

Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Indonesia

Aidy Halimanjaya, Komariah Ervita and Linda Rosalina

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The iGST aligns the independent community – from modellers and analysts, to campaigners and advocates – so we can push together for a robust GST that empowers countries to take greater climate action.

The Finance Working Group (FWG) is an open partnership bringing together expert perspectives from the global North and South on the progress made towards financing climate action. Considering the provision of support to developing countries to mitigate and adapt to climate change and the consistency of finance flows with climate objectives, the FWG aims to support the UNFCCC GST process and to independently benchmark the official GST. The group is co-chaired by Charlene Watson of ODI and Raju Chhetri Courtnae Bailey of the Prakriti Resources Center.

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+ Abbreviations

ADB	Asian Development Bank
AFOLU	agriculture, forestry and other land uses
APBN	national state budget (Anggaran Pendapatan dan Belanja Negara)
ASEAN	Association of Southeast Asian Nations
PPN/Bappenas	Ministry of National Development Planning/National Development Planning Agency (Kementerian Perencanaan Pembangunan Nasional/Badan Perencanaan Pembangunan Nasional)
BKF	Fiscal Policy Agency (Badan Kebijakan Fiskal)
BNPB	National Disaster Management Agency (Badan Nasional Penanggulangan Bencana)
BPDLH	Environmental Fund Management Agency (Badan Pengelolaan Dana Lingkungan Hidup)
BPDPKS	Palm Oil Fund Management Agency (Badan Pengelola Dana Perkebunan Kelapa Sawit)
BPK	Financial Audit Board (Badan Pemeriksa Keuangan)
BPS	Statistics Indonesia (Badan Pusat Statistik)
CBT	climate budget tagging
CFI	Corporate Finance Institute
CFU	Climate Funds Update
CM1	Counter Measure 1
CM2	Counter Measure 2
CMMI	Coordinating Ministry for Marine affairs and Investment
CO_{2e}	carbon dioxide equivalents
CRS	Creditor Reporting System
DAC	Development Assistance Committee

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DID	regional incentive funds (Dana Insentif Daerah)
ESG	environmental social governance
FCPF	Forest Carbon Partnership Facility
FDI	foreign direct investment
FSC	Forest Stewardship Council
GCF	Green Climate Fund
GHG	greenhouse gases
HCS	high carbon stock
HCV	high carbon value
ICCTF	Indonesia Climate Change Trust Fund
IFC	International Finance Corporation
iGST	Independent Global Stocktake
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
ISPO	Indonesia Sustainable Palm Oil
Kemendesa	Ministry of Villages, Development of Disadvantaged Regions and Transmigration (Kementerian Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi)
Kemenkeu	Ministry of Finance (Kementerian Keuangan)
KLHK	Ministry of Environment and Forestry (Kementerian Lingkungan Hidup dan Kehutanan)
KPK	Corruption Eradication Commission (Komisi Pemberantasan Korupsi)
KRISNA	Collaborative Planning and Budgeting Performance Information (Kolaborasi Perencanaan dan Informasi Kinerja Anggaran)
MSMEs	micro, small and medium-sized enterprises
NDA	national designated authority



NDC	nationally determined contribution
NDPE	no deforestation, peat or exploitation
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
OJK	Financial Services Authority (Otoritas Jasa Keuangan)
P3H	Forest Development Financing Centre (Pusat Pembiayaan Pembangunan Hutan)
PHPL	Sustainable Production Forest Management (Pengelolaan Hutan Produksi Lestari)
PPP	public–private partnership
PT IFF	PT Infrastructure Finance Facility
PT SMI	PT Sarana Multi Infrastructure
RAD	Regional Action Plan (Rencana aksi Daerah)
RAD SDG	SDG Regional Action Plan (Rencana aksi Daerah Sustainable Development Goals)
RAN API	National Action Plan for Climate Change Adaptation (Rencana Aksi Nasional Adaptasi Perubahan Iklim)
RAN GRK	National Action Plan for Reducing GHG Emissions (Rencana Aksi Nasional Gas Rumah Kaca)
RAN SDG	National Action Plan for the SDGs (Rencana Aksi Nasional Sustainable Development Goals)
REDD	Reducing Emissions from Deforestation and Forest Degradation
RKA	Work Plan and Budget (Rencana Kerja dan Anggaran)
RKPD	regional working plans (Rencana Kerja Pemerintah Daerah)
RPJMD	Regional Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Daerah)
RPJMN	National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional)

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RPJP	National Long-Term Development Plan (Rencana Pembangunan Jangka Panjang)
RSPO	Roundtable Sustainable Palm Oil
SDG	Sustainable Development Goal
SFR	Sustainable Finance Roadmap
SVLK	Timber Legality Assurance System (Sistem Verifikasi Legalitas Kayu)
TFCD	Task Force on Climate-related Financial Disclosures
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WRM	World Rainforest Movement





+ Executive Summary



One of the three main goals of the Paris Agreement is to ‘make finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’, as stated in Article 2.1c (UNFCCC, 2015). This long-term goal recognises that – if the two other long-term goals of the Paris Agreement (on adaptation and mitigation) are to be met – an increase in finance that supports climate action must be partnered with a redirection of the finance, both public and private, that is locking countries into high-emission, low-resilience futures.

One of the largest emitters of greenhouse gases (GHG) in the world, Indonesia has been steadily increasing financial flows into various instruments to respond to these needs since 2010. To date, Indonesia’s emissions are primarily produced by the agriculture, forestry and other land uses (AFOLU) and energy sectors. In the AFOLU sector, Indonesia has experienced high rates of deforestation because of the expansion of plantations for oil palm, pulp and paper, as well as mining and infrastructure developments as part of broader economic development. In the energy sector, heavy reliance on fossil fuels – especially coal – is responsible for high emissions.

This report offers a comprehensive assessment of the consistency of finance flows with the long-term climate goals as articulated in Article 2.1c of the Paris Agreement. It reviews both private and public financial flows and their (mis)alignment with the country’s climate change mitigation and adaptation goals.

Domestic public finance levers

Indonesia has developed and implemented a set of strategies and tools aimed at realigning public finance flows with low-carbon and climate-resilient pathways. Along with its nationally determined contribution (NDC), the most important national strategy relevant to Article 2.1c is the Sustainable Finance Roadmap (SFR), currently in its second phase (SFR II). While SFR I was criticised for having too many loopholes, allowing misaligned finance flows to continue, SFR II sees the Government of Indonesia embarking on an ambitious plan.

Broadly speaking, the government employs three key tools and mechanisms to ensure public and private finance flows are low-carbon and climate-resilient (i.e. aligned with Article 2.1c):

1. The Financial Services Authority (Otoritas Jasa Keuangan, or OJK) has launched its Green Taxonomy. Indonesia is one of the first countries in the world to develop and introduce such a taxonomy, although it is still voluntary. It covers 2,733 sectors and subsectors, and it categorises activities as green, yellow or red. There are concerns, however, about the classification of some sectors – particularly those related to fossil fuels and deforestation risks. Moreover, since 2018, the OJK has

required banks and other investors to disclose sustainable finance action plans and annual sustainability reports. But there is room to improve disclosure standards based on the Green Taxonomy and there is still limited regulatory oversight. The central bank (Bank Indonesia) has already introduced lower capital requirements to support investment and lending to green buildings and electric vehicles, but green-supporting and brown-penalising measures could similarly be developed further.

2. The Government of Indonesia uses climate budget tagging (CBT) to monitor its progress against national adaptation and mitigation goals, and to add transparency. However, significant planning–budgeting gaps exist because of inconsistencies at national (between ministries) and subnational (between national and regional authorities) levels. This jeopardises the Paris-alignment of public finance since allocated funds may be spent on climate-misaligned activities. The Government of Indonesia also monitors public budgets against the United Nations’ Sustainable Development Goals (SDGs), which link with climate action through SDG 13.
3. Indonesia is known for its flagship green sukuk, which are sovereign sharia-compliant green bonds. Indonesia first entered the green sukuk market in 2018 and issuances have risen ever since. The proceeds finance and refinance projects in nine eligible sectors, especially in sustainable transport and building resilience to climate change in highly vulnerable areas and sectors. However, the opacity of the framework used to identify eligible projects has raised fears over ‘greenwashing’. Some sustainable transport projects have faced criticism for their adverse knock-on effects on the environment. Public–private partnerships (PPPs), such as PT Sarana Multi Infrastruktur (PT SMI), are used as blended financing instruments to implement these projects, especially in the infrastructure sector, but these too have been criticised for some adverse human and environmental impacts.

Despite many positive developments in the Indonesian government’s plans to align finance flows with the goals of the Paris Agreement, issues remain over their successful implementation. Mandatory standards in the country’s important AFOLU supply chains suffer from weak implementation and enforcement. Large-scale deforestation, biodiversity loss and human rights abuses therefore continue to be reported, especially in the country’s palm oil, timber and mining sectors. In the carbon-heavy energy sector, emissions continue to grow – in part because of public finance support for fossil fuel projects and generous fiscal subsidies in the country’s coal sector.

International public finance levers

Between 2011 and 2020, at least \$1.19 billion in climate finance was disbursed through international development cooperation to support some 610 projects addressing climate change in Indonesia. Around 75% of these funds have clear objectives to undertake climate mitigation and adaptation actions in Indonesia; the remaining funds have objectives that are insufficient to promote sustainable development. On the multilateral side, the consistency of finance flows is highly likely, and non-allocated finance flows can be cross-cutting and create broad benefits beyond the objective of the Paris Agreement.



Meanwhile, the Government of Indonesia continues to strive to increase existing climate finance to achieve climate targets. The allocation for climate finance within the national state budget (Anggaran Pendapatan dan Belanja Negara, or APBN) has continued to rise since 2016, although there was a decrease in 2020 when global budgets necessarily refocused on the impact of the Covid-19 pandemic.

Private finance levers

To meet adaptation and mitigation financing needs, the Government of Indonesia relies on the mobilisation of both international and domestic sources of private finance. At present, these are largely concentrated in the country's AFOLU sector. Despite numerous voluntary actions and initiatives, such as the adoption of environmental social governance (ESG) frameworks and membership in certification schemes such as Roundtable Sustainable Palm Oil (RSPO), social and environmental risks still loom large in this sector. Analysis shows that despite corporate and investor commitments to stop deforestation, many of the country's largest 'sustainable' investors are exposed to these risks. Concerns over private finance misalignment also exist in Indonesia's mining sector. As with sovereign green bonds, it is not always clear whether capital raised from corporate green bond issuances is used in a Paris-aligned way.

Conclusions and recommendations

Overall, both public and private finance mechanisms are still open to interpretation by those data providers who submit evidence. This means that there is room for financial flows to be inconsistent with the Paris Agreement. Particular inconsistency is found in the area of implementation, because there is no verification mechanism attaching to the self- and voluntary reporting and data submissions of private finance, and public finance parameters are incoherent. This study recommends that the Government of Indonesia consider including verification and audit systems in its draft legislation on sustainable finance. In this way, it will ensure consistency and coherence between policy and implementation, and so help to harmonise public and private finance.



+1 Why collate country actions supporting Article 2.1c of the Paris Agreement?



The second instalment of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) states that climate impacts are happening sooner, and with greater frequency and intensity, than ever before: the global surface temperature was 1.09°C higher in 2011–2020 than in 1850–1900 (IPCC, 2021). The need to mitigate and adapt to climate change is urgent, and this urgency amplifies the need to flow finance towards all the issues.

Climate finance is indispensable to climate action. It has been increased significantly over the last decade, although its flow has recently slowed (Buchner et al., 2021). Article 2.1c of the Paris Agreement sets out a critical and innovative long-term climate finance goal to make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development (UNFCCC, 2015). This goal spans public and private domestic and international financial support for ambitious mitigation and adaptation actions, although Article 2.1c offers only limited guidance on what this means in practice, and there was no discussion or development during negotiations of the concept of consistent finance flows (Bodle and Noens, 2018). While the Paris goals are global, countries can define their own routes to low-emissions, climate-resilient economies, including what data and metrics might be relevant to climate-consistency (Watson, 2021). Thus, they must identify the tools they have available to ensure that financial decisions take climate change into account (Whitley et al., 2018).

Recognising that there is no common understanding and neither an existing approach nor guidance for countries keen to track the climate-consistency of finance flows, we aim in this paper to use the resources available to define consistency with climate objectives and its parameters. We assess the consistency of public and private finance flows by means of six parameters, briefly outlined below.

1.1 Public sector parameters

The scope of public finance covers a country's revenue, expenditures and debt load through various government agencies and institutions (CFI, 2022). Public finance flows for climate change programmes will be assessed across two dimensions:

- sector-specific public finance and activities in NDC-priority sectors such as agriculture, forestry and energy¹

¹ To assess the climate-consistency of Indonesia's finance flows, this paper focuses on three sectors and activities that are likely to bring about misaligned finance flows: agriculture, AFOLU and energy.



- cross-sectoral public finance policies and fiscal levers such as green sukuk or CBT.

Public finance and activities under each parameter will be assessed against sectoral, national and international adaptation and mitigation goals (e.g. whether or not fossil fuel and agricultural subsidies in the energy and AFOLU sectors target reduced GHG emissions).

1.2 Private sector parameters

The scope of private finance covers the income and expenditure activities of private individuals and entities, including investments, bonds, grants and insurances (Chan et al., 2022).

The climate-consistency of private finance flows will be assessed against four parameters:

- activities in sustainable finance sectors such as renewable energy
- alignment with the OJK's Green Taxonomy
- alignment of finance allocated by means of corporate green bonds
- climate-consistency of activities categorised under various mandatory and voluntary sustainable commodity certifications and standards, such as RSPO (see **Table 1**).

Table 1 Assessing the consistency of climate finance in Indonesia

Regulation/policy	Parameter	Standard / signal / indicator
<i>Public financing</i>		
Paris Agreement, Article 2.1c National agendas or regulations <ul style="list-style-type: none"> ▪ NDC ▪ long-term strategic, low-carbon climate-resilient (LTS-LCCR) ▪ RPJMN ▪ RAN GRK ▪ RAN API 	Sector <ul style="list-style-type: none"> ▪ Energy ▪ AFOLU ▪ Industry and product use ▪ Waste Financing mechanisms / instruments <ul style="list-style-type: none"> ▪ CBT ▪ SDG finance ▪ Green Climate Fund (GCF) ▪ Sovereign green sukuk 	<ul style="list-style-type: none"> ▪ Support for low-emission technologies and climate resilience ▪ Phasing out of brown finance flows (e.g. fossil fuel subsidies, unsustainable agricultural subsidies, other heavy industries subsidies)
<i>Private financing</i>		
Paris Agreement, Article 2.1c POJK 51/2017 on sustainable finance POJK 60/2017 on green bonds Presidential Regulation No. 44/2020 Ministry of Agriculture No. 38/2020	Sustainable finance sector activities <ul style="list-style-type: none"> ▪ Renewable energy ▪ Energy efficiency ▪ Pollution prevention and control ▪ Sustainable natural resources and land use ▪ Terrestrial and aquatic biodiversity conservation ▪ Sustainable transportation ▪ Sustainable waste and wastewater management ▪ Climate change adaptation 	<ul style="list-style-type: none"> ▪ Not financing unsustainable activities such as fossil fuel and palm oil ▪ Stricter due diligence and more rigorous ESG risk protection, clearer thresholds, tightened metrics and timelines for green and yellow

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	<ul style="list-style-type: none"> ▪ Eco-efficient products ▪ Green building ▪ Other environmentally friendly business activity ▪ Micro, small and medium-sized enterprises (MSMEs) <p>Green Taxonomy</p> <ul style="list-style-type: none"> ▪ Green activities – no significant harm, positive impacts on the environment ▪ Yellow activities – not significantly harmful to the environment ▪ Red activities – environmentally harmful <p>Green bonds</p> <ul style="list-style-type: none"> ▪ Allocation needs to support climate change mitigation and adaptation <p>Standards (commodities)</p> <ul style="list-style-type: none"> ▪ Timber Legality Verification System (SVLK) ▪ Indonesia Sustainable Palm Oil (ISPO) ▪ Global voluntary certification: <ul style="list-style-type: none"> ○ Forest Stewardship Council (FSC) ○ Roundtable Sustainable Palm Oil (RSPO) 	<p>activities under Green Taxonomy</p> <ul style="list-style-type: none"> ▪ Green investment through green bonds/sukuk significantly correlated with the reduction of carbon emissions; clear definition of green ▪ Controlled and managed certifications or standards
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+ 2 Country and market context

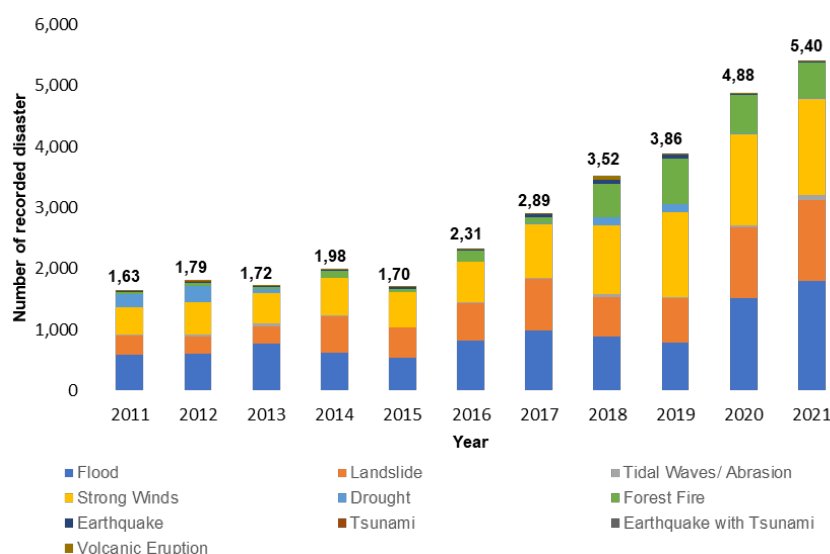


The Paris Agreement hinges on a bottom-up approach to multilateral negotiations. It has shifted away from previous international climate agreements, such as the Kyoto Protocol, which adopt a top-down model for parties to achieve GHG emission standards within a specific timeframe. Despite the flexible bottom-up approach, however, the Agreement rightly compels Parties to take action and to attach timing to their own mitigation pledges, and it provides for an international review process. The intention is to enhance transparency, including of the framework for each country’s climate finance support. Every country will have its own nationally driven interpretation of ‘climate finance’ and of ‘consistency’ with low-emission, climate-resilient pathways; these interpretations can be scrutinised to give them legitimacy. This process also allows countries’ progress to be acknowledged in light of their ‘common but differentiated responsibilities and respective capabilities in light of different national circumstances’ (UNFCCC, 2015) (see **Box 1**).

