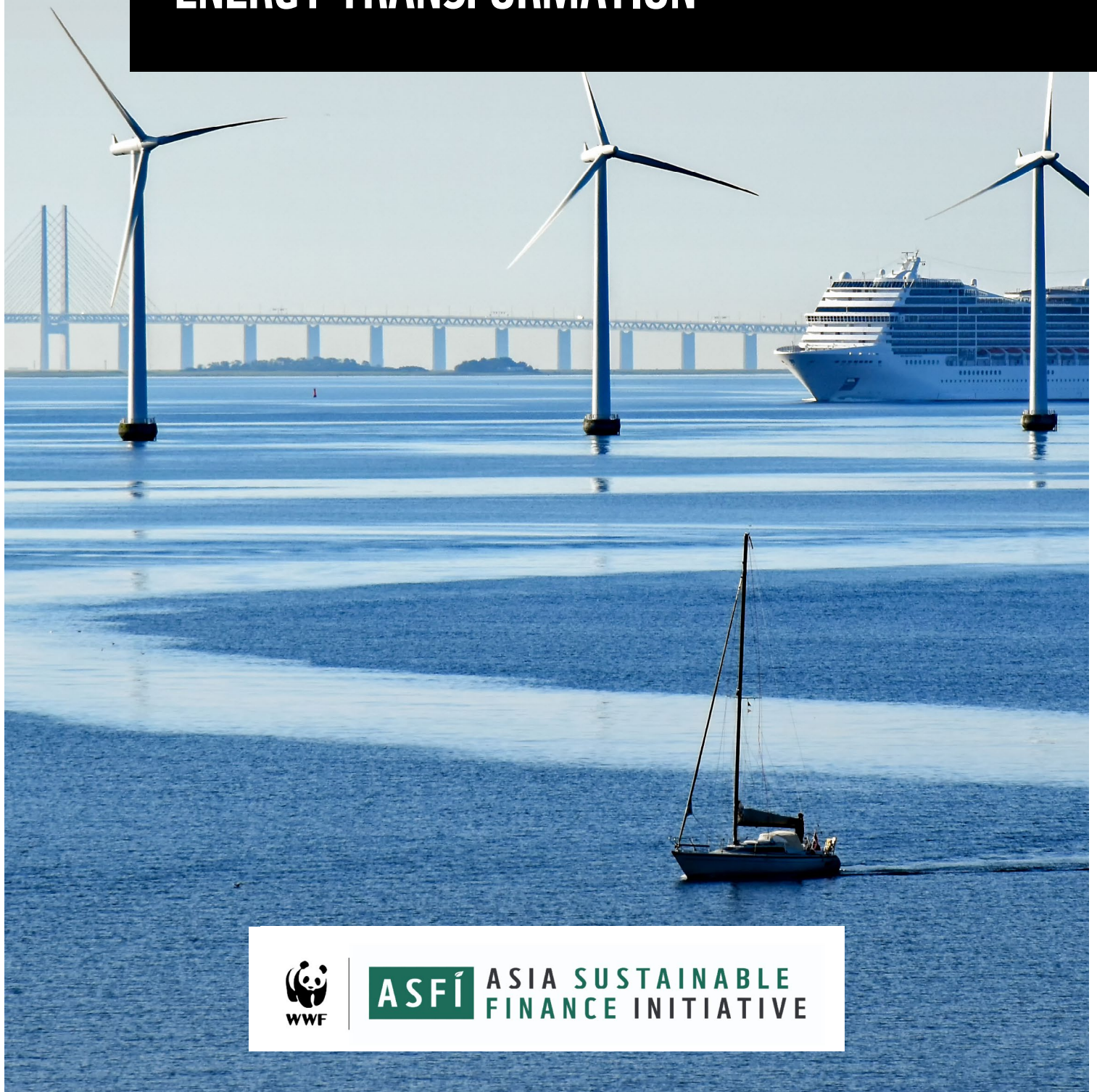


THE ROLE OF NATIONAL DEVELOPMENT FINANCE INSTITUTIONS IN ACCELERATING SOUTHEAST ASIA'S CLEAN ENERGY TRANSFORMATION



ASFI

ASIA SUSTAINABLE
FINANCE INITIATIVE



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About WWF-Singapore

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EXECUTIVE SUMMARY

There is a clear scientific consensus on climate change: the world must achieve net zero greenhouse gas (GHG) emissions by 2050 to keep the global temperature rise below 1.5°C and minimise irreversible environmental damage. To achieve this, all real economy sectors will need to follow science-based transition pathways to reduce their emissions. This will require significant investment, particularly in the energy sector which accounts for almost three-quarters of global GHG emissions.

Southeast Asia faces the twin challenges of increasing total investment in the energy sector while increasing the share of this investment going to clean energy technologies. With today's policies, the region's energy demand, fossil fuel imports and emissions are set to increase. Southeast Asia must attract much higher levels of energy sector investment to accelerate its clean energy transition and meet the rising demand for energy services. This requires upgrading clean energy policy and regulatory frameworks and addressing a wide range of financial hurdles across sectors. Ambitious announcements on clean energy in 2021 and in 2022 were a positive signal, but financial system sustainability and project bankability need further work.



As providers and facilitators of direct and indirect financing, development finance institution (DFIs) have an opportunity to play a pivotal role in supporting the energy transition. Their public mandates call for them to support sustainable development, including decarbonisation and climate resilience, which they can do through their own investments and by setting standards that other institutions emulate. Helping local, national development finance institutions (NDFIs) to become Paris-aligned and, where relevant, define and implement a net zero strategy, can be a game-changer for the much-needed energy transition in Southeast Asia's emerging markets. This in turn will unlock the potential of new sustainable projects accelerating further net zero ambitions. NDFIs can catalyse private funds, especially for projects at the early stages of development (e.g., hydrogen, and carbon capture, utilisation, and storage), and technologies with specific risks (e.g., geothermal exploration). Regionally, in the Association of Southeast Asian Nations (ASEAN), climate finance and expertise are present. However, to scale the equitable distribution of resources including capital, it is important to build local partnerships, and NDFIs are very ably placed to provide the strength and ownership to achieve climate targets. Mainstreaming climate change considerations throughout the NDFIs' operations and their investing and lending activities will enable them to deliver better, more sustainable, short- and long-term results – both developmentally and financially.

This white paper aims to highlight the importance and opportunity, as well as the current progress in aligning ASEAN NDFI's energy-related financing decisions with the Paris Agreement. It provides an overview of findings from a baseline assessment of four NDFIs in Indonesia, the Philippines and Viet Nam, along with broad recommendations for developing and implementing science-based, energy transition processes for direct and indirect investments.

FINDINGS

The four surveyed NDFIs are in the early phases of engaging with high-emission sectors on transition plans and have yet to establish comprehensive financing conditions that enforce accelerated decarbonisation efforts. Sector policies addressing the financing of activities that are not aligned with a 1.5°C scenario are largely underdeveloped, but some are breaking this trend with commitments to end the financing of coal activities. However, at present, many NDFIs still offer products or services dedicated to the exploration, development, and expansion of fossil fuel assets.

