total climate finance budget is still showing a steady, albeit insufficient, increase compared to earlier plans for 2021 (EUR 4.27 billion): EUR 4.30 billion for 2022 and EUR 4.31 billion for 2023. Germany has also made new financial pledges to support upcoming projects that will help Indonesia with its energy transition. Despite these encouraging signs, the rate of increment for these budgetary plans, as well as the budget realisation that follows, should be closely monitored in the years following the Russian war on Ukraine and its associated implications.

Thirdly, with regard to further areas for cooperation with Indonesia, it has been identified that further cooperation in policy and regulatory development to overcome barriers in the RE investment landscape is imperative. This includes improving coherence across Indonesia's climate and sectoral policies, as well as development of regulations that can alleviate the technical and bureaucratic barriers hindering RE development. In addition, cooperation between Indonesia and Germany in policy development should also address those policymakers whot are directly relevant to the financial sector, building on outputs of previous projects, and aim to improve the participation of private investors in RE development.

Moreover, taking into account available information on other countries' bilateral cooperation with Indonesia, it can be seen that Germany remains in the forefront on bilateral cooperation related to electricity-supporting infrastructures in Indonesia (e.g. grids), and bioenergy technologies, and should continue to utilise its extensive experience in this context.

Based on the above-mentioned key findings, the following are the recommendations brought forward to support further bilateral cooperation between Germany and Indonesia:

1 Indonesia and Germany should continue cooperating on the development of regulatory frameworks and policies that can enable financial flows from the private sector and financial institutions.

Policy and regulatory frameworks that require further improvement in their coherence and consistency include the LTS-LCCR 2050, the National Energy Plan (RUEN), the National Electricity Master Plan (RUKN), and the RUPTL. Particularly for the RUPTL, further evaluation needs to be conducted on the linkage between targets set in the RUPTL and Indonesia's emissions reduction targets. In addition, to bolster private sector financing for green projects, support to further develop Indonesia's Green Taxonomy Document is also required. This is particularly the case in terms of defining sectors in transition that are categorised as yellow in the taxonomy and applying scientifically sound emissions measurements and criteria to ensure their transition. Furthermore, room for improvement still exists for the taxonomy document: it should provide clearer guidelines for financial institutions to determine green and non-green economic activities and make effective adjustments to their portfolios and loan books, and the taxonomy's interoperability with international taxonomies should be improved. Action in this context will be built on Germany–Indonesia's past work in sustainable finance, with an emphasis on updating previously acquired information and proposing recommendations to ensure relevancy for the current context.

2 Looking back at various projects with components that address the financing aspect of RE, it can be seen that further assessments on past Germany–Indonesia cooperation projects are required to ensure the continued impact of future cooperation.

Considering that most of the cooperation programmes implemented by the GIZ focus on the deployment of RE technologies throughout all phases of RE pilot projects, it is indeed sensible for these projects to address only barriers to RE financing that are relevant to the needs of the programmes' RE pilot projects. However, given that implemented cooperation programmes have amassed a wealth of lessons learned, know-how, guidelines, and recommendations related to RE financing in Indonesia, Germany and Indonesia should consider assessing and synthesising available outputs and materials that have previously been contributed specifically to the financing aspect of RE, in order to avoid duplication of work and provide guidance materials on RE financing in ongoing and forthcoming projects. Following assessment and synthesis of available materials, both parties should continue their cooperation to expand, update, and utilise available resources that can specifically address barriers to RE financing in Indonesia. This future effort can also be made under the broader framework of further developing sustainable finance for green projects in Indonesia, given that precedents for Germany's support for Indonesia in this context already exist, e.g. efforts to leverage private finance and improve public fiscal management.

3 Cooperation on the electricity grid, storage, and energy efficiency measures should be continued.

Germany has extensive experience and has prioritised international support for grid development, storage, and energy efficiency, and more knowledge exchange and technical assistance are required to support Indonesia's energy transition. For example, supporting infrastructures such as application of batteries for utility-scale variable RE generation and improvements in grid reliability remain key to supporting RE deployment in Indonesia.

4 Under the framework of the JETP, Indonesia and Germany should also seek to improve the bankability of RE projects and improve frameworks that can leverage further private sector financing.

The JETP framework requires that attention be paid to the mobilisation of an international flow of funds to support financial de-risking instruments that ensure the bankability of JETP projects. International financing can play an important role in providing concessional loans to support project preparation, e.g. conducting feasibility studies, and blended financing can also play a role in reducing the cost of loans through interest subsidies. In addition, to further leverage private sector financing for projects beyond the framework of the JETP, assessments of Indonesia's disclosure standards should be conducted. Clear and effective disclosures of green projects implemented under the framework of the JETP can further highlight the long-term value of green projects, in order to further attract private investments beyond the framework of the JETP. In this context, the GoI should also take into account the long-term bankability of JETP-supported projects. Thus, the GoI should ensure that potential JETP projects such as the conversion of diesel power plants to gas power plants remain feasible, and attractive for investors specifically interested in supporting their further conversion to RE power plants.

5 Germany and Indonesia should consider further support under the framework of Indonesia's ETMCP, particularly to further leverage funds to support the ETMCP CRF.

Given that Indonesia currently faces an electricity oversupply issue due to an abundant supply of brown energy, maximum support for the ETMCP CRF facility should be ensured to make room for RE deployment. As available donors and investors have significantly more appetite for supporting RE deployment, further support is required to address the mismatch between current donors' and investors' appetites and Indonesia's critical need for CFPP phase-out. However, it must be highlighted that, considering that Germany will not fund measures such as CCUS, and considering that Germany's past development projects in Indonesia have mostly focused on renewables deployment, Indonesia should look into more effective measures through which Germany can contribute to Indonesia's coal phase-out, particularly in the context of the 'just' aspect of the transition, which is one of Germany's priorities in supporting Indonesia's energy transition.

6 Germany's whole-of-government approach in matters related to climate action should be considered as good practice for Indonesia's institutional arrangements relevant to its climate policies.

In terms of institutional arrangements on Indonesia's climate action, Germany's whole-of-government approach in climate issues[20] should be a lesson learned for Indonesia, enabling it to further improve institutions' commitments and the coherence of targets and policies across the Indonesian government. As an example, Germany has integrated the involvement of its line ministries into its climate diplomacy efforts in the UNFCCC process, an approach that should be viewed by Indonesia as a lesson learned in making policies and commitments across government institutions coherent.

20 Countries such as the United Kingdom have also begun to implement a whole-of-government approach in their climate action efforts.

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G7 | G20
TRACK 2
DIALOGUE

G7 | G20 TRACK 2 DIALOGUE

G7 | G20 Track 2 Project is a channel to allow 'trickle-down / bottom-up' dialogues between civil society and governments to discuss climate change policies in the context of G20. Our partner CSOs in each country represent the global south countries in these dialogues.

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