2.1 Indonesian sectors facing climate-related risk

Climate change poses socioeconomic and political risks for many countries, including Indonesia. The country ranks third among those facing high climate risk and is exposed to all types of disaster (World Bank and ADB, 2021). The increasing intensity of rainfall in many parts of Indonesia has caused flooding, flash floods and landslides. The impacts of climate change exacerbate natural disasters such as drought and high-intensity storms. **Figure 1** illustrates the increasing frequency of natural disasters over the last decade: in 2021, the country experienced 5,402 hydrometeorological disasters – the most the country has ever seen in a year (BNPB, 2022). Of the total number of disasters that year, the National Disaster Management Agency (Badan Nasional Penanggulangan Bencana, or BNPB) reported 1,794 flooding events – again, the most annually in the country’s recent history. These startling figures underline Indonesia’s need for a bigger contingency fund.

Figure 1 Frequency of natural disasters in 2011–2021 (based on BNPB, 2022)



Box 1 Indonesia at a glance

UNFCCC country grouping: Legally included as a Party to the UNFCCC, the Kyoto Protocol and the Paris Agreement, and a non-Annex 1 country under the UNFCCC

G20 grouping: Permanent member of the G20 since 1999, when it was the only country from the Association of Southeast Asian Nations (ASEAN); G20 chair in 2022

World Bank classification: Lower middle-income economy (downward change in income group for year 2021–2022^a)

Gross domestic product (GDP): \$16,970.8 billion

GDP per capita: \$4,349.50

Population: 273.52 million

Sovereign credit rating: Baa2 (Moody Rating 2022)^b; BBB, (Fitch Rating 2021)^c

Poverty rate: 9.71% (26.50 million) in September 2021^d

Taxes and other revenues: IDR2,011.4 trillion (\$130 billion), around 11% GDP

Public budget: Budget deficit, 5.7%; revenue, IDR1.743.6 trillion (2021); expenditure, IDR2.750 trillion (2021)

Public debt: 42.9% GDP

Sources: Bank Indonesia (2021, 2022); BPS (2022); Kemenkeu (2021a, 2022a); World Bank (2022).

^a The Covid-19 pandemic had an impact, with Indonesia dropping from upper middle-income to lower middle-income as of July 2021 (Hamadeh et al., 2021).

^b At February 2022, Moody's maintains Indonesia's credit rating at Baa2 (outlook stable). It is an outstanding achievement for Indonesia in light of the pandemic: throughout 2020 and 2021, many countries experienced negative outlook changes or even downgrades (Bank Indonesia, 2022).

^c At November 2021, Fitch maintains Indonesia's credit rating at BBB (outlook stable). This is an extraordinary achievement for Indonesia in light of the pandemic compared to the many countries that have experienced a decline. Fitch assesses Indonesia's economic activity as having gradually recovered from the pressures of Covid-19, supported by its policies and recovery efforts to handle the pandemic (Bank Indonesia, 2021).

^d This figure shows a decrease of 0.43 percentage points against March 2021 and remains 0.48 percentage points lower than it was in September 2020 (BPS, 2022).

Because of the increasing frequency and intensity of climate-related events, Indonesia is receiving a lot of attention. Climate change poses a threat not only to people but also to the country's economy and financial sector. It is estimated that the costs to the 16th biggest economy in the world and the largest in Southeast Asia could be 2.5–7% of the country's GDP in 2100 (World Bank and ADB, 2021), including to sectors such as agriculture, forestry, biodiversity, coastal and fisheries, water resources and human health (USAID, 2017).

Agriculture is the second-largest support sector in Indonesia's economy. According to Statistic Indonesia, its contribution to Indonesia's GDP at 2020 market prices was 13.7%, which is 0.99 percentage points more than in 2019 (BPS, 2021). The sector comprises primary production of plantation crops such as palm oil, cocoa, rubber and coffee, which are usually dominated by large state-owned and private corporations, and staple foods



such as rice, corn and sugar, alongside food crops (vegetables), which are mainly produced by smallholders and farmers.

Increasing temperatures and changes in rainfall patterns and distribution have reduced water quantity and increased flooding and droughts, negatively affecting productivity. The changes in rainfall patterns and temperature seem to affect the dynamic interactions between plant pests and diseases, which may also reduce productivity. On the island of Java, for example, it is predicted that temperature changes may cause a significant reduction in rice production by 2025 and 2050 of around 1.8 and 3.6 million tonnes respectively, assuming that the rice-growing area in Java remains the same (WALHI, 2017).

Water resources, which are critical for many economic activities, are also directly influenced by erratic rainfall caused by climate change. The Ministry of National Development Planning/ National Development Planning Agency (Kementerian Perencanaan Pembangunan Nasional/ Badan Perencanaan Pembangunan Nasional, or PPN/Bappenas) has projected that reduced water supplies will most critically affect Java Island and Nusa Tenggara provinces, in 2020–2034 and 2030–2045 (PPN/Bappenas, 2021). It estimates that this sector will experience a national economic loss of 27.9 trillion rupiah (IDR). More obviously, reduced rainfall creates drought events: in 2021, a total of 15 occurred in four provinces, while 2018 saw roughly 130 such events (BNPB, 2022).

Climate change has a huge and complex effect on the ocean, coastal and fisheries sectors (PPN/ Bappenas, 2021). Sea-level rises caused by global warming have inundated coastal and swamp areas, changing the coastline, increasing coastal erosion, damaging coastal ecosystems and even drowning small islands (Zikra et al., 2015; Solihuddin et al., 2021). In 2015–2016, the El Niño phenomenon caused about 86% mortality on reef flats in Bunaken Island (Ampou et al., 2017). In May 2022, major areas in the northern part of Central Java province were affected by the worst coastal flooding for five years, with the water reaching 2.1 metres above sea level (Cakti and Resinta, 2022). Increasing sea temperatures can also change ocean circulation patterns, with a significant negative impact on fish production (Gaines et al., 2019).

2.2 Sectors contributing to climate change in Indonesia

In 2015, Indonesia was the world's fourth-largest emitter of GHG (CO₂ equivalents, or CO₂e) which are the drivers of global climate change (Dunne, 2019). According to the Ministry of Environment and Forestry (Kementerian Lingkungan Hidup dan Kehutanan, or KLHK), the largest share of Indonesia's GHG emissions in 2019 came from the forestry and other land use (924,852 Gg CO₂e – 50%) and energy (638,808 Gg CO₂e – 34%) sectors, followed by the waste (134,119 Gg CO₂e – 7%), agriculture (108,598 Gg CO₂e – 6%), and industrial process and product use (60,175 Gg CO₂e – 3%) sectors, with total emissions of 1,866,552 Gg CO₂e (KLHK, 2020). Emissions from forestry and other land use had increased significantly that year compared to previous years, the main sources being peat fires (27.57%) and peat decomposition (24.05%). The national GHG emission trend is depicted in **Figure 2**.

For decades, Indonesia has seen high rates of deforestation – particularly on Sumatra and the Kalimantan islands (Broich et al., 2011; Austin et al., 2019). A large proportion of

the deforestation and associated emissions are attributable to the expansion of plantations for oil palm, pulp and paper (Alisjahbana and Busch, 2017), and mining and infrastructure development have also contributed heavily to deforestation as part of the development process (Bebbington et al., 2018; Sievernich et al., 2021). It is observed that increasing global and domestic demand for pulp and paper, as well as palm oil, will result in the conversion of an additional 21–28 million hectares of currently forested land by 2030 (Wakker, 2014).

In the energy sector, fossil fuels accounted for three-quarters of Indonesia's energy mix in 2020, include for power generation and transport fuels (Climate Transparency, 2021). The power and transport sectors dominated energy use in 2021, accounting for 35% and 27%, respectively (ibid.). In 2020, around 32% of Indonesia's power supply was generated by oil; 28%, by coal; 15%, by gas; 26%, by new and renewable energy. Although the share of coal-based fuel in Indonesia's power-generation systems is lower than that of oil, coal remains the predominant fossil fuel in the mix, because the country has the world's tenth-largest coal reserve (Smith, 2018; BP, 2021).

2.3 Overview of public and private finance stakeholders

Some 66% of Indonesia's climate finance comes from domestic public funding allocated in the APBN (Kemenkeu, 2019). The state budget – the main source of public funds originating from domestic sources – is mostly used to support government programmes and activities that centre on mitigation and adaptation action. Government funds are disbursed through entities such as regional incentive funds (Dana Insentif Daerah, or DID), the Reforestation Fund and various instruments for budget transfer to regional governments, such as the Village Fund (see **Table 2**).

Indonesia's remaining 34% of climate finance comes from bilateral and multilateral public finance. International public fund flows directly support financing projects with direct and indirect contributions to mitigation and adaptation objectives via state-owned enterprises or in lending to the private sector, while the rest is distributed through national and subnational governments to support indirect activities such as policy development.



Figure 2 National GHG emission trend in Indonesia, 2000–2019 (KLHK, 2020)

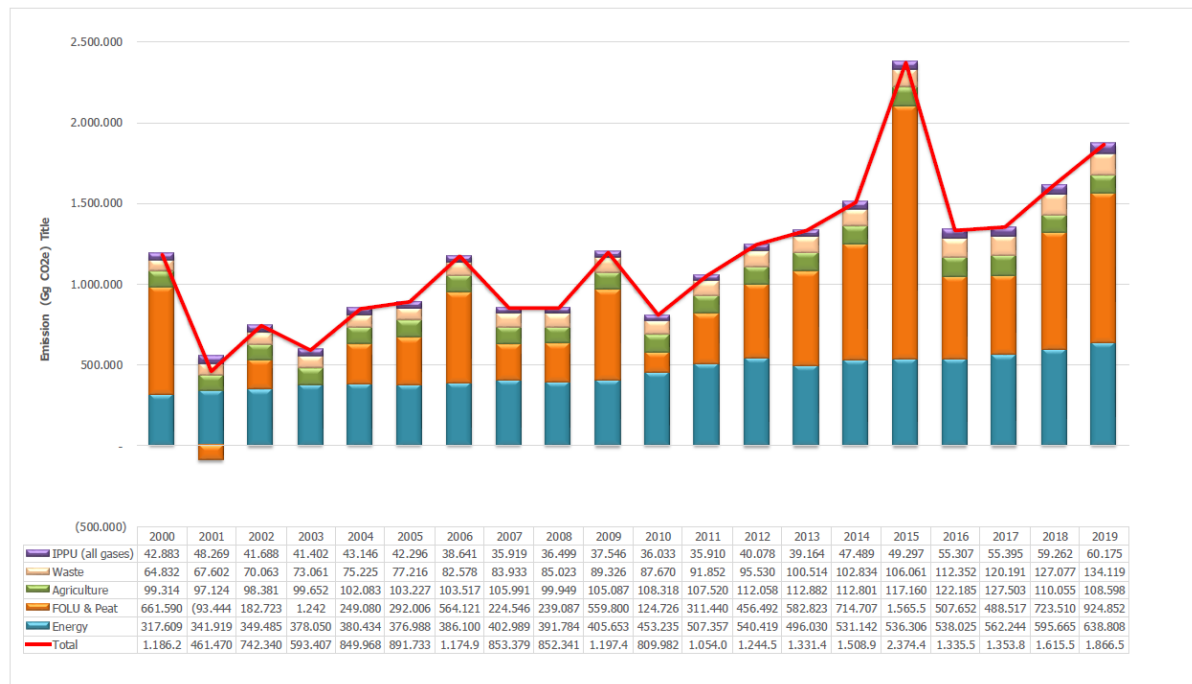


Table 2 presents the existing climate finance and investment instruments related to low-carbon development in Indonesia up to March 2022. These instruments accelerate investment from either domestic or a combination of domestic and international sources of finance.

Table 2 Existing instruments and funding sources

Instrument	Managing entity	Mobilised investment
<i>Public institution</i>		
Green sukuk	Kemenkeu	\$3,250 million
SDG bond (supported by UNDP, HSBC and Crédit Agricole)	Kemenkeu, PPN/Bappenas, CMMI	\$555 million
DID (2019)	Kemenkeu	\$695 million
Village fund (2021) ²	Kemenkeu, Kemendesa	\$22,857 million
Funds for prevention of forest, plantation and land fires (2017–2019)	KLHK, PPN/Bappenas, Kemenkeu	\$2,758 million

² Village funds have not yet been spent for NDC programmes, but they could be directed towards climate change mitigation and adaptation. Village funds can be the most strategic tool with which to achieve and maintain environmental sustainability.

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Reforestation Fund (2017)	P3H	\$14 million
Mixed (results-based payment from GCF, FCPF carbon fund, biocarbon fund)	BPD LH	\$836 million
Royalty and fees (2011–2019)	KLHK, Kemenkeu	\$2,180 million
Development cooperation (2014–2018)	PPN/Bappenas	\$11 million
Development cooperation	USAID, PPN/Bappenas	\$72 million
<i>Private institution</i>		
Green bond	OCBC NISP	\$200 million
Sustainability bond	PT Bank Republik Indonesia (PT BRI)	\$500 million
Impact investment	Private impact investors	\$149 million
<i>Public–private</i>		
Blended finance	Tropical Landscape Finance Facility	\$95 million
PPPs (1990–2019)	PT Infrastructure Finance Facility (PT IFF), Indonesia Infrastructure Guarantee Fund, Kemenkeu, PPN/Bappenas	\$63,500 billion

Several government bodies play a significant role in managing the climate alignment of domestic public finance and facilitating new sources of public and private climate finance in Indonesia. The national actors responsible for managing various national and international climate funds are the Ministry of Finance (Kementerian Keuangan, or Kemenkeu), the KLHK, PPN/Bappenas, the OJK and service agencies such as the Environmental Fund Management Agency (Badan Pengelolaan Dana Lingkungan Hidup, or BPD LH), as well as special mission vehicles such as PT SMI. These actors work in their own ways to ensure that the distribution of climate funding in Indonesia is effective, efficient and synergised with national programmes and priorities.

2.3.1 Ministry of Finance (Kemenkeu)

Kemenkeu is responsible for controlling and managing climate finance to ensure that sufficient funding is available to support climate programmes and activities (Kemenkeu, 2019). To strengthen transparency, it developed the CBT system in 2016, aiming at synergy between climate-change funding and government priorities and goals. Kemenkeu was also appointed national focal point for managing multilateral funding from bodies such as the Green Climate Fund (GCF), one of the financial mechanisms of the United Nations Framework Convention on Climate Change (UNFCCC) (Kemenkeu, 2018) It is also responsible for issuing sovereign green sukus (bonds).



2.3.2 Financial Services Authority (OJK)

The OJK facilitates the acceleration and mobilisation of private climate finance by issuing mandates under Regulation No. 51/POJK.03/2017 for the implementation of sustainable finance for financial service institutions, issuers and public companies.

Over the years, the OJK has developed regulations for sustainable financial management, aiming to encourage financial service institutions to adapt their business processes to support sustainable development and reduce Indonesia's carbon emissions. The OJK set out its route to this in 2014: the Sustainable Finance Roadmap (2015–2019) (SFR) charts an ambitious plan to reform the financial sector to help Indonesia realise its development plans and meet the SDGs. This was followed by a second SFR (2021–2025) (SFR II), central to which is Indonesia's first Green Taxonomy, released in January 2022. The climate-alignment of SFR I and SFR II are reviewed in **section 3.1**; the Green Taxonomy is the subject of **section 3.3.1**.

Furthermore, the OJK has developed and issued the green sukuk (see **section 3.3.5**) to facilitate an environmentally friendly capital market industry, as provided for under Regulation No. 60/POJK.04/2017 concerning the issuance and the term of green bonds.

Table 3 presents a non-exhaustive list of Indonesia's financing mechanisms and instruments, including fiscal regulation, institutional arrangements and programmes, and partnerships or business investment to leverage public and private investment in climate finance.

Table 3 Summary of domestic and domestic/international mechanisms for leveraging public and private investment

Public entity mechanism	Private entity mechanism	Public and private (mixed) mechanism
<i>Domestic source of finance</i>		
<ul style="list-style-type: none"> ▪ Tax incentive for investing in sustainable nature, forest and land use activitiesⁱ ▪ Climate expenditure (including subsidies for seedlings and other types of sustainable and use activity), as identified through a national CBT systemⁱ ▪ National debt for climate projects^{iv} ▪ Ecological fiscal transfersⁱ ▪ Village fundⁱ ▪ Funds managed by KLHK for fire management, reforestation and peatland managementⁱⁱ ▪ Payments for environmental services (REDD+, water, biodiversity)ⁱⁱⁱ ▪ BPDHⁱⁱ ▪ Reforestation Fund for Agroforestry Development (Badan Layanan Umum Pusat Pembiayaan Pembangunan Hutan, or P3H)^{j/ii} 	<ul style="list-style-type: none"> ▪ Lending supports to small-scale producers via financial institutions^{iv} ▪ Ecosystem restoration and carbon sequestration forestry licence investment in private companies' concessionsⁱⁱⁱ 	<ul style="list-style-type: none"> ▪ Public-private partnership for climate programmesⁱⁱⁱ ▪ Fund management agenciesⁱⁱ ▪ Private sector forest and biodiversity compensation schemesⁱⁱⁱ ▪ Ecosystem-based insurance productsⁱⁱⁱ
<i>Domestic and international sources of finance</i>		
<ul style="list-style-type: none"> ▪ Development cooperationⁱⁱⁱ ▪ Public debt (e.g. sovereign climate bonds at national, provincial and city levels)^{iv} ▪ Carbon trading institution and mechanism (G-to-G and G-to-B)^{ii/iii/v} 	<ul style="list-style-type: none"> ▪ Project or corporate sustainability/ green/ social/ gender bonds^v ▪ Company loans to financial institutions, including banks, for green activities^{iv} ▪ Derisking facilitiesⁱⁱⁱ ▪ Financial support for sustainable forestry and agricultural productionⁱⁱⁱ ▪ Financial support to promote sustainable supply chains and the connecting of sustainable products to the marketⁱⁱⁱ ▪ Direct investment in nature, forest and land use^{i/iii} ▪ Local impact/angel investmentⁱⁱⁱ ▪ Local philanthropic fundsⁱⁱⁱ ▪ Voluntary carbon market (B-to-B)ⁱⁱⁱ 	<ul style="list-style-type: none"> ▪ Project-based financeⁱⁱⁱ ▪ Blended financeⁱⁱⁱ ▪ Climate national trust fundⁱⁱ ▪ Mixed venture capitalⁱⁱⁱ

i Direct fiscal regulation
 ii Institutional arrangement
 iii Programme or partnerships or business investment
 iv Lending and borrowing mechanism
 v Trade policy and standards



2.3.3 Ministry of Environment and Forestry (KLHK) and Ministry of National Development Planning/National Development Planning Agency (PPN/Bappenas)

The KLHK and PPN/Bappenas take the lead on developing and formulating policy on climate-change management, and they monitor whether Indonesia is meeting its commitments. The KLHK is accountable at national and international levels as the UNFCCC national focal point, while PPN/Bappenas is charged with ensuring that Indonesia is carrying out its national climate commitments in accordance with national development pathways, and hence it tailors the agenda to the duties of ministries and institutions.