On a positive note, all NDFIs acknowledge the societal and economic risks and opportunities associated with climate change, including sustainable energy financing. A few have started to make progress to align their core strategy, decision-making, lending, and investment with the UN Sustainable Development Goals (SDGs), and international agreements such as the Paris Agreement. One NDFI has even become a signatory to the UN Principles for Responsible Banking (PRB) and completed the required self-assessment and reporting. Faster progress is also being made in setting milestones to scale up climate finance, although definitions of this vary widely. All NDFIs provide specific green product lines and services (e.g., green bonds, sustainability-linked loans, impact financing) that support climate mitigation and adaptation.

Most NDFIs have yet to disclose their exposure to high-risk energy sub-sectors and/or the carbon intensity of their energy portfolios. None have adopted the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Furthermore, climate scenario analysis of indirect financing activities is still a nascent field. So is science-based target setting. Moreover, linking executive remuneration and appraisal to sustainability progress, and offering regular, specialised sustainable finance training to staff are not yet being implemented by all NDFIs. However, there seems to be an increased appetite for the latter, and thanks to the growing number of inexpensive training offerings such as the Asia Sustainable Finance Initiative (ASFI) Academy’s sector-specific and sustainable finance courses, capacity building will probably be the most promising and catalysing development to take place in the next 1-3 years.



RECOMMENDATIONS

There are eight key areas that we have identified as opportunities for NDFIs to improve:

1 Meeting climate-related commitments regionally requires **updating mandates to include credible net zero commitments and transition plans, specifying short- and medium-term milestones and developing science-based sector targets** to fulfil these commitments. NDFIs should develop, implement, and disclose detailed, verifiable, and actionable climate transition plans following the latest frameworks and best practices.

2 **Climate action and climate risk management need to be embedded at every level of the institutions.** For direct investments, this means screening projects for climate-related risks and categorising them as presenting high medium, or low physical climate risk. There is a range of suitable tools including commercially available off-the-shelf software (e.g., Acclimatise Aware Climate Risk Screening Tool) as well as bespoke (e.g., the World Bank's Climate and Disaster Risk Screening Tools, and the Coalition for Climate Resilient Investment's Physical Climate Risk Assessment Methodology (PCRAM)). PCRAM provides guidelines for integrating physical climate risks into infrastructure investment appraisal. For indirect investments, NDFIs need to develop scenario analysis capabilities to bring their portfolios in line with their targets. Institutions should be integrating the International Energy Agency (IEA)'s Net Zero Emissions by 2050 Scenario (NZE) or other equivalent 1.5°C scenarios into their portfolio scenario analyses of climate risks. Finally, NDFI should disclose quantitative results.

3 NDFIs should **immediately end the financing for new coal-, gas- and oil-related projects, and urgently address these sectors' phase out in alignment with ambitious science-based 1.5C criteria.** Beyond direct financial risks, NDFIs need to carefully consider additional technical aspects in their coal power financed projects such as commitments on the technology used, GHG emissions, operation duration, input materials, and environmental and social (E&S) aspects. NDFIs need to develop robust transition risk plans and a plan to prevent and handle risks such as coal-fired power plant forced shutdowns, etc. Each bank should look to adopt best practices from its more advanced peers. Comprehensive and up-to-date fossil fuel exclusions policies are a clear priority, as are GHG accounting, transparency, and the integration of climate mitigation and adaptation considerations into energy strategies.

4 NDFIs should **invest strategically and align all new energy financing with the objectives of the Paris Agreement, and transition investment portfolios to net zero GHG emissions by 2050 at the latest.** This includes scaling-up green finance but also developing new financial instruments and products that enable companies to transition from high-emission assets and phase them out to move into low-emission assets.

5 NDFIs should also **engage with borrowers (investee companies, country governments) on transition plans** and phase out financing of energy-related activities not aligned with the Paris Agreement. More specifically, NDFIs should:

- Support **investee companies** to disclose credible, science-based transition plans and make clear the escalation strategy leading to divestment in case investee companies fail to adopt and implement credible transition plans.
- Work with **governments** to develop Paris-aligned project pipelines and programmes that promote green growth, climate adaptation and resilience, access to green energy, and a just transition to a low-carbon economy. This requires establishing advisory tools and services that support client countries to identify clean technology solutions and linking project support to technical assistance support for local governments, such as carrying out whole energy system studies and developing decarbonisation plans.
- Advocate **policymakers, supervisors, and regulators** to require mandatory science-based target setting and disclosure of climate and nature transition plans for financial institutions and large or listed companies.
- Engage in **peer-to-peer learning** platforms and initiatives to share experiences and best practices on transition plan design and implementation

6 **Improving the quality of disclosure of financed emissions** (around emissions, metrics, and targets) and their exposure to high-risk sectors. NDFIs should start making climate-related financial disclosures in line with high international standards, specifically adopting the recommendations of the TCFD to demonstrate progress.

7 As NDFIs need to make informed decisions on sustainability issues based on increasingly complex forward-looking scenarios, their **staff skills and incentives need to be aligned to include**

sustainability-linked criteria. Therefore, linking executive remuneration and appraisal with progress on decarbonisation targets is important. So is providing specialised training to staff on Paris-aligned exclusion and sector policies, due diligence practices, scenario analysis and stress testing to model risk, portfolio-level target setting, and product offerings.

8 Further progress in ASEAN's sustainable finance ecosystem would benefit from **closer public-private collaboration on data disclosure and project risk allocation** and a more consistent and coherent system for assessing and communicating priority environmental and social (E&S) elements of sustainable energy infrastructure in financial markets. This is a central policy development that governments should take up.

Since COP21, many public and private financial institutions have committed to “aligning” themselves with the Paris Agreement. As a result, it has become increasingly clear that aligning financial flows across all activities and business lines, in addition to delivering and increasing climate finance efforts, requires transformational changes within their institutions. These will include the adaptation of strategies and operations to phase out activities inconsistent with the goals of the Paris Agreement, and new measures to contribute whenever possible to national low-GHG climate-resilient development. This alignment process should be understood as a journey. In many instances, financial institutions will implement it step by step depending on their respective mandates and capacities. Therefore, NDFIs must **prioritise their efforts.** It is also increasingly recognized that **alignment will be an iterative process:** NDFIs will have to **continually review and develop new tools and approaches** to respond to societal, economic, and technological transitions.

INTRODUCTION

DECARBONISATION OF THE ENERGY SECTOR

According to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report, “deep, rapid and sustained emissions reductions” are required to achieve the Paris Agreement goal of limiting global warming to 1.5°C or well below 2°C. While GHG emissions reductions are expected to be achieved in the real economy, they must be supported by significant shifts in investments and capital flows towards a low-carbon economy.

Limiting warming to 1.5°C implies reaching net zero carbon dioxide (CO₂) emissions globally around 2050 and concurrent deep reductions in emissions of non-CO₂ forcers, particularly methane (high confidence). Such mitigation pathways are characterized by energy demand reductions, decarbonisation of electricity and other fuels, electrification of energy end uses and other means¹.