2.3.4 Public environmental funding instruments

There is also a broad range of collaboration among stakeholders to facilitate several funding instruments. The KLHK and Kemenkeu have established the BPD LH to manage national and international environmental fund sources, as provided for under Government Regulation No. 46/2017 and Presidential Regulation No. 77/2018.

The most relevant environmental fund is the Indonesia Climate Change Trust Fund (ICCTF), which was formed by PPN/Bappenas in 2009 to demonstrate the country's commitment to international climate finance. It aims to strengthen Indonesia's preparedness for and commitment to taking on massive responsibility and ownership regarding climate change. By 2022, the ICCTF had implemented 88 projects in 114 locations (ICCTF, 2021).

Another important public fund relevant to Indonesia's adaptation goals is the Crude Palm Oil Fund, which is raised from export levies on palm oil.

In addition, to help the development of its infrastructure, the Government of Indonesia created PT SMI and PT Indonesia Infrastructure Finance (PT IIF), which manage funding investment and debt from international financial institutions. PT SMI is also supported by the Asian Development Bank (ADB) and is partnered with the International Finance Corporation (IFC), a shareholder in PT IIF. In 2017, the World Bank provided a \$200 million loan to PT IIF; in partnership with the IFC, Standard Chartered Bank and Deutsche Bank, it arranged a \$250 million loan to PT IIF in 2014. PT SMI was originally approved as an accreditation partner to the GCF, but its accreditation was removed after it failed to fulfil fiduciary requirements (see **section 3**). PT SMI also issues green bonds to finance eligible national infrastructure projects.

2.3.5 Private finance stakeholders

Financial institutions have had a specific responsibility since Indonesia ratified the Paris Agreement with Law No. 16 of 2016 concerning the Ratification of the Paris Agreement to The United Nations Framework Convention on Climate Change, which specifically states in Article 2.1c the duty to '[make] finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development'. Since then, Indonesia's sustainable finance flows have been more specifically regulated for both debtors and creditors.

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Private capitalisation of Indonesia's natural resource sector (timber, monoculture plantations and mining, which pose risks to the climate and the environment) is extremely concentrated. Since the highest category of core capital was changed to a minimum of \$70 trillion, it includes just four banks: Bank Mandiri, BCA, BRI and BNI (Richard, 2021). These four major credit banks are the biggest lenders in Southeast Asia, providing funding of \$10,589.97 million – that is, 28% of the total loans supplied by the top ten banks in Asia.



+ 3 Public levers



3.1 Overall strategies and targets

Through its updated NDC targets, Indonesia is hoping to reduce its emissions rate by about 834 metric tonnes of CO₂e by 2030. The updated NDC covers mitigation and adaptation actions.

- In relation to mitigation, it specifies five key sectors – namely, forestry, agriculture, energy, waste, and industrial processes and product use (IPPU).
- Across the area of adaptation, it will focus on building economic, social (livelihood) and environmental resilience in four priority sectors – namely, marine and coastal, water, agriculture and health.

Consequently, Indonesia needs to balance the financial flows, both public and private, mobilised by developed nations between mitigation and adaptation activities, and to be steadfast in meeting its publicly stated commitments.

Indonesia is developing a framework with which to move to a low-carbon economy and is building resilience into its leading sectors by means of certain programmes, strategies and actions. Considerable funding is needed to support all of its development plans. According to its third biennial update report to the UNFCCC: to meet its 2018–2030 unconditional climate target (Counter Measure 1, or CM1), Indonesia has a financial requirement estimated at \$281 billion; to meet its conditional target (Counter Measure 2, or CM2), it needs about \$285 billion (IDR3,990 trillion, based on an exchange rate of IDR14,000/\$1) (KLHK, 2021a). In 2018, Kemenkeu estimated an increase in budget allocation for mitigation efforts of IDR196.3 trillion (~\$14.02 billion), compared with around IDR146.8 trillion (~\$10.49 billion) the previous year, and \$227.4 million for CBT-based adaptation (KLHK, 2021b).

The basis for realigning finance flows to support a low-carbon, climate-resilient economy was set out in 2014, when OJK developed its first SFR, which charts an ambitious plan to reform the financial sector to help Indonesia realise its development plans and meet the SDGs. The SFR I aimed to increase the supply of sustainable finance, to increase demand for sustainable finance products, and to provide better oversight of sustainable finance implementation and coordination with the relevant ministries (OJK, 2014). However, a review of the SFR I revealed that loopholes allowed climate-misaligned ‘business as usual’ in the finance services sector, such as banks failing to disclose major ESG risks including illegal plantation development, land rights violations, fire risks in plantations, the destruction of forests and peatlands, indicators of tax evasion and violations of labour laws (Rainforest Action Network, 2019).

To respond to these challenges, the OJK developed SFR II – although it acknowledges that some gaps remain, including the industry’s low awareness of sustainable finance options, the absence of commonly agreed green standards against which to assess implementation of ESG aspects on a national scale and untapped business opportunities in the sustainable sector (OJK, 2021). In the SFR II, OJK maps out an ecosystem that

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comprises seven factors critical to creating transparent regulations and improving the financial industry's capability – namely, policy, product, market infrastructure, coordination among ministries or institutions, non-government support, human resources and awareness (ibid.). Regular observation of the potential impacts of the financial ecosystem on sustainable development is imperative to ensure the climate-consistency of sustainable finance, to mitigate ESG risks and to identify business growth opportunities.

3.2 Consistency of sector-specific public finance levers

3.2.1 Agriculture, forestry and other land uses sector alignment

Along with energy, the AFOLU sector is one of the main targets and priorities for the actions set out in Indonesia's NDC. The most pressing concerns exist in relation to the harmful environmental, ecological, social and human rights impacts of the country's timber, oil palm and pulp industries. Although finance flows in these industries are market-led, the Government of Indonesia has mandatory policies and instruments in place.

Indonesia's system for verifying the legality of timber (Sistem Verifikasi Legalitas Kayu, or SVLK) is a mandatory instrument within its Sustainable Production Forest Management (Pengelolaan Hutan Produksi Lestari, or PHPL) standard. It applies across the supply chain and includes not only plantation companies but also village/community forests, manufacturers of forest products and exporters (KLHK, 2018b); it commits business permit holders to various environmental, ecological and social standards (KLHK, 2016).

Despite these instruments and strategic efforts to reduce emissions from the land-use sector, there is evidence of continued and widespread deforestation and peat exploitation, which is misaligned with the country's climate objectives. Asia Pulp & Paper (APP) and APRIL, two of Indonesia's largest pulp and paper companies, together operate five pulp megamills on the Indonesian island of Sumatra, which are supplied by over 1 million hectares of industrial tree plantations developed on Indonesia's peatlands (Forests & Finance, 2022). The Indonesian pulp and paper sector is estimated to be responsible for 88 million tonnes of CO₂e (around 80,000 Gg CO₂e) emissions annually from peat oxidation (Baffoni, 2017). Although there is no available data on government subsidies for the pulp and paper industry, its priority is made evident by Ministry of Industry Regulation No. 14 of 2014 concerning the National Industrial Development Master Plan, under which the growth of the country's pulp and paper production is to be secured (Mutaya, 2016) – growth that will inevitably lead to more deforestation.

Palm oil companies are legally required to comply with the ISPO standard for oil palm plantations. Under Presidential Regulation No. 44/2020 and Ministry of Agriculture Regulation No. 38/2020, the standard applies not only to plantation companies but also to integrated companies (i.e. those that manage both land and processing facilities), individuals and groups. The ISPO standard requires plantation companies to follow seven principles, including good management of the environment, of natural resources and biodiversity. Smallholders are excluded from two principles – those relating to labour and social responsibility – but even they are required to comply with the same environmental and ecological principles to which large-scale operators are subject (article 3, Regulation No. 38/2020).



However, the effect of the regulations is weakened not only by inadequate enforcement in the field but also by ignorance and poor implementation, resulting in detrimental environmental and social impacts. These impacts include: boundary conflicts between community management areas; cases of pollution, deforestation and forest fires; and failure to implement environmental certification standards and procedures, such as high carbon value (HCV) or high carbon stock (HCS) approaches to assessment. The ISPO scheme requires adherence to all Indonesian laws and regulations, but in practice many ISPO-certified palm oil concessions are located inside conservation and protected areas of the forest estate, resulting in economic, social and environmental imbalance (Dewi, 2021; Greenpeace, 2013).

There is also evidence of an abuse of power related to licensing in the plantation (palm) and forestry sectors to the benefit of certain parties, involving state capture and corruption when concession permits are prepared and granted (Kartodihardjo, 2016, 2021). Violations of ISPO standards can also be illustrated by the large number of amnesties granted to concession holders operating illegally. In August 2022 alone, 75 oil palm and mining companies operating in protected forest areas had been granted amnesty; a further 857 palm oil companies, 130 mining companies and 205 other companies are in the process of receiving amnesty (CNN Indonesia, 2022).³

Emissions resulting from deforestation and unsustainable agricultural practices are exacerbated by the misallocation of the state's Crude Palm Oil Fund, which is meant to promote sustainable palm oil in Indonesia. It is managed by the Palm Oil Fund Management Agency (Badan Pengelola Dana Perkebunan Kelapa Sawit, or BPDPKS), which is financed through an export levy and fines. Almost 80% of the funds managed by BPDPKS in 2015–2021 were channelled to oil palm large corporations through biodiesel subsidies. The sums are substantial, amounting to IDR139.2 trillion (\$9.6 billion). By contrast, the oil palm rejuvenation programme was allocated only 4.7% of funds (Hermawan, 2022). Studies have shown that the deforestation inherent in the production of palm biodiesel means it emits up to three times as much CO₂e as fossil fuels, making crop-based biofuels counterproductive to efforts to cut emissions (Jong, 2020a). There is no question that this activity is misaligned with Paris goals.

Finally, under the government 'Food Estate' programme, Indonesia's dwindling forest may be cleared, resulting in deforestation, high carbon emissions, biodiversity loss and floods (Jong, 2020a; Hidayat, 2021). It was calculated in 2021 that there are more than 1.5 million hectares of natural forest in the programme's area of interest (Arumingtyas, 2021).

³ The Omnibus Bill (Job Creation Law) decriminalises concessions operating illegally in forest areas (WALHI, 2021). The Financial Audit Board (Badan Pemeriksa Keuangan, or BPK) noted in its audit that there are 2.7 million hectares of oil-palm plantations illegally located in forest areas (BPK, 2019). In May 2022, the BPK reported ±2.90 million hectares of oil-palm plantations and ±841,790 hectares of unpermitted mining activities in forest areas (BPK, 2022). At least 222 oil-palm plantation companies will be able to legalise their illegal activities in forest areas through this mechanism (WALHI, 2022a), and while there have been 14 mining companies to date, it is planned that 869 mining companies illegally operating in forest areas will be legalised (WALHI, 2022b).

3.2.2 Energy sector alignment

While the land-use sector dominates emissions at present, the energy sector is projected to increase its output to over 50% of total emissions by 2026–2027 (Wijaya et al., 2017). Sector-specific public levers in the energy sector are nevertheless considered misaligned because of public finance support and fiscal incentives for fossil fuels.

Between 2018 and 2019, Indonesia provided public finance support averaging \$396 million a year to fossil fuel projects, with the largest share for oil and gas. Since 2020, Indonesia has also pledged at least \$6.54 billion to fossil fuel energy as part of its energy-related funding commitments and Covid-19 economic response (Energy Policy Tracker, 2021).

Indonesia plans to add 25 GW of coal power plants towards the 35 GW target by 2035, contributing to a high environmental and social cost (Singgih, 2021). Coal itself accounts for 40% of Indonesia's energy-related carbon emissions. Subsidies directed to coal consumption in Indonesia were estimated at \$881 million in 2019, delivered as direct budgetary transfers (Fossil Fuel Subsidy Tracker, n.d.). The Indonesian coal sector also benefits from unquantified tax and royalty advantages (Sumarno and Sanchez, 2021), and coal is further subsidised for electricity generation through the domestic market obligation scheme (ibid.).

3.3 Consistency of domestic public finance levers

3.3.1 Green Taxonomy

In January 2022, the OJK officially issued the Indonesian Green Taxonomy in an effort to accelerate financing programmes based on sustainable principles in the financial services sector (OJK, 2022). This made Indonesia one of the few countries outside China and the European Union to develop and implement such a tool. The document examines 2,733 sectors and subsectors, of which 919 have been confirmed by the relevant technical ministries. To facilitate the financial services sector's classification of green activities in developing a portfolio of financial products and/or services, the document is organised into three categories:

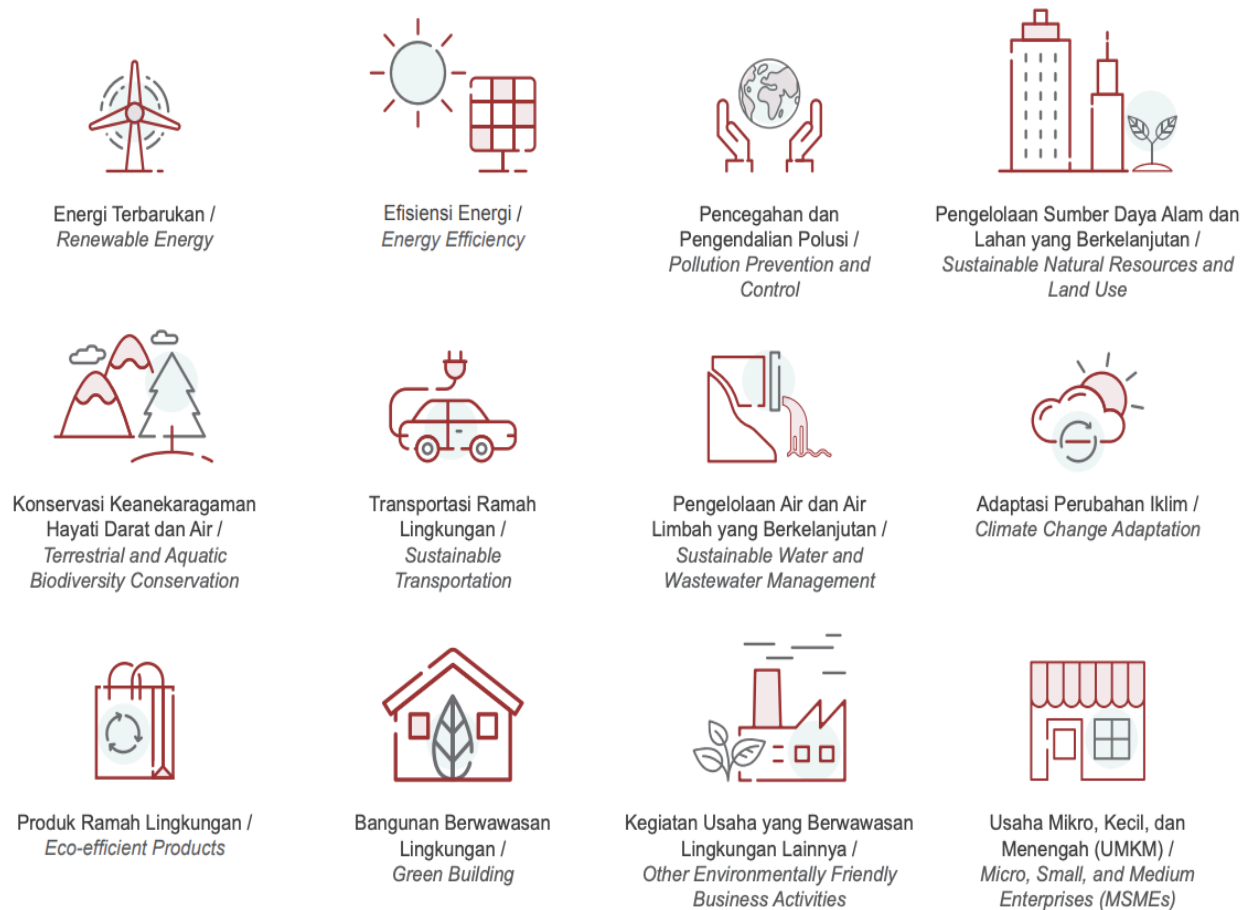
- **green** activities – do no significant harm, apply minimum safeguards, have a positive impact on the environment and align with the Green Taxonomy's environmental objectives
- **yellow** activities – do no significant harm
- **red** activities – harmful.

The Taxonomy is a living document that will be reviewed and updated regularly. At the time of writing, OJK is testing the Taxonomy on several banks in certain sectors to see how it applies to their portfolios and financing (OJK GKKT team, personal communication, 14 April 2022). While it is currently voluntary, it is likely to be used to mandate the disclosure of Taxonomy-relevant investment portfolios in the future. However, since 2017, the OJK's Regulation No. 51/POJK.03/2017 has imposed sustainable finance disclosure requirements on financial services institutions, issuers and publicly listed companies (including MSMEs) operating in 12 business areas (see **Figure 3**). This covers



sustainable finance principles, the timeline for implementation by financial institutions, and the requirement to submit a sustainable finance action plan and sustainability report. The OJK offers technical guidelines on implementing this Regulation and synchronising it with the Taxonomy (OJK, 2021; Larasati and Mafira, 2022).

Figure 3 Sustainable finance activities defined by POJK 51/2017: 11 green and 1 MSME financing (OJK, 2021)



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Of the 919 sectors and subsectors in the Taxonomy, only 15 have so far been classified as green; 422 are yellow, which means that they are in transition, avoiding significant harm but not yet fully aligning with the Taxonomy's green criteria; 482 are red, which means that they are completely misaligned with Indonesia's climate goals (Larasati and Mafira, 2022). Those in the yellow category may seek to 'avoid significant environmental harm' but include carbon-intensive activities with negative climate impacts and stranded asset risks, such as existing fossil fuel projects and clean coal (ibid.). This suggests material risks for banks exposed to forest-based sectors such as palm oil and timber, in which illegality and non-compliance are rampant (TuK Indonesia, 2022a). Without tighter due diligence and rigorous ESG protection, as well as critical detailed information such as clearer thresholds, tightened metrics and timelines, it is very likely that banks, investors and other stakeholders will continue investing in risky sectors and have no insight into what may change in future iterations of the Taxonomy.

3.3.2 Disclosure requirements

Since 2017, the Task Force on Climate-Related Financial Disclosures (TCFD) has issued recommendations for climate-related financial disclosure. These recommendations offer guidance to bank-related parties on how to provide information on good capital allocation related to climate change. Climate-related financial disclosures are compiled by the TCFD in four thematic areas that represent the core elements in which the company operates – namely, governance, strategy, risk management, and metrics and targets. The four recommendations are interrelated and supported by 11 disclosures, building a framework within which parties can disclose information that will help investors and others understand how the organisation is thinking about and assessing climate-related risks and opportunities (TCFD, 2017).

According to Setyowati (2019), there are at least three main policy insights that are of note for the implementation of sustainable finance in Indonesia – namely:

- the context of the SFR
- mechanisms for sustainable financial supervision and risk management
- central bank intervention.

First, the SFR works well in Indonesia. Most financial institutions in Indonesia already have a high level of procedural compliance in meeting sustainable finance regulations (Imansyah, 2019). This is particularly true of banks submitting a sustainable finance action plan and publishing an annual sustainability report on their implementation of the action plan.

In the context of sustainable finance policies, Indonesia is considered to be taking positive steps (Prakarsa, 2019). In early 2022, the OJK launched its Green Taxonomy, covering 2,733 sectors and subsectors (OJK, 2022). However, because substantive regulatory oversight is limited, it is difficult to assess its real results or impacts. The absence of a clear disincentive mechanism makes the consequences unclear and results in weak implementation in the field.

Second, the regulation and regulatory oversight of sustainable finance needs to be improved through better-quality disclosure standards and risk management processes, as



well as incentives for compliance. A review of sustainable finance reports – especially those from first-mover banks – shows that they document a broad portfolio of sustainable finance and that two of eight banks do not clearly identify the core business of ‘sustainable’ banking, preferring instead to highlight philanthropic and corporate social responsibility (Setyowati, 2019).

Third, Indonesia’s central bank must intervene to accelerate sustainable finance by enacting green macroprudential regulations that disincentivise or redirect resources away from carbon-intensive sectors. Bank Indonesia has already loosened the loan-to-value (LTV) and financing-to-value (FTV) ratios for green buildings and electric vehicles, but it can do more in the energy and AFOLU sectors.

In general, limiting the dependence of the implementation of sustainable finance on standards in Indonesia makes it difficult to maximise its achievement. For example, the use of ISPO as a third-party certification in the palm oil sector has been proven to have no direct correlation with legal certainty, the reduction of deforestation and social conflict (Astuti et al., 2022). These are among the various interests that inform, and hence are applicable to, the financial sector and regulators. The change of leadership in financial regulatory institutions often also shifts the focus of their implementation of sustainable finance (Setyowati, 2019; Guild, 2020).

3.3.3 Climate budget tagging

Climate budget tagging (CBT) is a tool for monitoring, tracking and identifying total government expenditure on climate mitigation and adaptation activities (Le and Baboyan, 2015). It encourages public transparency and accountability in the management of national government ministries and agencies’ budgets to finance climate change mitigation and adaptation actions. The public fund for mitigation activities is carried out in accordance with the National Action Plan for Reducing GHG Emissions (Rencana Aksi Nasional Gas Rumah Kaca, or RAN GRK), which mainly focuses on reducing GHG emissions and increasing carbon-absorption capacity in the forestry, agriculture, energy, transport, industry and waste sectors. Concurrently, adaptation activities financed by public funds should comply with the National Action Plan for Climate Change Adaptation (Rencana Aksi Nasional Adaptasi Perubahan Iklim, or RAN API), which largely focuses on increasing communities’ resilience to the negative impacts of climate change and reducing the socioeconomic and environmental vulnerability it brings.

Figure 4 shows the allocation of APBN to climate-related activities in Indonesia from 2016 to 2020, which increased by 82.96% from IDR72.4 trillion in 2016 to IDR132.47 trillion in 2018 (Kemenkeu, 2019), but decreased in 2019 and 2020 to IDR97.66 trillion and IDR77.81 trillion, respectively (Kemenkeu, 2020a). In 2018–2020, the majority of the climate budget, IDR129.93 trillion, was spent on climate mitigation (ibid.).

Figure 4 Climate budget allocation 2016–2020 (Kemenkeu, 2019, 2020a)

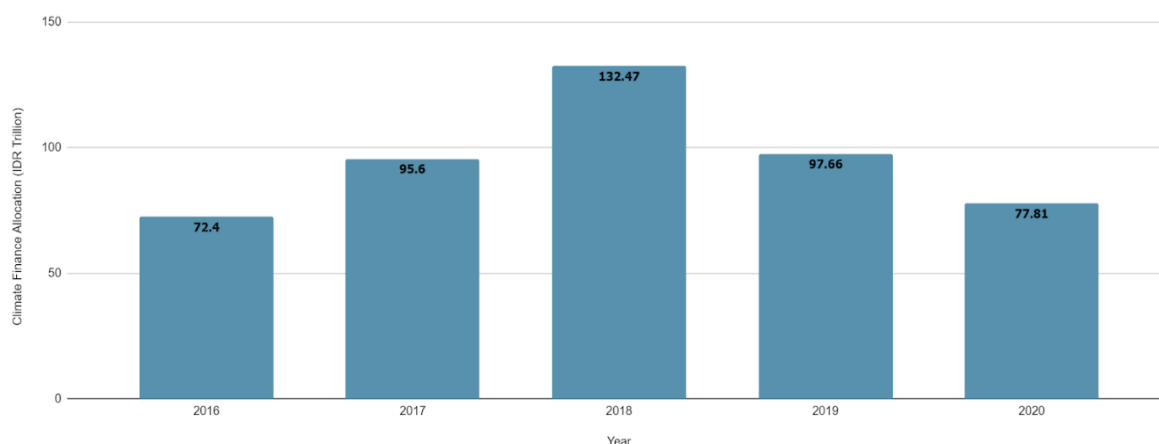
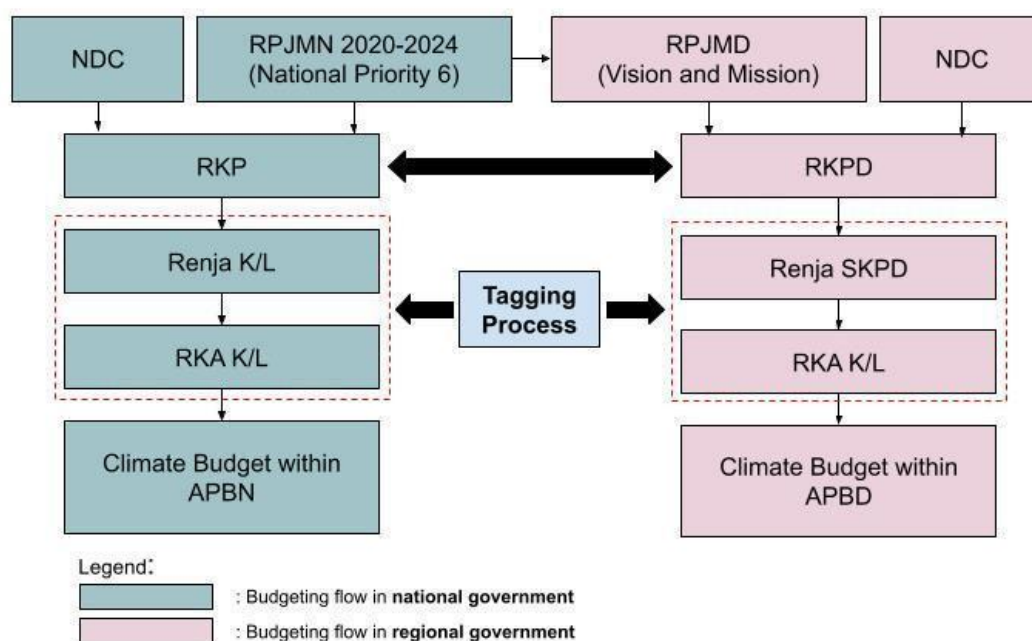


Figure 5 Integration of climate budget tagging within national development planning (based on Kemenkeu, 2020a)



Indonesia’s NDC, its 2020–2024 National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional, or RPJMN) and its regional medium-term development plans (Rencana Pembangunan Jangka Menengah Daerah, or RPJMD) are the bases on which national and regional governments build priority mitigation and adaptation programmes and activities, in the context of and with reference to the RAN GRK and RAN API.

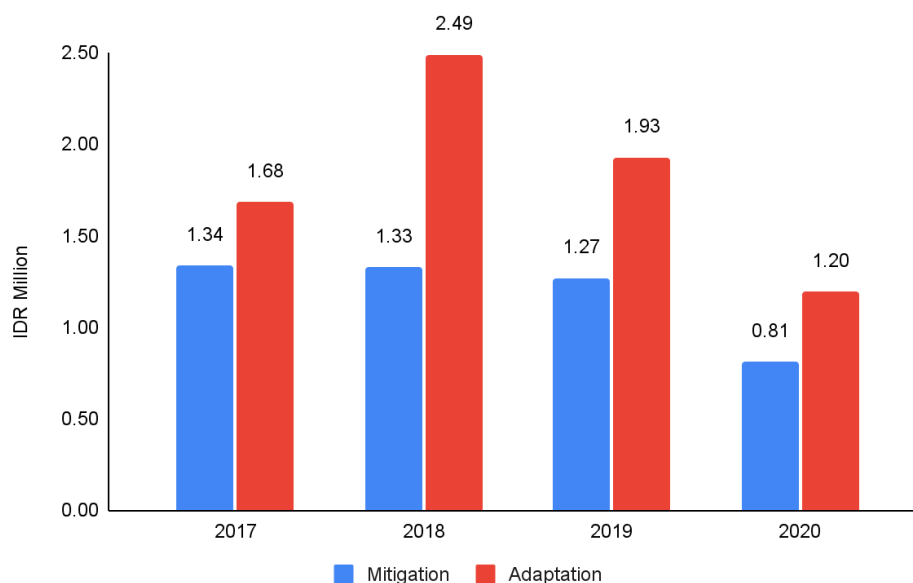
The CBT process is preceded by a climate public expenditure and institutional review (UNDP, 2015), which tracks and identifies the outputs of mitigation and adaptation activities outlined in the development planning documents in line with its budget, as stated in its National Working Plan and Budget (Rencana Kerja dan Anggaran, or RKA), regional working plans (Rencana Kerja Pemerintah Daerah, or RKPD) and national and regional



budget plans (Kemenkeu, 2020a). Furthermore, the RKA derives from the national and regional visions, missions, goals and objectives listed in the National Long-Term Development Plan (Rencana Pembangunan Jangka Panjang, or RPJP), the RPJMN and RPJMD, and the RKPD. **Figure 5** depicts the climate budgeting flow in Indonesia.

In 2018, Government Regulation No. 17/2017 concerning the Synchronisation of the National Development Planning Process and National Development Budgeting was issued; it was then incorporated within an application, Collaborative Planning and Budgeting Performance Information (Kolaborasi Perencanaan dan Informasi Kinerja Anggaran, or KRISNA), that supports the alignment of planning and budgeting with tagging at both national and regional levels. The government has implemented CBT in 11 regions across the country since 2017 and that tagging has shown that most regional allocation has been used on adaptation activities. From 2017 to 2020, an average of IDR3.01 billion was allocated annually to the regional climate budget, of which an average of IDR1.19 billion was assigned to adaptation action and the rest (about IDR 1.82 billion), to mitigation action. **Figure 6** shows climate budget allocation in regional adaptation and mitigation budgets.

Figure 6 Regional climate change mitigation and adaptation budget allocation, 2017–2020 (Kemenkeu, 2020a)



Unlike regional spending, the national budgetary allocation for climate was mainly spent on mitigation activities, reflecting the government’s commitment to significantly reducing GHG emissions through development and hence to investing heavily in mitigation.

While climate policy-making and governance in Indonesia has improved, there are still issues with the planning and budgeting process that jeopardise the climate-inconsistency of public finance flows. In contrast to international aid, domestic climate finance flow is supposed to be aligned with government climate-change plans and targets based on a sound understanding of domestic climate policy and needs. One such issue is that these processes are controlled by different government units – PPN/Bappenas is responsible

for planning; Kemenkeu, for budgeting – causing numerous bottlenecks in development planning (PPN/Bappenas, 2015). The government is aware that the planning and budgeting stages are not integrated. A planning–budgeting disconnect arising from the separation of authority and responsibility will have consequences where planning documents cannot be relied on for reference in budget formulation.

Other bottlenecks are caused by a lack of synergy between central and regional planning and budgeting. This issue includes inconsistency between the national (RPJMN) and regional (RPJMD) realisations of priority national programmes, as well as the failure to optimise budgets that results from the separation of duties between central and regional governments. The national development priorities set out in the RPJMN are often different from those set out in the RPJMD. One important influence here is differences between the political electoral agendas at central (presidential) and regional (provincial and district heads) levels. As a result, there is a discrepancy between governmental activities funded by the APBN and regional activities funded regionally, and this tracks back to the disconnect between the RPJMN and RPJMD, the RKA and the RKPD.

This disconnect can affect decisions on programme objectives, indicators, targets and outputs. For instance, RAN GRK regulations were developed to guide the implementation of actions aiming to reduce GHG emissions, yet a study found that some of the indicators within the national action plans were insufficient to demonstrate any such meaningful reduction (Meehan et al., 2019). The researchers assessed those seven of the thirteen RAN GRK actions that were provided to reduce emissions from forestry and peatland degradation. Only two of the seven had a direct, evidence-based link to emissions sources; three had some evidence of a link, while no information was given on the remaining two to demonstrate their clear and targeted implementation. The researchers note that the actions are problematic in part because they are pre-existing policies repurposed, rebadging a variety of different objectives as climate change actions. Furthermore, the disconnect makes duplication of work and programme overlaps highly probable in areas in which resources (budget) might also benefit other programmes, leading to high-cost but low-impact development. Poor planning–budgeting alignment – both vertically (central–regional) and horizontally (between sectors) – is a barrier to Indonesia’s successful implementation of its agenda.

3.3.4 Public budget from SDG finance

Indonesia has been proactively committed to achieving the 2030 Sustainable Development Agenda, as enacted through Presidential Regulation No. 59/2017 concerning SDG Achievement Implementation. PPN/Bappenas is the national lead on SDG implementation, ensuring that it aligns with domestic development pathways and collaborating with stakeholders to finance and implement projects. Indonesia’s RPJMN for 2020–2024 includes 124 of the 169 SDG targets, ensuring that the national development agenda supports global efforts (CICERO, 2021). Of 289 indicators, 94 align with RPJMN targets (PPN/Bappenas, 2019). To achieve these, Regulation No. 59/2017 prescribes three planning documents: the SDG Roadmap, the SDG National Action Plan (RAN SDG) and the SDG Regional Action Plan (RAD SDG).

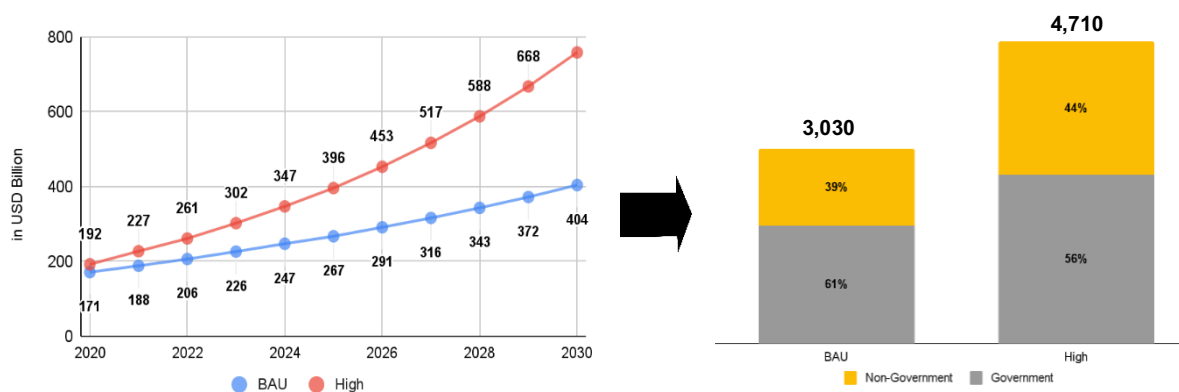


In general, Indonesia’s Roadmap is conceived of as a guideline that equips its users with a matrix containing targets, programmes, activities, supporting resources and implementing agencies. The document was very intensively and inclusively formulated by multiple stakeholders, including ministries and agencies, academics, experts, civil society organisations and philanthropists, as well as businesses, to produce a comprehensive plan that accommodates thousands of programmes and activities all aiming to reach SDG targets.