Energy, more than any other sector, must decarbonise effectively if the world is to achieve net zero emissions by 2050. The sector is the single biggest source of carbon emissions, accounting for about three-quarters of all global emissions², largely due to the burning of coal and natural gas in fossil fuel-based power generation. Energy also plays a vital role in the transition to net zero because electrification is a key lever for decarbonising other industries that depend on grid electricity, chiefly automotive, real estate, and hard-to-abate sectors such as steel and cement. A significant change in the way energy is delivered is therefore needed, involving its production without generating net GHG emissions.

Global investments in energy infrastructure need to increase to enable social and economic development, particularly in poorer countries. Considering that most energy infrastructure investments have a long lifetime (e.g., transmission lines – 50 years, high-voltage transformers – 40 years, generating plants – 35-80 years, substations – 35-45 years), the decisions taken today will have a decisive impact on long-term emission trends. Therefore, to close the infrastructure investment gap, investments must be aligned with the Paris Agreement today, to avoid high-carbon lock-in and the risk of stranded assets in the future³ (Box 1).

1 IPCC. 2019. Chapter 2. Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development.

2 Greenhouse Gas Emissions from Energy: Overview – Analysis – IEA.

3 Germanwatch and NewClimate Institute. 2018. Aligning investments with the Paris Agreement Temperature Goal – Challenges and Opportunities for Multilateral Development Banks. Cologne/Bonn/Berlin.

BOX 1. STRANDED ASSETS

In the energy industry, stranded assets are defined as “assets that at some time prior to the end of their economic life (as assumed at the investment decision point), are no longer able to earn an economic return (i.e., meet the company’s internal rate of return), as a result of changes associated with the transition to a low-carbon economy (lower than anticipated demand/prices).”⁴

The impacts of climate change can cause both direct and indirect stranded asset risks. Direct impacts include physical changes in the natural environment or in natural resources that pose a risk of stranded assets in many sectors and industries. For example, rising sea levels can affect the agriculture and transportation industries. Meanwhile, changes in rainfall can affect the hydropower and irrigation sectors. Indirect impacts of climate change that cause stranded assets include changes in government regulations, technology, social norms or consumer behaviour, litigation, and statutory interpretation. Typically, the commitment of governments to net zero carbon emissions can affect economic sectors with large CO₂ emissions such as coal-fired power plants and manufacturers of vehicles running on gasoline, diesel, etc. These commitments are contributing to the rapid global energy transition from traditional fossil fuels to renewable energy⁵.

Factors affecting stranded asset risk in the power generation sector range from internal (subjective) factors arising to external (objective) factors. Internal factors include fuel costs, technology, operating cost, and operating capacity. External factors include regulations on limiting pollution, fiscal policies on greenhouse gas emissions, the electricity market and competitiveness, and capital costs⁶.

Coal-fired power plants are the most at-risk of becoming stranded assets. This situation is defined as a power plant in danger of loss, devaluation, or of falling into bankruptcy because it must shut down early to meet the requirements for greenhouse gas emissions. The fact that coal-fired power plants are at risk of becoming stranded assets means that financial institutions, investors, and financers risk losing some of the capital invested in them.

4 Carbon Tracker. 2019. Here comes the Sun (and Wind): Viet Nam’s low-cost renewable revolution and its implications for coal power investments.

5 SIDA and OXFAM, 2022. Overview Of Stranded Assets Risk In The Context of Climate Change: A Case Study of The Power Generation Sector in Viet Nam.

6 Ibid

Several mitigation pathways have been proposed that are consistent with limiting warming to 1.5°C above pre-industrial levels (Figure 1). Despite some uncertainties regarding the remaining carbon budget and differences in how to achieve that overall objective, all scenarios show that a drastic change from current trends is required to meet the Paris temperature goal: global emissions must peak this decade and decline precipitously thereafter. The energy sector must also significantly ramp up the production of renewable energy (RE), such as wind, solar and geothermal, and provide this through effective storage and efficient grid systems (see Table 5 in the Annex for an overview of RE options). For financial institutions, this means a drastic reduction in all fossil fuel support (where unabated) and no new coal investment after 2030.





	IPCC	IEA	UN	OECD	NGFS	IRENA	Carbon Tracker
<div>Coal</div> <div></div>	Global drop to 0-5% by 2050	Phase out by 2030 for advanced economies and 2040 globally	Remove 8-24Mt-Co ₂ e/yr by 2030	Phase out by 2030 for advanced economies and 2040 globally	Coal-fired emissions reduction to 7% in 2030 and close to 0% by 2050.	Full phase out by 2050	Phase-out unabated coal by 2040
<div>Oil</div> <div></div>	Global drop to 40-75% by 2050	No new oil field developments by 2021 & no new oil plants by 2040	Remove 25-58Mt-Co ₂ e/yr by 2030 and 35-95 Mt-CO ₂ e/yr by 2050	No new investment by 2030. Annual reduction rate of 8.5%	Oil in the primary energy mix to change from 34% in 2020 to 18% in 2050.	Phase-out in the transportation sector by 2050	No new projects by 2021. Decommissioning of existing plants in 2030's.
<div>Gas</div> <div></div>	Global drop by 80% in 2050 in scenarios without CDR	No new gas field developments by 2021, but phase out unlikely	Remove 25-58Mt-Co ₂ e/yr by 2030 and 35-95 Mt-CO ₂ e/yr by 2050	No new gas fields by 2021. Annual reduction rate of 3.5%	Gas reduced to 9% of global energy mix by 2050	No clear stance	No new project by 2021. Decommissioning of existing plants in 2030's.
<div>Removal</div> <div></div>	No overshoot. Emission reduction included, but LULUCF often sufficient.	No overshoot. No reductions from outside the energy sector.	No/low overshoot. Net zero will require scaling up of removals.	No/low overshoot. No unproven technologies only natural carbon sinks.	Limited temporary overshoot. Low-medium availability of removal technology.	CCS and BECCS	No use of removal technology.

Figure 1. Role of fossil fuels in 1.5 and net zero scenarios. Comparison between scenarios. To define what it would mean to align investments with the Paris temperature goal, it is necessary to analyse scientific scenarios that show emissions pathways consistent with keeping global warming to 1.5°C. Despite some uncertainties regarding the remaining carbon budget and differences in how to achieve that overall objective, all scenarios show that a drastic change from current trends is required to meet the Paris temperature goal. Paris-aligned pathways show that the global energy supply needs to achieve net zero emissions around 2050. Source: WWF, 2022.

The International Energy Agency (IEA)’s Net Zero Emissions (NZE) scenario (see Box 2), which is one of the most cited in the energy policy literature, indicates that not only is a two-thirds reduction in the emissions intensity of energy production by 2030 required, but the sector also needs to reach zero emissions intensity by 2040, ahead of other sectors’ net zero timelines. To put this into a financial perspective, the IEA estimates that annual clean energy investment worldwide needs to reach US\$4 trillion by 2030, nearly four times the US\$750 billion invested in 2021, and all new investments in oil, gas, and coal would need to stop right away if we are to reach emissions neutrality by 2050.

BOX 2. IEA NET ZERO EMISSIONS BY 2050 SCENARIO

In 2021, the IEA published a study outlining a pathway to reach net zero emissions by 2050⁷. In its scope, this roadmap for achieving a clean energy transition has global dimensions and was designed to help guide the 2021 United Nations Climate Change Conference (Conference of the Parties - COP26). The report did not provide specific regional or national pathways⁸. However, the publication is noteworthy for the IEA’s revision of some long-held positions, including on fossil fuels, in stating: ‘there are no new oil and gas fields approved for development in our pathway, and no new coal mines or mine extensions are required’⁹.

The NZE thus became a ‘benchmark’ for measuring progress towards reaching the 1.5°C goal. To further underscore the NZE’s importance, its findings have been officially recognised in the COP26 Statement on International Public Support for the Clean Energy Transition. It includes a pledge to end new international direct public support for unabated fossil fuel in the energy sector by the end of 2022¹⁰.

The NZE satisfies the IPCC requirements for 1.5°C scenarios, especially regarding energy sector developments: a necessary rapid decline of coal power generation in industrialised countries by 2030, and globally by 2040. It emphasises the importance of wind and solar energy as the main energy carriers to cover the ambitions of most IPCC 1.5°C pathways concerning energy supply, fossil fuel use, and RE sources^{11,12}. The NZE offers additional greater benefits for social and economic issues compared with other scenarios, such as increasing living standards and significantly decreasing premature deaths due to air pollution¹³. But, for all its ambition, the NZE does fall short in some regards.

Main points of criticism are the NZE’s predictions of continued fossil fuel use, considered acceptable because of an optimistic perception of carbon dioxide capture and storage (CCS)/carbon dioxide capture, utilisation, and storage (CCUS) technologies and their potential¹⁴.The IEA NZE is regarded as ‘conservative’ regarding its reliance on carbon dioxide (CO₂) removal (CDR), perceived as a major risk towards reaching 1.5°C ambitions. Whereas its reliance on CDR is still lower than other models, the NZE’s reliance on CCS technology is comparatively high¹⁵. While the IEA predicts no need to develop new oil and gas fields under its scenario, it does not go as far as recommending the end of licensing such projects. This contrasts with a recent trend in policymaking, most notably the Beyond Oil and Gas Alliance formed at COP26¹⁶. Another issue is the unclear distinction between ‘public’ and ‘private’ investments, as well as lack of identifying geographical distribution¹⁷. This makes it hard to identify which source of investments need to be capped or redirected. One last point of criticism is the NZE’s projected reliance on biomass and nuclear energy, whereas the potential of RE sources remains modest¹⁸.

7 IEA. 2021. Net Zero by 2050: A Roadmap for the Global Energy Sector.
8 IEA. 2021. Pathway to critical and formidable goal of net zero emissions by 2050 is narrow but brings huge benefits, according to IEA special report.
9 IEA. 2021. Net Zero by 2050: A Roadmap for the Global Energy Sector, p. 21.
10 UN Climate Change Conference UK. 2021. Statement on International Public Support for the Clean Energy Transition.
11 Carbon Brief. 2021. IEA: Renewables should overtake coal “within five years” to secure 1.5C goal.
12 Ibid.
13 Reclaim Finance. 2021. The IEA’s Net-Zero 2050: The new normal and what’s left to be done.
14 Ibid.
15 Greenpeace, IISD, Oil Change International. 2022. Zeroing In: A guide for the finance sector on the IEA’s Net Zero Emissions scenario and its implications for oil and gas finance.
16 Ibid.
17 IEA. 2021. Net Zero by 2050: A Roadmap for the Global Energy Sector, p. 103.
18 Reclaim Finance. 2021. The IEA’s Net-Zero 2050: The new normal and what’s left to be done.

Based on the analysis of Paris-compatible pathways and other relevant scientific literature, investment areas can be grouped into three categories: “Paris-aligned”, “misaligned” and “conditional” (see Figure 2). Paris-aligned means investments in this area fully support the achievement of the Paris Agreement’s temperature goal. Misaligned means they undermine this goal. For investment areas and technologies classified as “conditional”, whether they can be considered Paris-aligned depends on the exact circumstances and characteristics of a project. To assess investments in the “conditional” category, more granular decision-making tools are needed¹⁹.

Figure 2. Categorization of investment areas in the energy supply infrastructure. Source: Germanwatch and NewClimate Institute, 2018²⁰.

	PARIS-ALIGNED	CONDITIONAL	MISALIGNED
	Fully aligned with Paris Agreement consistently across all scenarios	Only aligned under certain conditions	Consistently Paris misaligned in all scenarios
Energy supply infrastructure	<ul style="list-style-type: none">Renewable energy (solar, wind, small hydro, tidal, wave and ocean)Electricity system flexibility option	<ul style="list-style-type: none">Energy transmission and distribution infrastructureGeothermalGas (power plants, transport of gas)Large hydropowerBiomass, incl. bio energy carbon capture storageCoal with carbon capture and storage (CCS)Nuclear	<ul style="list-style-type: none">Coal fired power plants with unabated emissions over their lifetimeNew upstream oil and gas production and explorationCoal miningOil power plants

CHASING NET ZERO IN THE FINANCIAL SECTOR

Investors, governments, and the public are increasingly focusing on the financial sector’s role in facilitating an economy-wide transition towards net zero emissions, as highlighted at COP26 in November 2021. Many banks have made net zero commitments in recent years, acknowledging that they have a role to play in the climate transition. What is needed now is clarity and guidance for banks on how to build and implement their net zero strategies, demonstrating that they have a robust approach and enabling external stakeholders to keep track of progress. Net zero commitments may not be credible unless there is common ground on what the term means for banks in practice, and how to get there.

In response to this trend and need, a growing number of guidelines are emerging to help financial institutions measure their ‘financed emissions’, i.e., those associated with their loans, investments, and other financial products. These include the guidelines of the Partnership for Carbon Accounting Financials (PCAF), the Paris Agreement Capital Transition Assessment (PACTA) and the Science Based Targets Initiative’s (SBTi) guidance for the financial sector (see Box 3)²¹. In parallel, several initiatives have emerged to align the financial sector with net zero, most notably the Glasgow Financial Alliance for Net Zero (GFANZ) and the sub-sector alliances, including the Net Zero Banking Alliance²². GFANZ also includes the Net Zero Asset Managers (NZAM) initiative and the Paris Aligned Asset Owners group, which the Institutional Investors Group on Climate Change (IIGCC) co-founded. The focus on the role of financial institutions in decarbonising the economy has also shaped the regulatory environment. This includes the development of the EU’s taxonomy for sustainable activities, the ASEAN taxonomy, and the publications of the Climate Financial Risk Forum in the UK, which aim to guide financial institutions in addressing climate-related financial risks.

BOX 3. NET ZERO STRATEGIES FOR FINANCIAL INSTITUTIONS

A review of the net zero target-setting landscape reveals that financial institutions are using many tactics to get to net zero, including reducing portfolio exposure to GHG emissions, engaging companies to set GHG reduction targets, and investing in climate solutions to help the wider economy reduce emissions.