In 2019, PPN/Bappenas estimated the finance required to support Indonesia’s achievement of the SDGs as around \$400–750 billion, depending on the intervention scenario applied – namely, ‘business as usual’, moderate intervention or high (PPN/Bappenas, 2019). The gap between that need and available finance, which gap has widened as a consequence of the Covid-19 pandemic, is estimated at \$1 trillion (Aprian, 2022); the government will be well advised to explore, unlock and leverage new finance to help close this gap. **Figure 7** presents SDG finance and distribution needs in Indonesia from 2020 to 2030.

Of relevance to climate alignment are targets that contribute directly to SDG 13 (‘Take urgent action to combat climate change and its impacts’). Yet SDG 13 does not exist in isolation; each individual goal influences the others and they are all closely linked. Actors aiming at each one of the SDGs should therefore take into account the role of climate change as an urgent global threat. For each goal, attention should be given to each of the social, environmental, economic, and law and governance development pillars, underlining the close relationship between them. Furthermore, the government should adopt a bottom-up approach to simplify identification of those national and regional programmes and activities that can be tailored to incorporate climate goals.

Figure 7 SDG financing needs (left) and distribution (right), 2020–2030 (Kemenkeu, 2021a)



3.3.5 Sovereign green sukuk

The green sukuk is a new sovereign bond being promoted as a vehicle to accelerate the financing of green and development pathways. It was developed in Islamic markets, mirroring green bonds by accommodating socially responsible investment. In terms of promoting green activities within Indonesia’s development framework, the green sukuk

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follows the principles of green bonds whereby each project and activity should promote a low-emission economy and climate-resilient growth, including elements of climate mitigation, adaptation and biodiversity. The applicable criteria and processes are set out in the Eligible Green Project framework: green bonds or sukuk can finance nine eligible sectors – namely, renewable energy, sustainable natural resource management, energy efficiency, green tourism, resilience to climate change, green buildings, sustainable transportation, sustainable agriculture, and waste management and waste energy. The following projects are *not* eligible:

- new fossil-fuel-based electric power-generation capacity and expenditure related to improvement of the efficiency of fossil fuel-based electric power generation
- large hydropower plants (>30 MW capacity)
- nuclear and nuclear-related assets (Kemenkeu, 2021b).

In 2018, Indonesia successfully entered the sukuk market, issuing approximately \$5 billion, with proceeds of about \$1.25 billion (IDR17.75 trillion at an exchange rate of \$1/IDR14,200) (Kemenkeu, 2022b). This was the first issuance of green sukuk in the world, making Indonesia a pioneer in Southeast Asia (KLHK, 2018a). Demand for the green sukuk has continued to increase to issuance of \$3.25 billion (IDR47.4 trillion at an exchange rate of \$1/IDR14.573), at time of writing (Kemenkeu, 2022c).

Green sukuk revenue has been successfully used to finance or refinance green projects. Kemenkeu reports annually on the allocation and impact of the green sukuk, showing that of the nine eligible sectors, five received funding from capital raised by the sukuk issuances (Kemenkeu, 2021c; see **Table 4**). By far the largest allocation of green sukuks in 2018 and 2019 was to the sustainable transport sector, at 62% and 48%, respectively, and with a medium-to-dark green level, indicating a long-term commitment to low-carbon development and climate change. The sustainable transport sector projects funded by the green sukuk are the Trans-Sumatra railway project, the railway on the north coast of Java Island and Jakarta's Jabodetabek commuter line (Kemenkeu, 2020b), all of which are expected to significantly reduce carbon emissions. The South Java Double Line alone is expected to encourage more than 2.5 million passengers to switch from buses, private cars and motorcycles to train, while reducing their travel time by an average of 30 minutes (Kemenkeu, 2021c).

Table 4 Allocation of green sukuk funds

Sector	Allocation 2018	Allocation 2019	Allocation 2020	Green level	SDGs
Renewable energy	8%	5%	–	Dark	7, 8, 9, 11, 13



Energy efficiency	8%	27%	–	Light–medium	7
Resilience to climate change in highly vulnerable areas and sectors, and disaster risk reduction	22%	11%	83%	Dark	1, 2, 8, 13
Sustainable transport	55%	48%	7%	Medium–dark	8, 9, 11, 13
Waste and waste-to-energy management	7%	9%	11%	Medium–dark	7, 11

Source: Kemenkeu (2020b, 2021b)

However, the use of revenues generated from green sukus has not been without its critics. Some have raised concerns about the convoluted system used to identify eligible projects, highlighting the risk of greenwashing (Gokkon, 2022). Although green sukuk issuance documents show that some of the projects to be funded through this framework will engage in forest management under the Reducing Emissions from Deforestation and Forest Degradation (REDD+) scheme and will not support or finance the development of new agricultural land through deforestation, it may still result from some projects (Gokkon, 2018). While projects are typically screened and monitored against the government's green sukuk framework, reported progress against stated adaptation and mitigation goals might be offset by unreported climate-misaligned impacts. For example, a sustainable transport project can reduce emissions by reducing reliance on road transport – but it can simultaneously require clearance of thousands of hectares of forested land, facilitate the transport of environmentally damaging plantation crops and increase reliance on coal-powered electricity (WRM, 2019). The green sukuk framework would therefore benefit from a more holistic understanding of the complex nature and consequences of green investments and the full range of financing options (United Nations, 2016).

Adaptation and resilience projects have also received significant funding from green sukus, especially in 2020. Examples include a rice-field opening and revitalisation project in Patangon Village in Buol district, Central Sulawesi. This support is intended to avoid the extensification in peatlands, such as in the Central Kalimantan region (Kemenkeu, 2021b).

In addition to Kemenkeu's green sukus, PT SMI – an infrastructure financing company wholly owned by the Government of Indonesia – recognises that green bonds are an important tool to channel investments in green assets and thereby contribute to the Indonesia's NDC. PT SMI complies with the provisions stipulated in Indonesia's Regulation No. 60/POJK.04/2017 concerning the issuance and the term of green bonds (PT SMI, 2021). The company's green bond framework is consistent with the 2017 Green Bond Principles set out by the International Capital Markets Association, as well as the 2017 ASEAN Green Bond Standards (PT SMI, 2018).

PT SMI green bonds will raise funds for a pool of new and existing eligible green projects (see **Table 5**), which should have clear environmental benefits, promote the transition to low-carbon and climate-resilient growth, and aim to conserve, preserve and/or improve the qualities and functions of the environment (PT SMI, 2018). PT SMI will *not* finance fossil fuel and nuclear power through its green bonds. It has a selection and evaluation

process in place for all projects it funds, and it will evaluate projects based on their financial viability as well as their environmental and social benefits and risks.

3.4 Consistency of domestic public–private finance

The Government of Indonesia requires a substantial amount of climate finance to meet its national climate targets. Since the APBN contributes only 20–30% of the country’s total climate finance needs, the government is compelled to close the gap between available climate finance and the funds necessary to achieving its climate targets. That this funding gap far exceeds the government budget means that private funds and other resources are regarded as essential to its closure. Private sector support in tackling climate change is a critical complement in meeting increasing climate finance needs, including because the sector is more able to mobilise both financial resources and technical capabilities to meet the targets.

Table 5 Examples of eligible projects in each sector eligible for PT SMI green bonds

Eligible sector	Eligible projects
Renewable energy	<ul style="list-style-type: none"> ▪ Generation and transmission of energy from renewable energy sources, including offshore and onshore wind, solar, tidal, hydropower ($\leq 10\text{MW}$) and geothermal ▪ Research and development of products or technology for renewable energy generation, including turbines and solar panels
Energy efficiency	<ul style="list-style-type: none"> ▪ Improvement of the energy efficiency of infrastructure, which results in an energy consumption of at least 10% below the average national energy consumption of an equivalent infrastructure ▪ Research and development of products or technology and their implementation that reduces energy consumption of underlying asset, technology, product or system(s), including LED lights, improved chillers, improved lighting technology, district heating, smart grids and reduced power usage in manufacturing operations
Sustainable pollution management and prevention	<p>The management of land pollution and waste, including:</p> <ul style="list-style-type: none"> ▪ Waste treatment and decontamination ▪ Waste prevention ▪ Waste-to-energy activity
Sustainable natural resources and land use management	Irrigation
Clean transportation	<ul style="list-style-type: none"> ▪ Developing clean transportation systems (electric transportation, hybrid vehicle, light rail transit, mass rapid transit) ▪ Transportation network upgrade to more climate-resilient design standards
Sustainable water and sewage management	<ul style="list-style-type: none"> ▪ Waste minimisation, collection, management, recycling ▪ Rehabilitation of landfill areas ▪ Water supply ▪ City drainage



Source: PT SMI (2018)

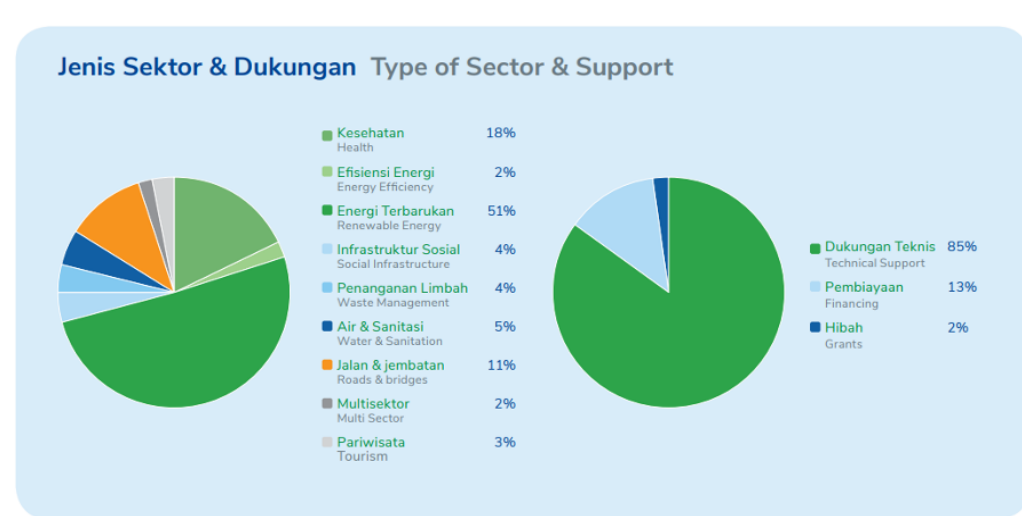
The government of Indonesia is determined to practise blended finance as a creative strategy to fill existing gaps and meet its needs. The term refers to the combination of public and private funds in a common investment scheme or agreement, into which the parties bring complementary expertise (Ruddyard, 2019). Blended finance in Indonesia draws from three groups of resources – namely, the government, the private sector and others (philanthropists).

The public–private partnership (PPP) was the first blended finance mechanism bringing together the government and private sectors; it is regulated and managed by Kemenkeu. Kemenkeu has had notable results in facilitating PPP, including the establishment of PT SMI, which can finance eight operational sectors: roads and bridges, transportation, oil and gas, telecommunications, waste management, electricity, irrigation and drinking water supply (PT SMI, 2022). Through PT SMI, Indonesia has also launched its first blending finance platform, SDGs Indonesia One, which aims to optimise the financing of environmentally sound infrastructure projects in Indonesia. The platform has raised an impressive \$3.22 billion in commitments to date and has a target of \$4 billion (PT SMI, 2021). In 2021, the majority of financial support from SDGs Indonesia One focused on renewable energy (see **Figure 8**).

PT SMI is the first private institution in Southeast Asia to be accredited by the GCF in the context of the SDGs and the Climate Change programme (PT SMI, 2021). In 2016, that accreditation as a partner entitled PT SMI to ‘climate funds’ from the GCF. However, the GCF Accreditation Panel then found that PT SMI could not supply a disclosure policy and had not complied with fiduciary requirements, including those associated with procurement (e.g. purchase tenders or contracts) (WALHI, 2018). Although the renewable energy sector claimed to have 51% support, the PT SMI 2021 sustainability report cited economic benefits to infrastructure projects of additional fossil fuel production of 31,000 bpd (PT SMI, 2021).

In the case of Indonesia, infrastructure projects (e.g. Mandalika, trans-Papua) often involve land grabbing and some are connected to cases of corruption. For example, on 14–15 February 2019, the Corruption Eradication Commission (Komisi Pemberantasan Korupsi, or KPK) conducted an operation in Central Lampung related to corruption in the infrastructure sector involving regional heads and construction entrepreneurs. Its findings revealed that large-scale infrastructure projects and PT SMI from the World Bank, Asian Infrastructure Investment Bank, ADB and GCF are vulnerable to corruption. Multilateral financial institutions must therefore re-evaluate their provision of financing for such projects (WALHI, 2020).

Figure 8 Financial support of SDGs Indonesia One through PT SMI (PT SMI, 2021)



In another scheme, the ADB, through Brunei Darussalam, Indonesia, Malaysia and the Philippines (known collectively as BIMP), established the East ASEAN Growth Area (EAGA) in 1994. The ADB also supports a scheme called the West Borneo Economic Corridor, which aims to attract 'foreign investment, especially from large companies that have an interest in sourcing raw materials or taking advantage of low-cost factors of production' (BIMP-EAGA, 2017).

In addition to SDG Indonesia One, the Coordinating Ministry for Marine affairs and Investment (CMMI) has led Indonesia's blended finance initiative Tri Hita Karana, which launched during the 2018 World Bank annual meeting in Bali. The initiative mobilises capital from prominent Indonesian philanthropists. Its initial focus was on infrastructure and much has been done to accelerate blended finance in Indonesia.

Nevertheless, there is evidence that barriers remain to the success of blended finance in Indonesia.

- The ongoing funding gap jeopardises the country's ability to meet its climate commitments and that gap stems from the government's tendency to sustain a 'business as usual' scenario.
- Despite its potential, finance flows from blended finance are still routed through a relatively selective aid modality, which ignores some SDG financing requirements given the high risk of some private investment projects.
- Higher amounts of private capital have been mobilised in support of those countries considered to be more economically, environmentally and politically stable.

3.5 Consistency of international public climate finance

Indonesia receives official development assistance (ODA) from the GCF, bilateral sources and multilateral sources to help develop its economy on its low-carbon, climate-resilient way.



3.5.1 Consistency of bilateral flows

The Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) captures ODA finance flows to recipient countries, which include direct assistance through grants and other forms of concessional finance (e.g. soft loans) from bilateral and multilateral sources. The data distinguishes between transactions that meet ODA criteria and those that do not, which are categorised as ‘other official flows’ (i.e. those that are for the purposes of military aid or the promotion of donor security or commercial objectives, such as export credits). To map the progress and climate-consistency of flows deployed under Indonesia’s climate change agenda, it is necessary to screen aid and flow data to identify those flows directly aimed at mitigation and adaptation actions that address climate change.

The Creditor Reporting System (CRS) database⁴ can be used to distinguish ODA that has a climate objective, as well as broader development goals. **Figure 9** outlines how we can determine the consistency of bilateral flows under the CRS.

⁴ The data includes ODA committed and disbursed that includes a climate component as either a ‘principal’ (code number 2) or ‘significant’ (code number 1) objective. An activity marked as ‘1 or significant’ means that the climate objective (climate change mitigation or adaptation) is explicitly stated, but it is not the fundamental driver or motivation for the project. An activity with a marker ‘2 or principal’ means the climate objective (climate change mitigation or adaptation) is explicitly stated as fundamental to the design of or the motivation for the activity. Climate components include keywords in the description of the project’s objectives such as ‘deforestation’, ‘renewable energy’, ‘peatland’, ‘forest fires’, ‘palm oil’, ‘fossil fuels’, ‘biodiversity’, ‘restoration’, ‘conservation’ or ‘sustainability’.

Figure 9 Assessing the consistency of bilateral flow: a decision tree (based on OECD, 2020)

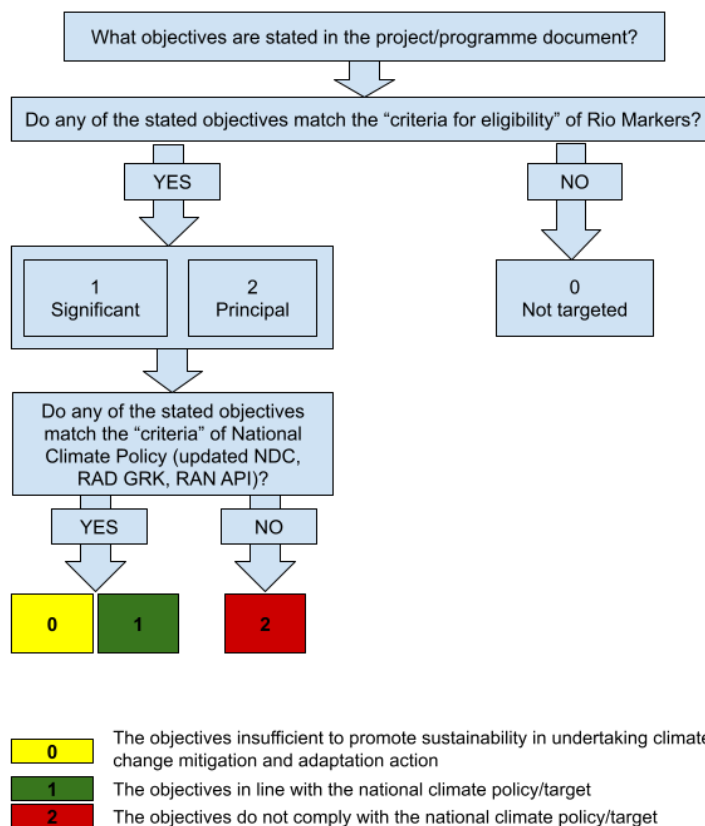
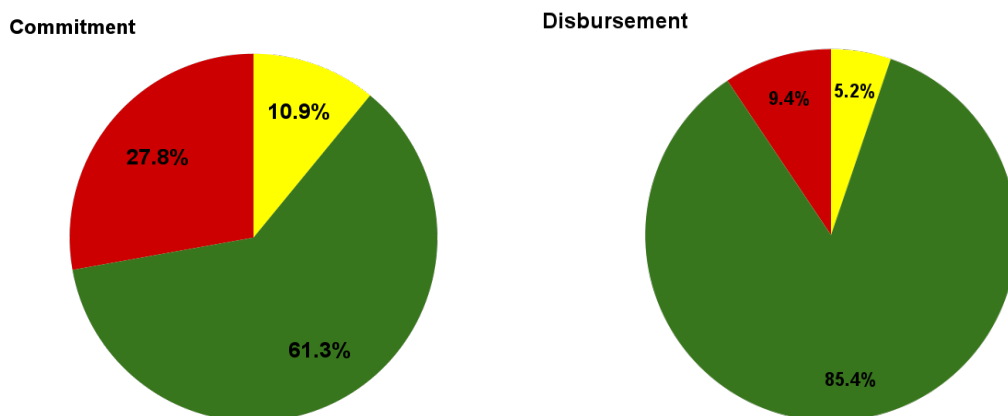


Figure 10 Consistency of committed and disbursed climate bilateral flows (based on OECD, n.d.)