The SBTi suggests²³ that a combination of approaches may be the most credible option for banks to achieve net-zero. These are:

- 1 A financed emissions strategy:** net zero claims are based on measuring and tracking emissions associated with financing activities. There are two important considerations when evaluating financed emissions strategies: if the abatement just occurs within the portfolio by reducing exposure to GHG emissions or if the abatement measures also promote decarbonisation in the wider economy, i.e., the portfolio company reduces its own value-chain emissions.
- 2 A portfolio alignment strategy:** net zero claims are based on assessing the relative level of net-zero alignment of their financing activities. It requires companies to develop and disclose forward-looking ambitious reduction targets and ultimately to reduce emissions in line with global or sector goals.
- 3 A portfolio contribution strategy:** net zero claims are based on shifting financing toward technologies needed for the real economy to reach net-zero emissions. financial institutions focus on financing both decarbonisation activities and explicitly reallocating financing activities to climate solutions at a rate that is consistent with global climate goals.

19 Germanwatch & NewClimate Institute (2018). Aligning investments with the Paris Agreement Temperature Goal – Challenges and Opportunities for Multilateral Development Banks. Cologne/Bonn/Berlin.

20 Ibid

21 SBTi’s Foundations for Science-Based Net-Zero Target Setting in the Financial Sector (Version 1.0 I April 2022) states that for banks targets to be compatible with reaching net-zero emissions at the global level, two conditions must be met:
1. Align all financing with pathways that limit warming to 1.5°C with no or limited overshoot.
2. Neutralize residual emissions through the financing of activities that permanently remove an equivalent amount of atmospheric CO₂.

22 PRI and UNEP FI convene a number these alliances including the Net-Zero Asset Owner Alliance (NZAOA), Net-Zero Asset Managers Initiative (NZAM), Net-Zero Insurance Alliance (NZIA), Net-Zero Banking Alliance (NZBA), and the Net Zero Investment Consultants (NZICI).

23 SBTi. 2022. Foundations for Science-Based Net-Zero Target Setting in the Financial Sector I Version 1.0.





	GFANZ	UNEP-FI	IIGCC	PRI	RACE TO ZERO
Coal 	Prohibit financing of new thermal coal projects. Global phase out by 2040.	5% revenue from coal as target setting threshold	Expect carbon pricing to facilitate reduction in new coal.	Phase out by 2030 in OECD and by 2050 globally.	In line with 1.5°C scenarios (i.e. IEA specifies no new coal)
Oil 	Must be in line with net-zero by 2050.	No clear stance for oil phase-out.	Demand falls by over 1/3 by 2030.	No clear stance for oil phase-out.	Phase down and out unabated fossil fuel to align to a "global, science-based, just transition"
Gas 	Must be in line with net-zero by 2050.	No clear stance for gas phase-out.	No clear stance for gas phase-out.	No clear stance for gas phase-out.	Phase down and out unabated fossil fuel to align to a "global, science-based, just transition"
Removal 	Recommend compensating for emissions, specific reference to removal credits for Scope 1.	TBC	Where offsets are necessary, to invest in long-term carbon removals.	TBC	TBC

Figure 3. Fossil fuel policy landscape – Comparison between initiatives. Source: WWF, 2022.

THE ROLE OF DFIs IN DECARBONISATION: OPPORTUNITIES AND CHALLENGES

Development finance institutions (DFIs)²⁴ play a vital role in climate finance and enabling a global energy transition by financing the research, development, and deployment of novel technological solutions, bearing the cost of de-risking less attractive yet much-needed investments and enhancing the RE investment proposition²⁵. Furthermore, DFIs have a significant capacity to help countries shift international finance flows toward low-carbon, climate-resilient development. Their public mandates call for them to support sustainable development, including decarbonisation and climate resilience, which they can do through their investments and by setting standards that other institutions emulate²⁶. Moreover, DFIs benefit from government-supported credit ratings, so they can offer longer grace periods and provide below-market rates²⁷. Therefore, DFIs are well positioned to take up the task of piloting and scaling up clean energy transitions, yet little has been done to systematically investigate the role of domestic or national DFIs (NDFIs) in achieving clean energy transitions.

24 National and international development finance institutions (NDFIs and IDFI) are specialised development banks or subsidiaries set up to support private sector development in developing countries. They are usually majority-owned by national governments and source their capital from national or international development funds or benefit from government guarantees. This ensures their creditworthiness, which enables them to raise large amounts of money on international capital markets and provide financing on very competitive terms.

25 Development finance is also critical in the riskier countries, and they can provide technical assistance to improve investment frameworks and design financial instruments, particularly guarantees.

26 Fuchs, S., Kachi, A., Sidner, L., and Westphal, M. 2021. Aligning Financial Intermediary Investments with the Paris Agreement. World Resources Institute.

27 Oil Change International. 2022. Using international public finance to unlock a just transition: key data and opportunities.

BOX 4. CLASSIFICATION OF DEVELOPMENT FINANCE INSTITUTIONS

We classify DFIs into three categories according to ownership structure: multi-national, national, and subnational. Each of these can be divided in subcategories, depending on the geographical scope in which they operate. Indeed, there are four different geographies in which a particular public development bank (PDB) or DFI can operate: global, regional (or sub-continental), national, or local (a particular territory within national frontiers). A majority of DFIs are created by one country which operate at the national level²⁸.

The term DFI is used in Europe as a particular category of bilateral specialized financial institutions to support private sector development in developing countries that often have membership in the Association of European Development Finance Institutions (EDFI). This stands in contrast with other regions, especially in developing countries where DFIs are widely used in the World Federation of Development Finance Institutions (WFDFI), There also exists the Association of African Development Finance Institutions (AADFI), Association of Development Financing Institutions in Asia and the Pacific (ADFIAP), Association of National Development Finance Institutions in Member Countries of the Islamic Development Bank (ADFIMI), and Association of Development Finance Institutions in Latin America (ALIDE) on a global scale. Their members include most development banks as well as guarantee-, insurance-, and equity-only financial institutions. PDBs are a major type of DFIs because most DFIs provide loans. However, governments sometimes create nonbank financial institutions that primarily provide guarantees, insurances, or equity investments to achieve public policy goals. Because PDBs account for a majority of DFIs, we use the terms PDB and DFI in parallel²⁹.

RE infrastructure often has high upfront capital costs and lengthy development periods until it is commercially operational, requiring long-term financing to match long payback periods. Affordable capital is required given the inherent risk in such projects often linked to technological and policy and regulatory risk. DFIs acting as guarantors or capital providers play a role in de-risking the technological, policy, and regulatory risks (see Box 5). DFIs’ ability to provide affordable, long-term capital is further enhanced by their ability to access additional concessional finance³⁰. This further reduces their cost of capital, allowing them to invest more in riskier, subordinated parts of project capital structures, which commercial banks may be unwilling to invest in. Furthermore, unlike many commercial banks, DFIs (to varying degrees) have in-house specialists, such as engineers and monitoring and evaluation experts, each crucial to large energy infrastructure projects. This enables DFIs to play a key role in bringing projects to the market.

28 Xu, J., Marodon, R., & Ru, X. 2020. Identifying and Classifying Public Development Banks and Development Finance Institutions. Research papers International Research Initiative on Public Development Banks.

29 Ibid

30 World Bank. 2022. What you need to know about concessional finance.

BOX 5. COMPARATIVE ADVANTAGES OF DFIS WHEN IT COMES TO PILOTING AND FINANCING RENEWABLE ENERGY (RE)

Compared with alternative financial arrangements, DFIs have the following comparative advantages when it comes to piloting and scaling up investment in RE:

- Provision of affordable patient capital;
- Technical expertise;
- Country risk mitigation;
- Demonstration effect to overcome the first-mover challenge; and
- A coordinated approach to scale up renewable energies.

The financing approaches and instruments typically used by DFIs can be grouped into four categories:

- Mobilise private investment at scale (loan syndication, issuance of green bonds, product standardisation and pooled equity financing);
- Provide risk capital across the three risk levels in the capital structure of investment from equity at the bottom of the capital stack which carries the most risk, through to mezzanine finance (preferred equity, convertible grants and loans, subordinated debt), through to senior debt at the top of the capital stack which carries the least risk;
- Support the development of RE projects for investment through grants and technical assistance; and
- Provide access to capital for small and medium enterprises (SMEs) and households who undertake small-scale RE investments.

Bilateral and multilateral DFIs were the most active investors in the early phase of RE development in Southeast Asia, up until the emergence of bankable utility-scale solar and wind projects³¹. Even though the relative role of DFIs has decreased in the region (that of the private sector has increased since 2010, reflecting a transition to mainstream infrastructure investment), DFIs remain an important source of funding for energy infrastructure investments in ASEAN providing along with other publicly owned financial organisations and state-owned enterprises, around half of the energy investment in recent years.

The role of DFIs has evolved in the region, as their portfolio of financing instruments and risk exposure has expanded over the past few years. They now operate on many fronts, including capacity and awareness building, technology transfer programmes, feasibility studies, as well as technical cooperation with other donor-funded public agencies, such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the United States Agency for International Development (USAID)³². The landscape of national financing vehicles in Southeast Asia is still underdeveloped in terms of project implementation, even though several countries are now aiming or are already in the process to build national financing vehicles and green banks to gain access to international climate finance. Technical structures are up and running and the next defining phase is the move from piloting to scale-up.

³¹ IRENA. 2018. Renewable energy market analysis: Southeast Asia

³² Ibid

BOX 6. BARRIERS TO RE FINANCING FOR DFIs

DFIs can face tension in their mission between the objectives of providing risk capital to areas most in need, promoting private-sector development and fulfilling their roles as banks with sound risk management and public accountability. Their lending approaches differ from those of private actors. While they tend to provide lower-cost and longer-term financing, as a group the DFIs have typically maintained lower loan loss allowances on portfolios, an indication of overall lower risk-taking capacity³³.

The risks that DFIs face when financing RE include:

- **Technology risks** that face the financial attractiveness of DFI financing for RE. Such risks relate to the length of the innovation and diffusion cycle of RE, the scale and distribution of technology opportunities, and the associated infrastructure that makes financing RE difficult or risky;
- **Political, policy, and regulatory risks** that pertain to political and regulatory uncertainty and/or policies that bias away from RE technology and toward incumbent fossil fuel technologies. They are seen as the most significant barrier for many DFIs;
- **Macroeconomic risks** are rife and include the availability of credit in general, current account issues related to the need to import key RE technologies, and supply chain risks and barriers due to the lack of domestic production of associated equipment; and
- **Bankability risks** that pertain to the lack of investment-ready projects that DFIs can participate in. When commercial viability is lacking, then it will be difficult for even DFIs to be a first mover to bring a project to life.

In addition, according to a baseline survey carried out by ADFIAP, DFIs in Southeast Asia in particular, are experiencing several additional internal challenges with regard to scaling up clean energy projects and financing the energy transition. These include:

- Difficulty in the technical evaluation of clean energy projects;
- Lack of or limited data/information for best practices and benchmarking for clean energy financing;
- Lack of capacity to assess, manage and monitor environmental and social risks of projects; and
- Lack of staff trained to assess or evaluate projects.

³³ IEA. 2021. Financing Clean Energy Transitions in Emerging and Developing Economies.

Bridging financing gaps in the energy infrastructure sector will require boosting blended finance solutions as well as better collaboration between public and private financiers. While some DFIs have revamped lending strategies, there are questions about how well current approaches can support the dramatic scale-up and range of solutions needed to finance clean energy transitions.

Key considerations that DFIs need to face include:

- Integrating climate impacts into decision-making and portfolio management can be challenging for investments with less clear emissions profiles (e.g., grids);
- Boosting project pipelines and transaction sizes, such as with project preparation and development funds, while fostering capacity among local financial institutions;
- Developing approaches to finance small-scale projects for energy efficiency SMEs, distributed energy, and access;
- Targeting new sectors and markets with risk capital – e.g., from dedicated entities such as ADB Ventures, IDB Invest, IFC Disruptive Technologies and Venture Capital; and
- Financing transitions and economic development for regions dependent on coal.³⁴

Leading DFIs, including multilateral development banks (MDBs) and the International Development Finance Club (IDFC) and ADFIAP, have committed to aligning their operations with the Paris Agreement³⁵. This recognises that development banks together with other development actors have a key role to play in supporting their clients to scaleup ‘consistent and aligned’ investment finance flows, scaling-down and redirecting ‘inconsistent or misaligned’ flows, as well as raising and delivering resources to support national and international climate and development goals. But, so far, they have focused mostly on developing and implementing Paris alignment processes for direct financing (Box 7)^{36,37}. As a result, large volumes of public finance continue to flow toward the fossil fuel industry. According to Oil International, DFIs financed \$16 billion in fossil fuels a year during the 2018-2020 period which amounts to twice as much as their support for RE³⁸. At the same time, support for clean energy sources continues to lack a much-needed increase³⁹.

It is therefore imperative for DFIs to become Paris-aligned, i.e., to ensure that their portfolio exposure, institutional-level criteria, and project-level investment requirements are consistent with limiting global warming to 1.5 °C and fostering climate resilience. DFIs’ financial resources should be used for purposes that do not undermine climate goals and whenever possible contribute to low carbon and climate-resilient development pathways consistent with a 1.5 °C global warming target⁴⁰.

³⁴ Ibid

³⁵ Finance in Common. 2021. Joint declaration of all public development banks in the world.

³⁶ Fuchs, S., Kachi, A., Sidner, L., and Westphal, M. 2021. Aligning Financial Intermediary Investments with the Paris Agreement. *World Resources Institute*.

³⁷ For example, at the International Finance Corporation (IFC), more than 60 percent of all commitments are channelled through intermediaries. At the European Bank for Reconstruction and Development and European Investment Bank (EIB), about a third of all commitments are channelled through FIs. If FI lending is not Paris aligned, then these institutions cannot claim to be Paris aligned.

³⁸ Price of Oil. 2021. Past Last Call: G20 public finance institutions are still bankrolling fossil fuels.

³⁹ IPCC. 2022. Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

⁴⁰ Ibid.