Analysis of the data shows that at least \$1.19 billion of climate finance from bilateral flows was disbursed over the 2011–2020 period and supported 610 projects addressing climate change in Indonesia. However, the funding delivered by bilateral flows is far below that needed to finance Indonesia’s climate agenda from 2018 to 2030, estimated at \$285 billion (only 0.42% of total needs). Furthermore, to ensure that bilateral flows are consistent with Indonesia’s low-carbon, low-resilient pathway, it is necessary to assess whether the projects implemented are among the activities encouraged in the national climate policies (i.e. the NDC, RAN GRK, RAN API). Analysis shows that 85.4% of the \$1.19 billion of bilateral climate finance disbursed directly sought climate mitigation and adaptation objectives in Indonesia (see **Figure 10**). The total amount was disbursed in support of 467 projects in diverse sectors across the country, including forestry, agriculture, disaster and preparedness, energy, industry, government and civil society, and general environmental protection.

The remaining share of total disbursement comprises 5.2% grouped as ‘grey’ projects and 9.4% as ‘inconsistent’.

- A project is categorised as ‘grey’ when its objectives are insufficient to promote sustainable development and climate change simultaneously. A palm oil project is one example. Although palm oil projects will offer sustainability in development, the production, cultivation and continuous expansion of oil palm plantations are associated with high levels of deforestation (Andrianto et al., 2014; Vijay et al., 2016). Oil palm monocultures have also been associated with the destruction of large areas of peatland (leading to high levels of carbon emissions) and substantial biodiversity declines (Evans, 2019).
- A project is labelled ‘inconsistent’ when it does not conform with national climate policy or global efforts under the Paris Agreement. Some 80 inconsistent projects received funding over the 2011–2020 period. Largely, they were funded to support programmes in the health (reproduction health), education (basic, post-secondary), business and finance, trade, conflict and peace, and communication sectors.

In terms of social inclusion, Indonesia’s agendas and plans for climate change mitigation and adaptation respect, promote and consider the country’s obligations on social components such as human rights, Indigenous peoples’ rights, and the inclusion of vulnerable and marginalised communities in the planning and implementation phases of climate programmes that are in line with the Paris Agreement (KLHK, 2021b; Oditya and Rahayu, 2018). Information on the specific actions and financing for social components is not yet comprehensive, however, indicating that there are gaps between government agendas and their implementation. Most of the attention has been historically paid to the environmental component, particularly in channelling capital to low-carbon or already-green economic activities, leaving the social factors the most challenging component to assess and incorporate into any investment analysis (ILO, 2022). This factor consequently complicates assessment of the consistency of finance flows with climate and sustainable development goals.

3.5.2 Consistency of multilateral flows

The multilateral public climate finance component covers climate-related commitments from multilateral development banks, multilateral climate funds and other multilateral organisations (OECD, 2022). Multilateral climate funds play an important role in the use of public finance to drive the economic and societal transformation necessary to address climate change. They help countries to adopt low-emission, climate-resilient development trajectories (CFU, n.d.). They also have a role in capacity-building, research, piloting and demonstrating new approaches and technologies, and removing barriers to other climate finance flows (ibid.).

Table 6 Multilateral climate funds that have supported projects in Indonesia from 2006 to 2021

No.	Fund name (Indonesia)	Funding approved (\$million)
1	Adaptation Fund (AF)	9.87
2	BioCarbon Fund Initiative for Sustainable Forest Landscapes (BioCarbon Fund ISFL)	19.00
3	Clean Technology Fund (CTF)	489.75
4	Forest Carbon Partnership Facility – Readiness Fund (FCPF-RF)	8.59
5	Forest Investment Program (FIP)	41.81
6	Global Environment Facility (GEF)	59.56
7	Green Climate Fund IRM (GCF IRM)	208.63
8	Partnership for Market Readiness	3.35
9	Pilot Program for Climate Resilience (PPCR)	0.27
10	Special Climate Change Fund (SCCF)	5.00
11	Programme on Reducing Emissions from Deforestation and Forest Degradation (REDD)	5.64
	Grand total	851.47

Source: Based on CFU (n.d.)

Between 2006 and 2021, 11 multilateral funds supported 48 mitigation and adaptation projects in Indonesia, helping the country to confront the challenges that climate change poses for its development (see **Table 6**). This data derives from Climate Funds Update (CFU) – the world’s leading source of information on climate funds, including how much finance climate funds have raised, where it has been deployed and the objectives of funded projects (Nakhoda et al., 2014). The total amount of funding approved through the 48 projects was \$851.47 million (CFU, n.d.).

The distribution of multilateral climate funds is divided across the eligible sectors identified by the OECD and used by the CFU. It was reported that mitigation (in general) represented two-thirds (\$634.95 million) of the total multilateral climate finance provided and mobilised in Indonesia during the period. This imbalance was driven notably by finance for programmes in sectors with greater potential for GHG emissions abatement (\$52.17 million), and renewable energy generation and production (\$568.6 million). Financial support for adaptation was predominantly focused on the forestry sector



(\$178.82 million). The financing of ‘cross-cutting’ programmes thought to deliver benefits for both mitigation- and adaptation-oriented projects, totalling \$20.66 million, was allocated to the forestry and general environment protection sectors, as well as to unspecified projects. Furthermore, adaptation-oriented finance was found to focus on those sectors that are linked to ecosystems, such as agriculture (\$5.27 million) and general environmental protection (\$7.93 million).

There are, however, challenges associated with multilateral climate finance. For example, the GCF – the largest dedicated climate finance mechanism (see **Box 2**) – provides only limited transparency and accountability on how approved funding for adaptation is spent, particularly for projects that claim to generate local-level adaptation outcomes (Omukuti et al., 2021). The GCF has been a major international REDD+ funder since 2019 (WRM, 2020); it is paying national governments in the global South, including Indonesia, to conserve their forests (Jong, 2020b). But the trend of increasing deforestation in all of these countries shows that their governments have either failed to take measures to reduce deforestation or have taken aim with measures that miss its real drivers (WRM, 2020). Civil society groups have raised concerns about the cherry-picking of data to make results on paper look better than the reality on the ground, arguing that the GCF is dishing out money for a concept that is not working (Farand, 2020). Furthermore, REDD+ mechanisms have been criticised for their adverse effects on the livelihoods of forest communities (WRM, 2015; Apriwan and Afriani, 2015).

Despite these concerns, multilateral climate finance flows in Indonesia can largely be considered consistent with global climate change mitigation and adaptation objectives. The projects are consistent with the commitments developed countries made under the UNFCCC to help developing countries, including Indonesia, to mitigate and adapt to climate change through multilateral climate funds (CFU, n.d.). All 48 projects funded also support the national climate agenda and policy (i.e. the NDC, RAN GRK, RAN API).

Box 2 The Green Climate Fund (GCF)

Kemenkeu’s Fiscal Policy Agency (BKF) is the national designated authority (NDA) of the GCF in Indonesia, in accordance with Minister of Finance Decree No. 756/KMK.010/2017 (Kemenkeu, 2018a). The permanent office of Indonesia’s NDA is the Center for Climate Finance and Multilateral Policy (Pusat Kebijakan Pembiayaan Perubahan Iklim dan Multilateral, or PKPPIM). The Global Green Growth Institute (GGGI) was legally selected in 2018 via several processes as Indonesia’s NDA delivery partner. Indonesia’s GCF-financed climate projects and activities must take into account the country’s commitments as laid out in technical government documents (e.g.e.g.e.g. the RPJMN, its NDC, nationally appropriate mitigation actions and national adaptation programmes of action) to strategically maximise GCF financing in accordance with the country’s climate targets.

In June 2022, Indonesia received GCF funding amounting to \$287.3 million. Its portfolio comprised three readiness activities and seven approved projects in areas including sustainable transport and buildings, REDD+, renewable energy, increased climate resilience and conservation (GCF, 2022).

Table 7 sets out all of these findings in summary.

Table 7 Public levers for pursuing consistency of finance flows against climate objectives

Legend

	Implementation status	Paris alignment	Data availability to assess consistency status and progress	National agenda/policy/planning alignment
2	Implemented or to be implemented	In line with Article 2.1c of the Paris Agreement	Data publicly available	In line with all national climate agenda/policy/planning
1	Under discussion by government or on hold	Progress in right direction but not sufficient	Data partially available, search costs high	Somewhat in line with all national climate agenda/policy/planning
0	Rejected or disregarded by government	Misaligned, with little progress towards alignment	Data not publicly available or search costs prohibitively high	Misaligned with all national climate agenda/policy/planning
-	Financial system aspect not yet on governmental agenda	Financial system aspect not yet on governmental agenda	Data may be available once financial system aspect is implemented	Financial system aspect not yet on governmental agenda

Financial system aspects	Implementation status			Climate action focus		Geographic focus		Paris alignment			Data availability			National agenda/policy/planning alignment			Summary
	0	1	2	Mitigation	Adaptation	Global	Domestic	0	1	2	0	1	2	0	1	2	
<i>National plans and strategies</i>																	
NDC	2			✓	✓	✓	✓	2			1			2			Indonesia plans to reduce emissions by 834 metric tonnes of CO ₂ e by 2030, and it identifies five key mitigation sectors (forestry, agriculture, energy, waste and IPPU) and four



									key adaptation sectors (marine and coastal, water, agriculture and health). To meet these needs, the government has allocated an unconditional budget of \$281 billion and a conditional target of \$285 billion between 2018 and 2030.
Sustainable Finance Roadmaps I & II		✓	✓		✓				To mobilise and realign the finance required to meet these adaptation and mitigation needs, the OJK developed a Sustainable Finance Roadmap (SFR I) for the period 2015–2019. Loopholes in the SFR I allowed climate-misaligned business-as-usual finance to continue and hence OJK has developed SFR II, whereby it aims to close these, e.g. by developing a new and ambitious green taxonomy.
<i>Consistency of domestic sector-specific public finance levers</i>									
AFOLU	2	✓	✓		✓	0	0	1	The government has introduced mandatory standards for the palm oil (ISPO) and timber industries (PHPL and VLK). However, neither is considered effective; in practice, monoculture plantations for Indonesia's palm oil, pulp and paper sectors continue to expand, leading to widespread deforestation, peat oxidation and loss of biodiversity. Moreover, the National Industrial Development Master Plan set out in Regulation No. 14 of 2014 continues to prioritise the growth of Indonesia's pulp and paper production. A public agency, BDPKS, oversees the allocation of the national \$9.6 billion Crude Oil Palm Fund. This is levied from export taxes on palm oil products and is primarily used to subsidise biodiesel production by large corporations. Furthermore, studies show that a total of 1.5 million hectares of nature forest have been lost to the government's 'Food Estate' programme. Weak implementation and control in financial institutions of ESG indicators for impact investing have fuelled abuses of licensing powers in the plantation (palm) and forestry

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									sectors, creating environmental and social conflicts.
Energy	2	✓			✓	0	1	1	Sector-specific public finance levers in the energy sector are misaligned. The government has provided average annual public finance support of \$396 million to fossil fuel projects – especially those involving oil and gas. The government also provides subsidies to coal consumption in the form of direct budgetary transfers estimated at \$881 million per year, as well as various unquantified tax and royalty exchanges and price subsidies.
<i>Consistency of domestic public finance levers</i>									



Green Taxonomy	2	✓	✓		✓	2	1	1	<p>OJK's Green Taxonomy is ambitious by global standards, categorising 2,733 sector and subsector activities into green, yellow and red. While it is not yet compulsory and is still being tested, it is likely to be used to mandate the disclosure of Taxonomy-relevant investment portfolios in the future.</p> <p>At present, disclosure requirements exist for 12 business activities whereby financial institutions must submit a sustainable finance action plan and a sustainability report.</p> <p>Concerns have been raised over the categorisation of some business activities – particularly, clean coal and forest-risk sectors.</p>
Disclosure requirements	2	✓	✓		✓	1	2	1	<p>There is a high level of compliance with existing disclosure requirements, which require the submission of a sustainable finance action plan and the publication of an annual sustainability report. However, there is limited regulatory oversight, disclosure standards need to be improved and risk management processes need to be introduced. These goals might be achieved by enacting green macroprudential regulations that incentivise or redirect resources away from carbon-intensive sectors, which mechanism Bank Indonesia has started implementing for green buildings and electric vehicles.</p>
CBT	2	✓	✓		✓	1	2	1	<p>Climate budget tagging is somewhat consistent with international and national climate agendas. Although the mechanism is considered a step in the right direction in terms of Paris-alignment, bottlenecks have emerged because of inconsistent central–regional planning and budgeting.</p>
SDG finance	2	✓	✓		✓	1	2	2	<p>It is estimated that Indonesia's SDG financing gap has grown to \$1 trillion as a result of the Covid-19 pandemic. The country is struggling to close the gap between its needs and the available SDG finance. While climate-related SDG finance is currently linked to SDG 13, the country needs to consider cross-cutting SDG goals that are climate-relevant.</p>

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Sovereign green sukus	2	✓	✓		✓	2	1	1	<p>Green sukus are strongly guided by the green bond principles whereby each project and activity should promote the transition to a low-emission economy and climate-resilient growth, including in terms of climate mitigation, adaptation and biodiversity.</p> <p>Green sukuk revenue has successfully been used to finance and refinance green projects, especially in sustainable transport (2018 and 2019) and in increasing resilience to climate change by means of disaster risk reduction (2020).</p> <p>However, concerns have been raised over the opacity of the process whereby green sukuk revenue is allocated. There are also concerns over the unreported and environmentally harmful side-effects of some projects, especially in sustainable transport. While projects support global GHG mitigation efforts, they may be harmful to local and national adaptation or mitigation goals.</p>
<i>Consistency of domestic public–private finance levers</i>									
Public–private finance	1	✓	✓	✓	✓	0	2	0	<p>Public–private partnerships have played a central role in financing Indonesia’s sustainable infrastructure needs, especially PT SMI. However, despite significant investment in renewable energy (among other sectors), sustainability reports still highlight additional fossil fuel consumption as an economic benefit. Furthermore, cases of land grabbing have been cited: during the Covid-19 pandemic, 18 funded projects created environmental and social conflicts in 12 provinces. Some of these cases related to national strategic projects and national vital objects.</p> <p>Indonesia’s blended finance initiative Tri Hita Karana has aimed to increase access to blended finance from philanthropists, but it has fallen significantly short of needs.</p>
<i>Consistency of international public finance</i>									



Bilateral flows	2	✓	✓	✓		1	2	1	The disbursement of bilateral financial support to projects with climate-related objectives was slightly higher than the total commitment over the 10 years. Nonetheless, at \$1.19 billion, bilateral flows are far below the \$285 billion needed to support Indonesia's climate agenda until 2030. Furthermore, a small share of projects funded are misaligned with Indonesia's pathway towards a low-carbon, climate-resilient economy (e.g. palm oil projects), and hence this finance flow is only partially Paris-aligned.
Multilateral flows	2	✓	✓	✓		2	2	2	Multilateral climate finance flows are consistent with Indonesia's climate change mitigation and adaptation objectives. Multilateral climate finance is focused on promoting the economic and societal transformation necessary to address climate change and helping countries to adopt low-emission, climate-resilient development trajectories. These flows are also politically important and help Indonesia to build capacity for domestically funded projects. Nonetheless, some concerns have been raised over the transparency of GCF-funded projects and their potentially adverse effects on the livelihoods of local communities.

+ 4 Private sector activities



4.1 Supply chain finance

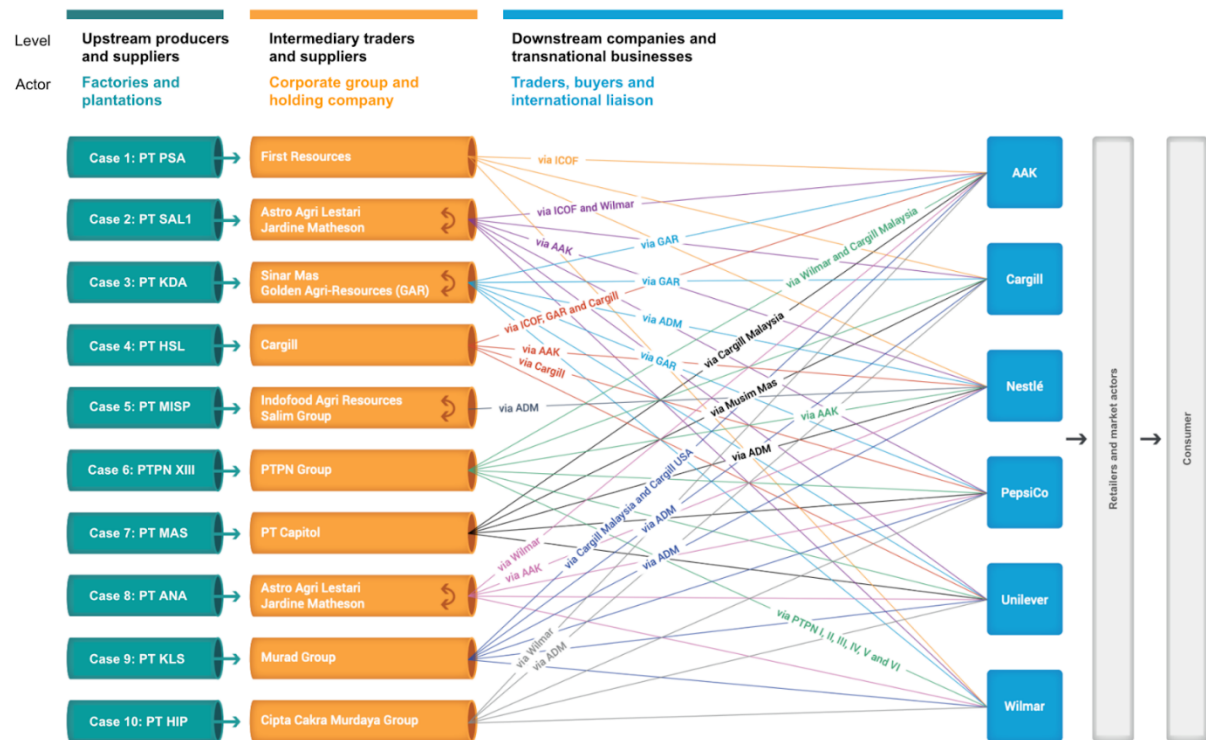
In the context of supply chains, large corporate groups often fail to monitor claims and certification documents, even when classified as ‘sustainable’ or ‘ESG’. This results in reports of the denial of Indigenous peoples’ rights, the seizure of community lands without free, prior and informed consent, forced evictions, violations of environmental rights, oppression, persecution, criminalisation and even the death of human rights defenders (FPP et al., 2021).

A study across three Indonesian provinces found that many companies and company groups classified as ESG continue to take raw materials from plantation companies that violate human rights; these companies include Cargill, Nestlé, PepsiCo, Unilever, Wilmar International, Archer Daniels Midland and AAK (FPP et al., 2021). Some of the major investors involved include Blackrock International, ABN-AMRO, Rabobank, Standard Chartered, Citigroup, Lloyds Banking Group and JP Morgan Chase, as well as various pension funds and Asian banking groups (see **Figure 11**).

Many of these corporates or investors are involved in Indonesia’s extensive palm oil supply chain. While they are subject to mandatory but ineffective ISPO standards (see **section 3.2**), they are also members of voluntary and stricter sustainability initiatives such as the RSPO or FSC certification schemes (FSC, n.d; RSPO, 2018). As part of these, they have ‘no deforestation, peat, or exploitation’ (NDPE) policies in place, and they are supposed to carry out rigorous environmental and social due diligence, such as HCV and HCS assessments.

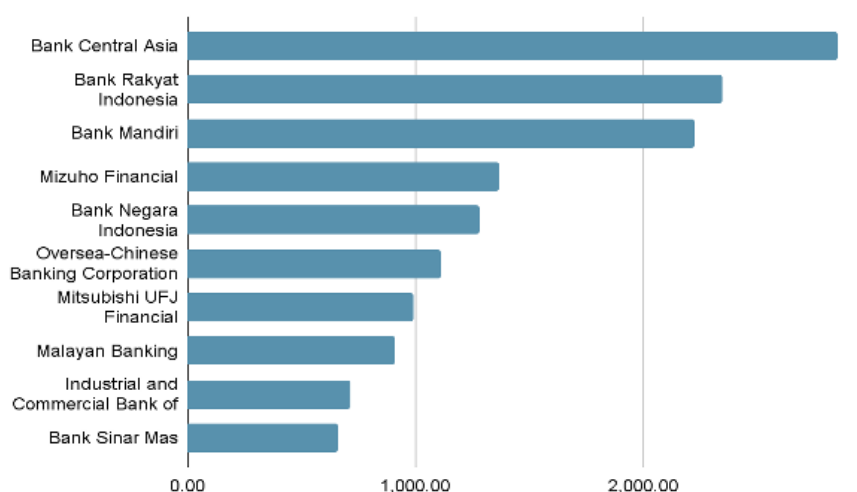


Figure 11 Supply chain relationships (FPP et al., 2021)



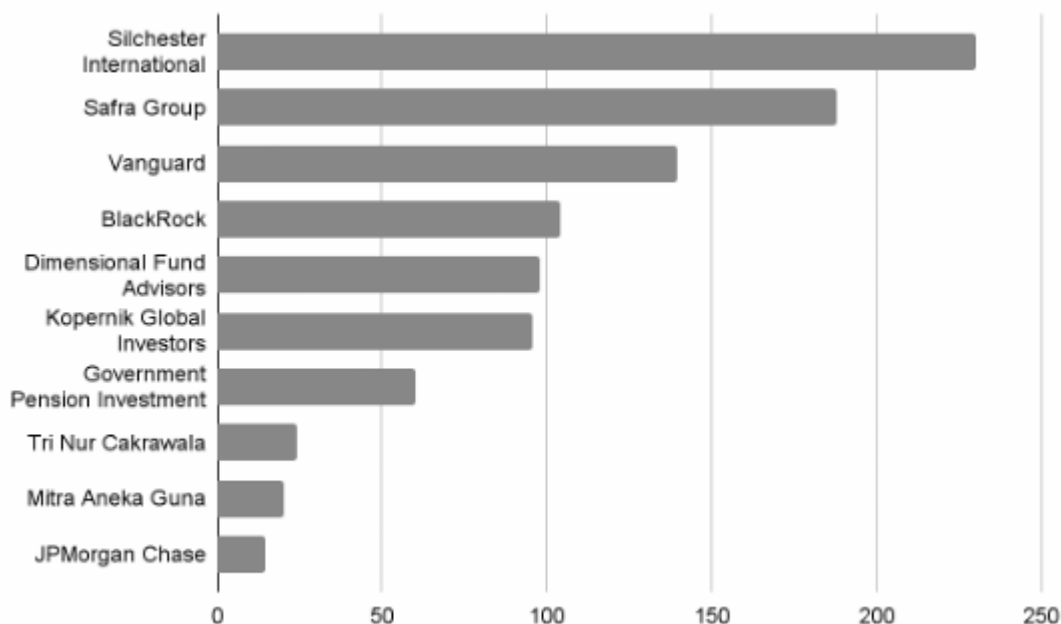
Despite this, a number of interviewees revealed that RSPO members had committed violations and had their certifications revoked. In practice, there are few disincentives to environmental, social and human rights violations, leaving a large gap between corporate commitments and their implementation. In the context of sustainable finance, the revocation of thousands of permits (2,078 mining companies, 192 forestry sector permits, 34,000 hectares of plantation permits) in January 2022 was an indication of the weak implementation of the ESG framework (Kemensetneg, 2022). Several companies whose licences were revoked were recorded to have received loans of \$26.62 billion in the form of debt and guarantees over the period 2017–2021. Some \$8.09 billion (30%) of them came from BCA, BRI, Bank Mandiri and Bank Sinar Mas (see **Figure 12**) (TuK Indonesia, 2022b).

Figure 12 Top 10 creditors, 2017–2021 (in \$million) (Forests & Finance, n.d.)



In terms of investment, as at 2021, a total of \$1.25 billion had been disbursed by investors (bonds and shareholders) to group companies whose licences had been revoked by 5 January 2022 (see **Figure 13**).

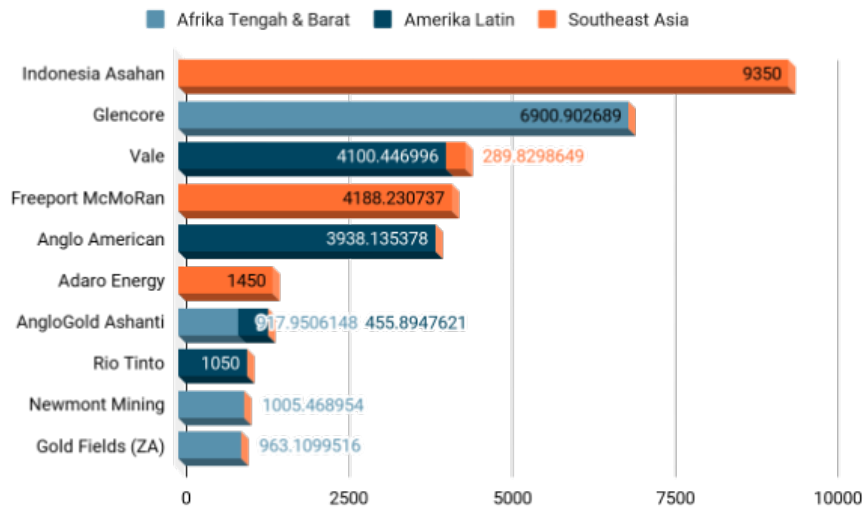
Figure 13 Top 10 investors, 2021 (in \$million) (Forests & Finance, n.d.)



In addition to issues in the palm oil and pulp-paper supply chains, concerns have been raised over the environmental impact of privately financed mining operations. Mining operations on forest land are estimated to contribute a total of more than 536 million tonnes of CO₂e (WALHI, 2022c). Between 2016 and 2021, there were at least 23 mining company groups in receipt of credit and investments that put forests at risk (see **Figure 14**).



Figure 14 Top 10 loan groups 2016–2021(in \$million) (Forests & Finance, 2022)



There are three factors that help to explain the gap between sustainable commitments and their implementation in the private sector.

- **Weaknesses in the consistency of implementing commitments** At the lender level, funding still flows to sectors that are at risk of deforestation without any clear and transparent evaluation efforts.
- **Weak control mechanisms** Although OJK has issued guidelines on ESG and many banks claim to apply ESG indicators in their sustainability reporting, financing for sectors involving environmental risk is still high.
- **Regulatory changes** These affect the implementation of ESG indicators. For example, the Job Creation Law (Undang-undang Cipta Kerja) changed regulations on the exploitation of forest areas and many crucial elements of environmental standards.

4.2 Corporate green bonds

Figure 15 shows that, since green bonds were first issued in 2017, the investor base has expanded to include not only from public funds but also funding from corporations (OJK, 2016).

Green Bond Berkelanjutan Sarana Multi Infrastruktur (SMI) Phase I 2018 was the first green bond issued in Indonesia. As of 31 December 2021, the leading investors were government-related institutions, corporations and pension funds (PT SMI, 2022; see **Figure 16**).

Figure 15 Investor expansion in green bonds (OJK, 2016)

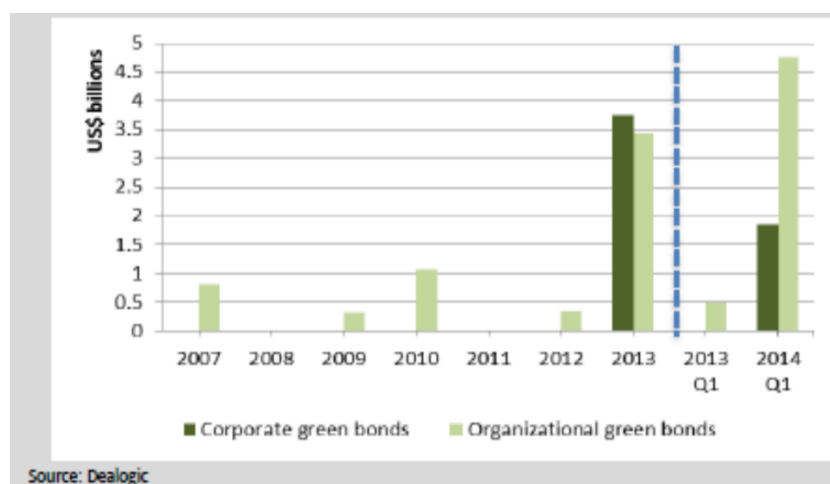
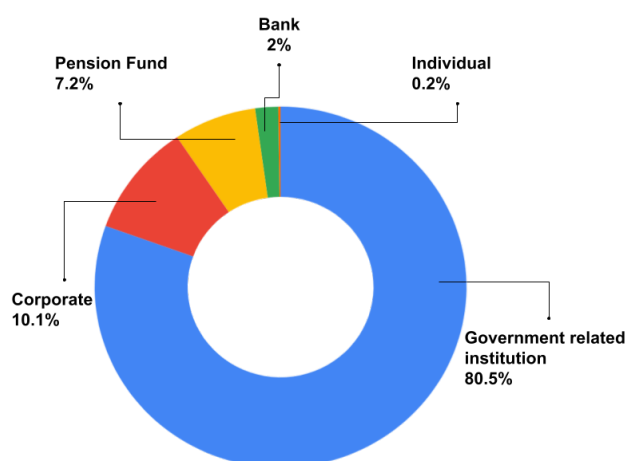


Figure 16 Green bond issuance structure (PT SMI, 2022)



A close reading of the green bond report published by PT SMI in 2022 reveals the tendency to calculate environmental factors only in terms of the quantitative carbon impacts (PT SMI, 2022). Yet it is important to look at the ESG indicators holistically, given that many infrastructure projects (especially those related to PT SMI) have an environmental impact, involve disaster risk and often cause social conflict.

In 2016, the chair of the Board of Commissioners of the OJK outlined five challenges in the development of green financing:

1. a lack of capacity in financial institutions to identify social and environmental risks, meaning an inadequate risk mitigation process
2. an absence of awareness of financial institutions because environmentally friendly projects are high risk and government incentives offsetting that risk are lacking



3. a mismatch in the timing of financing because environmentally friendly projects have long time horizons, while bank financing often comprises short-term loan agreements
4. a lack of information about environmentally friendly projects
5. a lack of capacity in the banking sector to support these projects because these issues are unpopular (infobanknews, 2016).

However, research conducted for the European Union has shown that, under conditions of good governance, energy firms, utilities and banks that issued green bonds between 2009 and 2019 were much more likely to disclose emissions data and have on average reduced their carbon intensity to a larger extent than other firms. This confirms the view that green bonds signal a firm's climate-related commitments (Mazzacurati et al., 2021).

Table 8 sets out all of these findings in summary.

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Table 8 Consistency of private finance flows with climate objectives

Legend

	Implementation status	Paris alignment	Data availability to assess consistency status and progress	National agenda/policy/planning alignment
2	Implemented or to be implemented	In line with Article 2.1c of the Paris Agreement	Data publicly available	In line with all national climate agenda/policy/planning
1	Under discussion by government or on hold	Progress in right direction but not sufficient	Data partially available, search costs high	Somewhat in line with all national climate agenda/policy/planning
0	Rejected or disregarded by government	Misaligned, with little progress towards alignment	Data not publicly available or search costs prohibitively high	Misaligned with all national climate agenda/policy/planning
-	Financial system aspect not yet on governmental agenda	Financial system aspect not yet on governmental agenda	Data may be available once financial system aspect is implemented	Financial system aspect not yet on governmental agenda

Financial system aspects	Implementation status			Climate action focus		Geographic focus		Paris alignment			Data availability			National agenda/policy/planning alignment			Summary
	0	1	2	Mitigation	Adaptation	Global	Domestic	0	1	2	0	1	2	0	1	2	
<i>Consistency of international private finance</i>																	
Supply chain finance	2					✓	✓	0			2			0			Many companies and group companies continue to take raw materials from plantation companies that violate human rights and are clearly against RSPO and Palm Oil Innovation Group standards,



									<p>even though they have corporate NDPE policy commitments and the commitment to implement the social requirements of the HCSA.</p> <p>One indication of how weakly the ESG framework has been implemented is the number of companies whose licences have been revoked since they received loans in the form of debt and guarantees. This is evidence that trade and investment with suppliers has been detrimental, accelerating the impact of climate change.</p>
Corporate green bonds	2	✓	✓		✓	1	2	1	<p>There has been a sharp rise in corporate green bond issuances in recent years. However, the labelled green bond represents only a few of the bonds that contribute to climate finance. There is here also a vulnerability to greenwashing.</p>



+ 5 Conclusions



Indonesia's growing public and private financial flows are supporting the climate agenda. However, the share involved is relatively small compared to the size of the country's economy and the majority of market demand still follows a business-as-usual pattern. Climate finance in Indonesia is still primarily dominated by domestic public funding through the APBN, with the remainder coming from international public finance. It has mostly been used to support government programmes and activities with mitigation and adaptation benefits. It is clear that domestic funds – in particular, those from the state budget – cannot fully meet climate funding needs. With this in mind, the Government of Indonesia welcomes and needs support from the private sector.

In this study, we provided parameters for assessing the consistency of public and private financial flows in Indonesia with climate objectives set out in Article 2.1c of the Paris Agreement, as well as those set out in national climate agendas, plans and regulations. The parameters for public financial flows are the Green Taxonomy, disclosure requirements, CBT, SDG finance and sovereign green sukuk; these are the mechanisms for monitoring and mobilising the finance-specific outputs of climate-related activities (mitigation and adaptation) particularly in high-risk sectors. In addition, we consider climate finance from bilateral and multilateral sources. For private financial flows, the Green Taxonomy and prudential regulations (referring to OJK regulations, and SFR I and SFR II), as well as standard commodities, are the parameters with which to assess the role of private financial institutions (debtors and creditors) in implementing sustainable finance and ESG standards. However, there are gaps and weaknesses in the climate-consistent implementation of both public and private financial flows.

The consistency of some international private finance flows with climate goals, based on the parameters and indicators provided, is challenged by the lack of programme descriptions, clear programme boundaries, and justification of the relationship between sustainable land use and forest carbon sinks as a consequence of potential violations on the ground – violations evidenced by the expulsion of members from the RSPO and FSC. Although palm oil projects offer sustainability in development, their cultivation and continuous expansion have negative effects – high deforestation, in particular – and this is contrary to the efforts made to tackle climate change. For multilateral finance flows, it seems that support for economic and societal transformation is consistent with climate change mitigation and adaptation, given the vital role of multilateral climate funds in helping countries to adopt low-emission and climate-resilient development trajectories. In multilateral finance flows, a non-allocated finance category for cross-cutting projects allows for budgets with benefits reaching beyond the Paris objective.