BOX 7. DIRECT VS INDIRECT FINANCING

Direct financing is financing that goes directly to projects like new infrastructure but DFIs also provide loans (also called credit lines), equity investments, debt security, or guarantees to partner financial institutions, which those institutions then use to finance a set of subprojects. This is called **indirect or financial intermediary investment**. These partner financial institutions can include commercial banks, investment banks, private equity funds, venture capital funds, microfinance institutions, leasing and insurance companies, and other national and regional development banks. Under intermediary financing, DFIs can offer credit lines as general-purpose loans or the DFI and financial intermediary may agree on specific types of eligible subprojects, such as certain investments in energy infrastructure. These are referred to as earmarked, or ring-fenced, loans. Figure 4 below illustrates the distinction between direct investments and financial intermediary investments⁴¹.

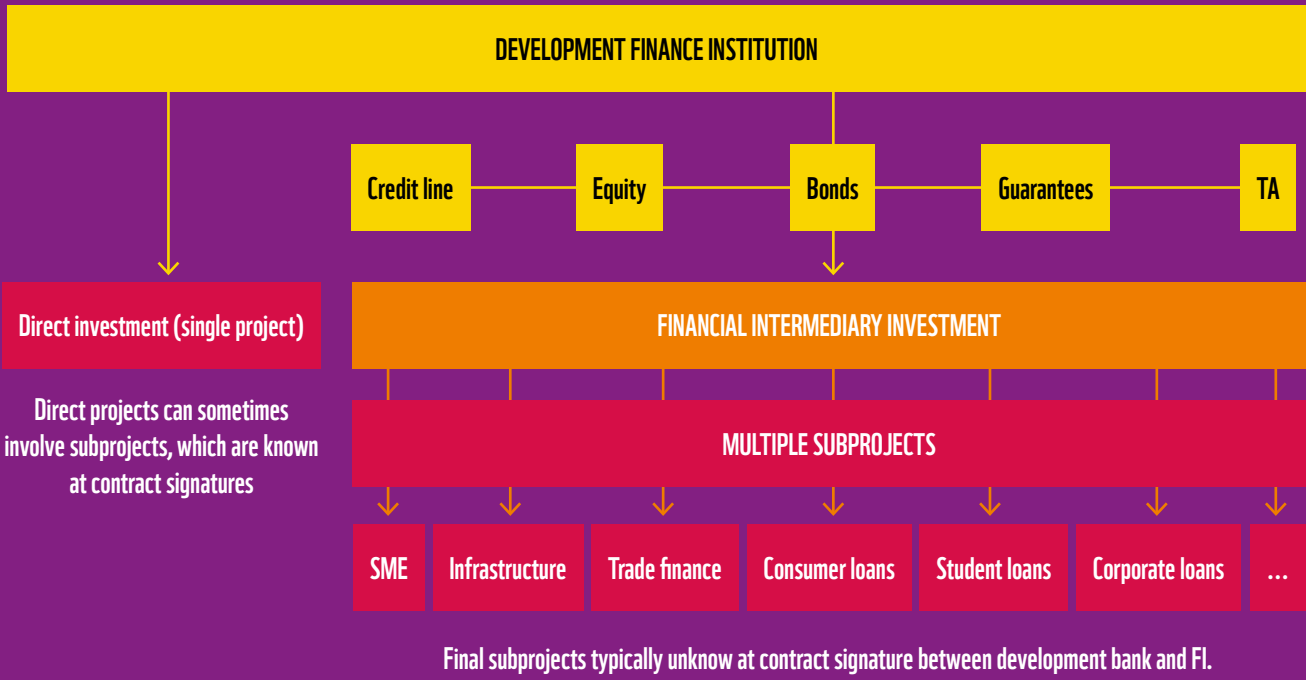


Figure 4. Comparison of direct DFI investments and financial intermediary investments. Note: Abbreviations: TA: technical assistance; SME: small and medium-sized enterprises. Source: Fuchs S., et. al. 2021⁴².

In addition, DFIs also offer policy-based lending which is disbursed only when the borrower completes policy reforms or actions that have been agreed upon with the DFI. Examples include reforms to improve revenue collection and management of public resources, reforms to create a more business-friendly investment climate or those that improve the governance and performance of state-owned enterprises. This creates a platform and incentive for governments to carry out improvements with sector- or economy-wide impacts. Policy-based lending can also be used to respond to a country’s needs in case of crisis, be it economic or caused by disasters triggered by natural hazards.

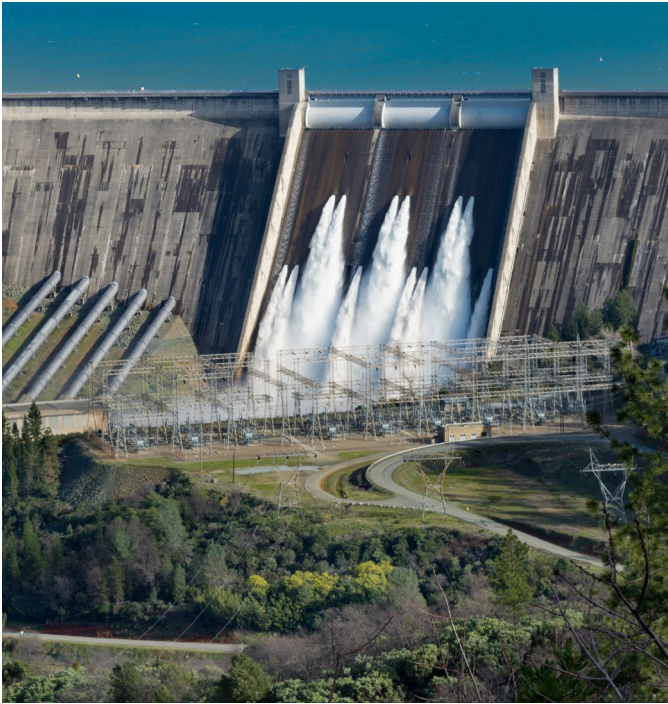
⁴¹ Fuchs, S., Kachi, A., Sidner, L., and Westphal, M. 2021. Aligning Financial Intermediary Investments with the Paris Agreement. *World Resources Institute*.

⁴² Ibid.