The consistency of domestic public finance flows, as measured against climate parameters and indicators in this study, is also challenged by the variable grasp of climate objectives among officials across government departments and governance levels, particularly in terms of their working and budget plans for climate-related programmes. Through CBT, we can see that most of the finance allocation for adaptation action is at the regional level, while the spend for mitigation action is primarily at the national level. Regardless of the budget allocation, transgressions are evident as a consequence of poor



planning and budgeting alignment – both vertically (central–regional) and horizontally (between sectors). Duplication of work and programme overlaps are highly probable in areas in which resources (budget) might also benefit other programmes, meaning that development may be high-cost but low-impact. This inconsistency within the public climate finance flow contributes to deviation in the implementation agenda, which may reflect not only the direct impact that activities have but also the indirect impact, which can follow any action at a remove. Some believe in accounting only for the direct impact of activities; others would include financial flows with only indirect impact or an obscure causal relationship with net sinks.

The consistency of international private finance flows with climate objectives is driven by the adoption of ESG indicators; however, there has been ineffectual implementation of aspects in supply chain finance and corporate green bonds for development projects in Indonesia. In the context of supply chains, large corporate groups often do not monitor claims and certification documents related to ESG indicators; claims that ESG indicators are met often rely solely on written evidence. In relation to corporate green bonds, the tendency of implementing ESG indicators is mostly focused on calculating environmental factors only in terms of the quantitative carbon impacts, resulting in minimal ESG impact and continued detrimental effects on the environment and society. Furthermore, there is a lack of clarity on the consequences of these shortfalls – including especially an absence of disincentive mechanisms and control. This creates a large gap between commitment and implementation in the field, and hence climate-inconsistency.

Similarly to international private finance, the consistency of domestic private finance flows with climate objectives is also driven partially by the attachment of ESG standards to companies' entire portfolios through both commercial bank loans and sovereign green bonds. There is, however, a risk that the lack of capacity of private companies to comprehend and operationalise the ESG concepts could result in some reporting being little more than greenwashing. The SFR framework works well in Indonesia, where most financial institutions have a high level of procedural compliance in meeting sustainable finance regulations. However, this is not seen in the field, during implementation of the ESG standards, where results and consequences are ill-defined, and there is no clear disincentive mechanism and only limited substantive regulatory oversight. In many cases, a company's ESG report will either misunderstand or make little mention of its climate impact. In addition, finance flows including banks' lending to RSPO members are misplaced and framed as proxy finance contributing to the Paris Agreement.

Indonesia might therefore take advantage of opportunities to build harmony and coherence across public and private finance by means of blended finance mechanisms, and it must improve its regulatory oversight in terms of control mechanisms, periodic reviews, multistakeholder involvement (including civil society organisations), transparency and mandatory disclosure mechanisms. This will promote the reliability of all financial flows subject to CBT, the Green Taxonomy for sustainable finance, SDG finance and ESG.

General recommendations regarding climate finance and green finance

- Develop more detailed indicators of climate and green finance. Climate finance is not measured only by quantifying carbon; the environmental, social and governance aspects of ESG cannot be viewed in isolation from one another. .
- Consider carbon quantification in the context of relevant ecosystem conditions (e.g. environmental services and ecosystem regulation in specific ecosystem types such as mangroves, karst). The environment is a unified whole and we ignore biodiversity factors when we calculate only the volume of carbon.
- Simplify quantitative carbon reduction in the carbon offset mechanism to pay close attention to the risk of greenwashing pollution-generating allocation transfers if the mechanism is not handled carefully. .
- Roadmaps towards climate finance and green financing must be made mandatory. That records are being set by current national and global initiatives in the context of sustainable finance is indicative only of how slow progress has been among the parties and stakeholders responsible for its implementation.

Recommendations for financial services institutions

- Develop a mechanism for determining debtor standards and do so specifically for each ESG indicator – then carry out periodic reviews to evaluate compliance.
- Develop a mechanism for debtor assessment that supplements documentary evidence with field verification and ground-truthing, both comprehensively and using random sampling. Ensuring the full implementation of ESG indicators will reduce financial risk in the long term.

Recommendations for corporations and commodity associations

- *For corporations*
- Establish a periodic review of ESG implementation based on not only documentary evidence but also evidence gathered in the field from subsidiaries, as well as suppliers who are directly related to the company's supply chain.
- Develop an open and transparent complaint mechanism, and provide space for public consultation and participation.
- *For commodity associations (such as those in the palm oil sector and forestry industry)*
- Provide an information hub and an open space for public participation, as well as a complaint mechanism for stakeholders, including the community, state institutions and financial service institutions.
- (For those at the global level) Set up a periodic review mechanism for all products made under certification.

Recommendations for the government and specific government agencies

- *For the government*



- Focus acutely not only on the implementation of sustainable finance and of ESG indicators, but also their linkages to the supply chain and finance.
- *For the OJK and financial regulatory agencies*
- Establish a complaint mechanism for negative ESG indicators.
- Develop a public transparency mechanism on ESG indicators (from the creditor or debtor side).
- Establish and maintain a special task force or other institution that is responsible for the control, review and implementation of sustainable finance.

Recommendations for civil society organisations

- Focus interventions towards those government financial policies that have potentially negative consequences for the climate-inconsistency of climate finance flows.
- Raise community awareness of the issues related to finance flows that are inconsistent with climate change objectives and the SDGs.
- Escalate concerns about the implementation and mobilisation of climate-inconsistent finance flows.
- Work with the government or policy-makers to:
 - a. improve the tools intended to align finance flows with climate goals
 - b. develop better ways of tracking and assessing the consistency of finance flows with low-emissions and climate resilient development.



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+ Annexes

Annex 1a Guiding survey and interview questions

Name: Contact: Position: Gender:			
No	Questions	Dala Institute	TUK Indonesia
1	Please introduce your role and your understanding of climate finance flows.	x	
2	How do you see international and domestic climate finance flows supporting the climate agenda in Indonesia?	x	
3	How can climate finance be consistent and sustainable toward Indonesia's climate agenda?	x	
4	What are the challenges and opportunities for building consistencies of financial flows to the climate agenda and the impact on Indonesia's economy?	x	
5	How to align climate finance with other development related finance like SDG finance, ESG and environmental-risks measurement standards?	x	
6	From your perspective, how can the finance of subnational governments be aligned?	x	
Private instruments			
1	<i>Introduction question</i>		
	Please introduce your role and your understanding of the relationship of sustainable finance to climate change actions. To what extent the regulations such as permit requirements have ensured sustainable finance to be consistent with climate change actions?		
2	<i>Specific questions to OJK</i>		x
	Control mechanism for the implementation of sustainability reports in financial institutions What is your advice for banks that found any malpractice on the ground reported by the public?		
3	<i>Specific questions to banks</i>		x



	<p>What is the mechanism for controlling ESG indicators for financing in risky sectors (plantation, mining, forestry)?</p> <p>How do you follow up any findings and malpractice on the ground?</p> <p>Control mechanism for the implementation of sustainability reports in financial institutions</p>		
4	<p><i>Specific questions to RSPO</i></p>		x
	<p>What is the control mechanism for the certification that has been issued?</p> <p>What to do if a company that has obtained certification finds conflicting implementation facts</p>		
5	<p><i>Specific questions to companies (Sinar Mas)</i></p>		x
	<p>How many sustainability staff?</p> <p>The allocation to sustainability</p> <p>Is GAR eligible to meet ESG indicators when applying for bank financing? If so, what indicators and tools are proposed by the bank?</p> <p>How GAR responds to complaints related to ESG indicators, with an example.</p>		
5	<p><i>Specific questions to impact reporting company (CICERO)</i></p>	x	x
	<p>Give some examples:</p> <ul style="list-style-type: none"> ▪ green building on the conservation land ▪ solar panel on grid or with batteries (foot print) <p>Assessment with field check or based on paper?</p> <p>How if there is any malpractice after the assessment?</p>		
	<p>What standard basis do you use in giving a green label?</p> <p>Is it related to SF & ESG indicators?</p> <p>Does standardisation cover supply chain and upstream–downstream levels?</p> <p>Is it based on legal documents or field studies?</p>		
	<p>How do you respond to findings/reports of violations after the label is issued? Is there a periodic evaluation?</p> <p>Any cases where the green label was removed? Are you willing to provide information and examples of cases related to this?</p>		
6	<p><i>Specific questions to IFC</i></p>		x
	<p>If there are complaints from the community, how do you respond</p>		
	<p>Do you have SoP and specific bodies to handle the complaint?</p>		
	<p>How does IFC respond to violations of ESG indicators on existing projects?</p>		
	<p>How would you respond if your investment was related to problems in the ESG sector?</p> <p>What if there is a problem/complaint from the public regarding investment claiming to have implemented the Environment and Social Management System (EMS)?</p>		
7	<p><i>Specific questions to ANGIN angel investor</i></p>	x	x

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	<p>How do you determine investment in a particular sector? Are ESG indicators considered?</p> <p>What indicators do you use? Is there any reference document related to ESG that you use that has been recognised globally?</p>		
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Closing questions			
1	In your experience, what are the most common problems related to ESG indicators? Can we get the report documents? What do you do to deal with ESG-related problems that often arise? Are there any improvements or changes to the guide regarding ESG indicators that you make?	x	x
2	From your experience, any suggestions for better implementation of ESG indicators? How to avoid problems that often arise?	x	x

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Annex 1b Letter to respondent (EN)

Dear stakeholders,

The Dala Institute is a research institute engaged in the environmental field. Currently, we are involved in a research project led by ODI related to the Independent Global Stocktake (iGST) of Indonesia's Finance Flows.

In the process of developing the final report, we need inputs from related actors. In that context, we will conduct discussions with relevant parties from various sectors. This discussion aims to collect data about the current context of Indonesia's finance flows. The results will be used as insights to provide a comparative outlook of the Climate Finance Flows in Indonesia – both public and private – to align with the goals of the Paris climate agreement.

We value your experience and expert insights. We would like to learn more from you by meeting remotely via Zoom, Google Meet, or your preferred platform. To be clear this is an interview for a research project titled Independent global stocktake (iGST) of Indonesia's finance flows.

We would like to speak to you about:

- What extent of international and domestic financial flows (finance, investment, trade) align with Indonesia's emission reduction and climate-resilient agenda.
- Gaps, barriers, and possible implications related to international and domestic financial flows towards Indonesia's climate agenda.
- The influential and powerful actors in Indonesia's Climate finance (from both recipient and donor sides).
- The alignment process of several climate related finance in Indonesia (CBT, SDGs Finance, ESG, etc).

Please let us know your availability. You are welcome to assign the interview to another person in your company and invite up to two (2) other people from your company for the interview.

Any information that you share with us will be held in strict confidence by the Dala Institute. It will be summarised, analysed, and presented in an anonymous, aggregate manner in a final report that will be used by ODI. Please let us know during and after the interview if you would like to withdraw or revise any of your responses.

We look forward to hearing from you soon. This discussion will be followed up by Komariah Ervita, *Analyst* from Dala Institute (k.ervita@dala.institute / 081228270498).

Best regards,

Aidy Halimanjaya, PhD
Director and Team leader



Dala Institute
a.halimanjaya@dala.institute

Annex 1c Letter to respondent (ID)

Kepada pemangku kepentingan,

Dala Institute merupakan lembaga penelitian yang bergerak di bidang lingkungan. Saat ini kami sedang terlibat dalam kegiatan penelitian yang dipimpin oleh ODI terkait dengan konsistensi arus pendanaan iklim di Indonesia.

Dalam proses penulisan laporan kegiatan, kami membutuhkan masukan dari pemangku kepentingan terkait. Sehubungan dengan itu, kami akan melakukan diskusi dengan pihak-pihak terkait dari berbagai sektor. Diskusi ini bertujuan untuk mengumpulkan data dan informasi terkait konsisten arus pendanaan iklim di Indonesia saat ini. Hasil penelitian ini akan digunakan sebagai masukan untuk memberikan pandangan komparatif terkait arus pendanaan iklim di Indonesia baik yang berasal dari pendanaan publik maupun pendanaan swasta agar selaras dengan tujuan dari perjanjian paris.

Kami sangat menghargai pengalaman dan wawasan yang Ibu/Bapak miliki. Oleh karenanya kami berharap Ibu/Bapak dapat berbagi pengalaman dan sudut pandang mengenai kondisi terkini, upaya, trayektori pencapaian dan konsistensi pendanaan iklim di Indonesia. Kami ingin belajar lebih banyak dari Ibu/Bapak melalui diskusi Zoom, Google Meet, atau media komunikasi lain sesuai dengan preferensi Ibu/Bapak sekalian. Untuk lebih memperjelas, diskusi ini dilakukan untuk mendukung kegiatan penelitian yang berjudul 'Independent Global Stocktake (iGST) of Indonesia's Finance Flow.

Topik yang didiskusikan antara lain terkait:

- Keselarasan dukungan pendanaan iklim baik yang berasal dari dalam maupun luar negeri terhadap komitmen Indonesia untuk pengurangan emisi dan ketahanan iklim.
- Hambatan dan rintangan yang dihadapi yang mungkin memberikan dampak terhadap konsisten arus pendanaan iklim di Indonesia baik yang berasal dari internasional maupun domestik.
- Aktor kunci yang berpengaruh kuat dalam pendanaan iklim di Indonesia (baik sebagai penerima maupun pemberi dana)
- Keterkaitan dan keselarasan beberapa bentuk instrumen pendanaan iklim di Indonesia seperti CBT, SDGs Finance, ESG, dll)

Silahkan memberikan balasan mengenai waktu diskusi yang bisa anda luangkan. Kami juga memberikan kesempatan kepada Ibu/Bapak untuk menunjuk perwakilan dari lembaga anda. Silahkan menunjuk maksimal dua (2) orang perwakilan.

Semua informasi yang Ibu/Bapak bagikan dengan kami akan dirahasiakan oleh Dala Institute. Semua wawancara akan disimpulkan, dianalisa, dan dipresentasikan secara anonim dan agregat di laporan akhir kami ke ODI. Jika Ibu/Bapak mau mengeluarkan atau merevisi informasi yang sudah diberikan saat atau setelah wawancara, Ibu/Bapak bebas untuk melakukannya. Silahkan memberitahu tim kami jika perlu melakukannya.



Kami mengucapkan terima kasih sebelumnya dan kami berharap agar bapak/ibu bisa berpartisipasi dalam kegiatan ini. Diskusi ini akan di follow up oleh Komariah Ervita, Analyst dari Dala Institute ([k.ervita@dala.institute/081228270498](mailto:k.ervita@dala.institute)).

Salam,

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Annex 1d Interview guide

Interviews will be conducted in the period June to July and will last about one hour. The team will use a platform that is convenient for the respondent, such as offline meeting, Google Meet, Microsoft Teams, or Zoom.

Each interview will start with an introduction of the interviewer and clarification of the purpose of the meeting as follows:

The Dala Institute is involved in a research project led by ODI related to the Independent Global Stocktake (iGST) of Indonesia's Finance Flows.

The results will be used as insights to provide a comparative outlook of the Climate Finance Flows in Indonesia to align with the goals of the Paris climate agreement.

Next, the interviewer will clearly state the following:

6. Your participation is completely voluntary
7. You may choose not to respond to any of my questions.
8. If you want to add, delete or edit any of your responses, you may do so by emailing me before (*will follow the interview schedule*) 2022
9. I will be taking notes as we speak. [OPTIONAL: I would like to record this conversation with your permission].

Finally, the interviewer will ask the respondent:

10. Do you have any questions?
11. Do you consent to proceed with the interview?

[Consent must be provided before proceeding]

Preparing for the interview:

Prior to each interview, the interviewer should review this guide and the data collection instruments. You should also be sure to take note of the role of the respondent and company in the supply chain or as a collaborator and be prepared to probe based on this positionality.

Make sure that you have tested your hardware and software. If you have an unreliable internet connection, be sure to have a back-up data signal in case you need to use it.

Join the call about 5–10 minutes early to test your equipment and connection.

12. Be clear about the intent of the interview, how data will be used, anonymity, and data security. Be clear that participation is voluntary. If remote, this preamble could be sent to the respondent in advance.



13. Be clear on the time available for the interview at the beginning and monitor your time as you go.
14. Ask for consent, and another specific consent if you want to record audio. Video recording is usually not needed. If you are not confident that you can take notes in sufficient detail, try to record audio.

During the interview:

Use video if possible as this improves the rapport with the respondent.

During the interview, the interviewer is expected to take detailed notes, being careful to record as clearly as possible what the respondent said. Transcripts are not necessary and notes can be in bullet or prose form. Quotes should be clearly marked and each interview should have five to 10 quotes in the notes.

15. Detailed notes means that the context of the question is also noted. You can use bullets if you want, but make sure that the context is very clear.
16. Link notes to the question asked. This helps to contextualise the question. For remote interviews, you can document responses directly under the question template. For in person interviews, you can note the question number.
17. Read the room. If a respondent doesn't have anything to say, move on to something they want to talk about. In a semi-structured interview format, you don't need to answer every single question.
18. Be sure to answer any required questions.
19. Use probing language like: 'Can you tell me a bit more about that?' 'Why do you think that happened?'
20. Take quotes as much as possible.
21. Use shorthand to signify important part of the interview eg. put a '!!' before and after important parts of text and use quotation marks to record direct quotations. Avoid trying formatting that takes your hand off the keyboard for remote interviews (e.g. Colouring or highlighting text)
22. Note emotions or your thoughts in special quotes (eg [She was angry] or [Follow up with respondent Y on this])
23. At the end of the interview ask the respondent if there is anything else they want to talk about and let them know that you might like to follow up with them to talk about something. Remind them that they can contact you to amend their responses.

After the interview:

24. Once finished, make some annotated notes in the form of a paragraph that summarises the interview. You can include some initial thoughts, links with other interviews etc., but be careful not to make conclusions or judgements... just document the findings to keep your mind flexible for alternative views.

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25. Save the digital document in the designated folder using a standardised coding. The lead interviewer or location codes followed by a sequential number often works (eg. 1–01) where 1 is the location or interviewer and 01 is the interview number for that person/location. If using a document key, do not put the name of the respondent in the title or the document. Just add the interview number to the key. Upload or input all notes within three days of conducting the interview.
26. A good 45–60-minute interview will be more than four pages of notes. A bad interview might only have a page even if the notes are good.