ASEAN ENERGY LANDSCAPE

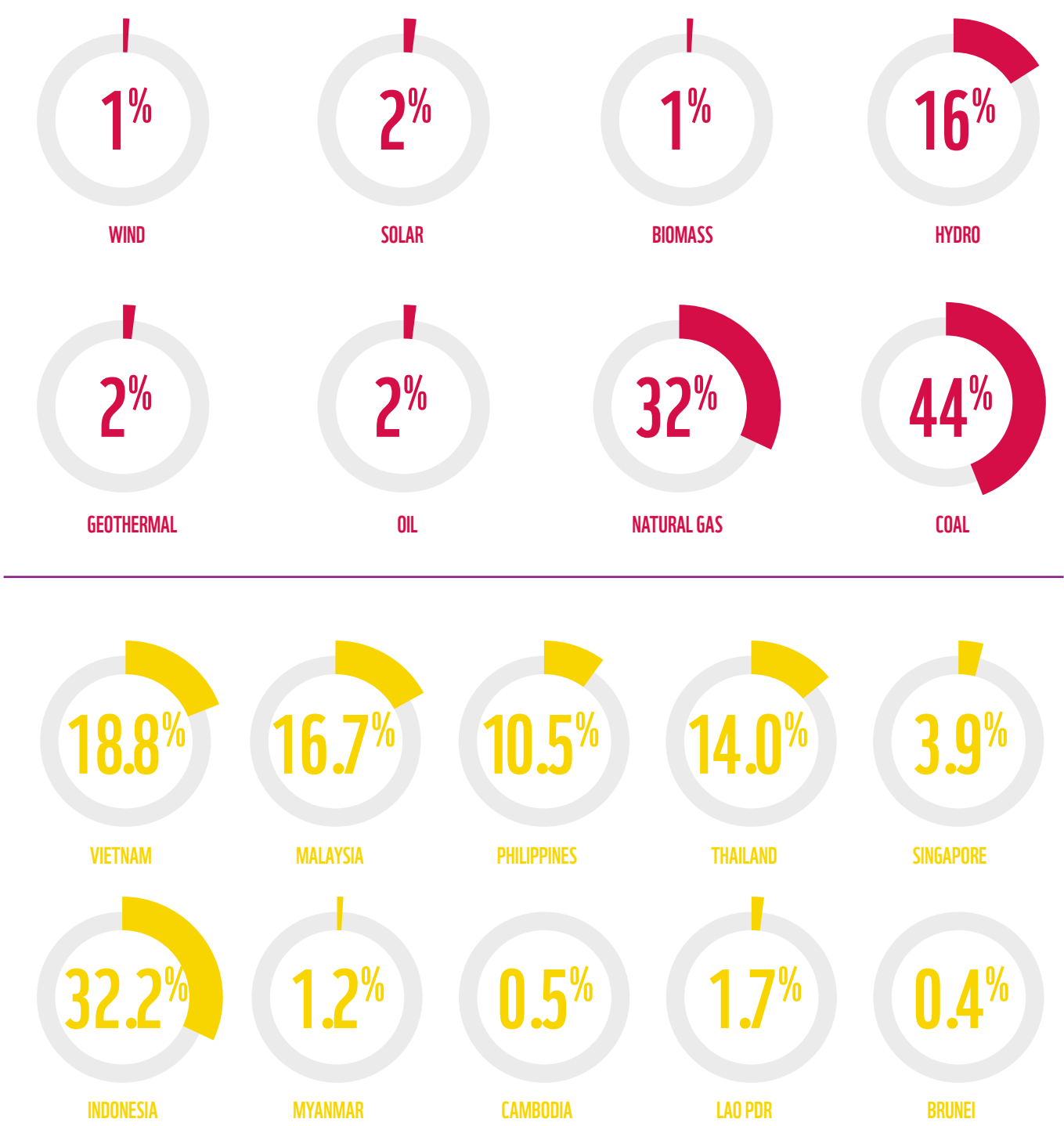
The Association of Southeast Asian Nations (ASEAN) comprises 10 Member States: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam. Together, they are home to about 667 million people (in 2020), with a combined GDP predicted to reach USD 8.5 trillion in 2022⁴³. The region with its shift from the agricultural sector to industrialisation is becoming one of the global growth drivers and an important economic force in the world. Due to its rapid economic growth, it is projected that ASEAN’s regional GDP will reach USD 20 trillion by 2040, with an annual average growth of 5% even after accounting for the impact of COVID-19. This will lead to a significant rise in energy demand⁴⁴. Already, the electricity demand increased at an average annual rate of 6.3% between 2008 and 2018, owing to rapid economic growth and urbanisation. This is expected to more than triple by 2050⁴⁵ with Indonesia and Viet Nam accounting for 58% of ASEAN’s total electricity demand, and Cambodia and the Philippines seeing the highest and second-highest growth rates, respectively⁴⁶.

Furthermore, rising temperature due to climate change is likely to further increase electricity demand which in turn will put even greater pressure on the power generation sector in the long term⁴⁷. This increased demand for electricity leads to a corresponding increase in the supply of essential primary energy (due to an increase in the fuel input for power generation) as well as an increase in GHG emissions from power generation.



To meet the rising energy demand, the region has relied on fossil fuels. In 2020 for example, fossil fuels accounted for 79% of ASEAN’s electricity generation, with coal accounting for 44%, natural gas 32% and oil 2% (Figure 5). Hydropower made up 16% of the electricity mix, while other renewables supplied only 6% of the region’s electricity. In 2020, the corresponding GHG emissions were 656 million tons CO₂e. The five largest contributors of GHG emissions were Indonesia (32.2%), Viet Nam (18.8%), Malaysia (16.7%), Thailand (14%) and the Philippines (10.5%). The other five ASEAN Member States (AMS) together accounted for less than 8% of the region’s total emissions, with Brunei being the smallest contributor⁴⁸.

Figure 5. ASEAN electricity generation mix and GHG emissions shares in 2020. Sources: Handayani, et al., 2022.⁴⁹.



43 ASEAN Centre for Energy (ACE). 2022. 7th ASEAN Energy Outlook (AEO7).
44 ASEAN Centre for Energy (ACE). 2020. 6th ASEAN Energy Outlook (AEO6).
45 In line with rapid economic growth, energy demand in the region is expected to triple by 2050 under the Baseline Scenario. Total final energy consumption (TFEC) is expected to reach 473.1 Mtoe in 2025 and 1,281.7 Mtoe in 2050. The baseline scenario follows the historical trend of AMS energy systems. It assumes a business as-usual level of effort put forth by each AMS, without any modelling interventions to meet existing national RE/EE targets. Hence, it also excludes firm plant capacity additions from power development plans (PDP).
46 Global Energy Monitor. 2022. Global Coal Plant Tracker.
47 SIDA and OXFAM, 2022. Overview Of Stranded Assets Risk in The Context of Climate Change: A Case Study of The Power Generation Sector In Viet Nam
48 ASEAN Centre for Energy. 2022. Net Zero Emissions Pathways for the ASEAN Power Sector.

According to the latest Energy Outlook (AEO7), fossil fuels are projected to continue to supply most of the regional energy demand, with oil accounting for 47.4% of total final energy consumption (TFEC), followed by electricity (20.3%), coal (14.5%), and bioenergy (9.2%)⁵⁰.

49 Handayani, K., Anugrah, P., Goembira, F., Overland, I., Suryadi, B., & Swandaru, A. 2022. Moving beyond the NDCs: ASEAN pathways to a net-zero emissions power sector in 2050. *Applied Energy*, 311, 118580.
50 ASEAN Centre for Energy (ACE). 2022. 7th ASEAN Energy Outlook (AEO7).

BOX 8. SOUTHEAST ASIA’S OPERATING COAL CAPACITY

In Southeast Asia, Indonesia (40.1 GW), Viet Nam (22.7 GW), Malaysia (13.2 GW), and the Philippines (10.5 GW) represent 90% of the region’s 95.6 GW of operating coal capacity. 5.2 GW of new coal capacity went into operation in 2021 in Indonesia, Viet Nam, and one small unit in Cambodia. Meanwhile, Indonesia (10.8 GW), Viet Nam (20.1 GW), and Laos (6.1 GW) represent 90% of the pre-construction coal capacity in the region. Pre-construction and construction coal capacity dropped from 79.5 GW to 66 GW in 2021, a 17% decrease⁵¹.

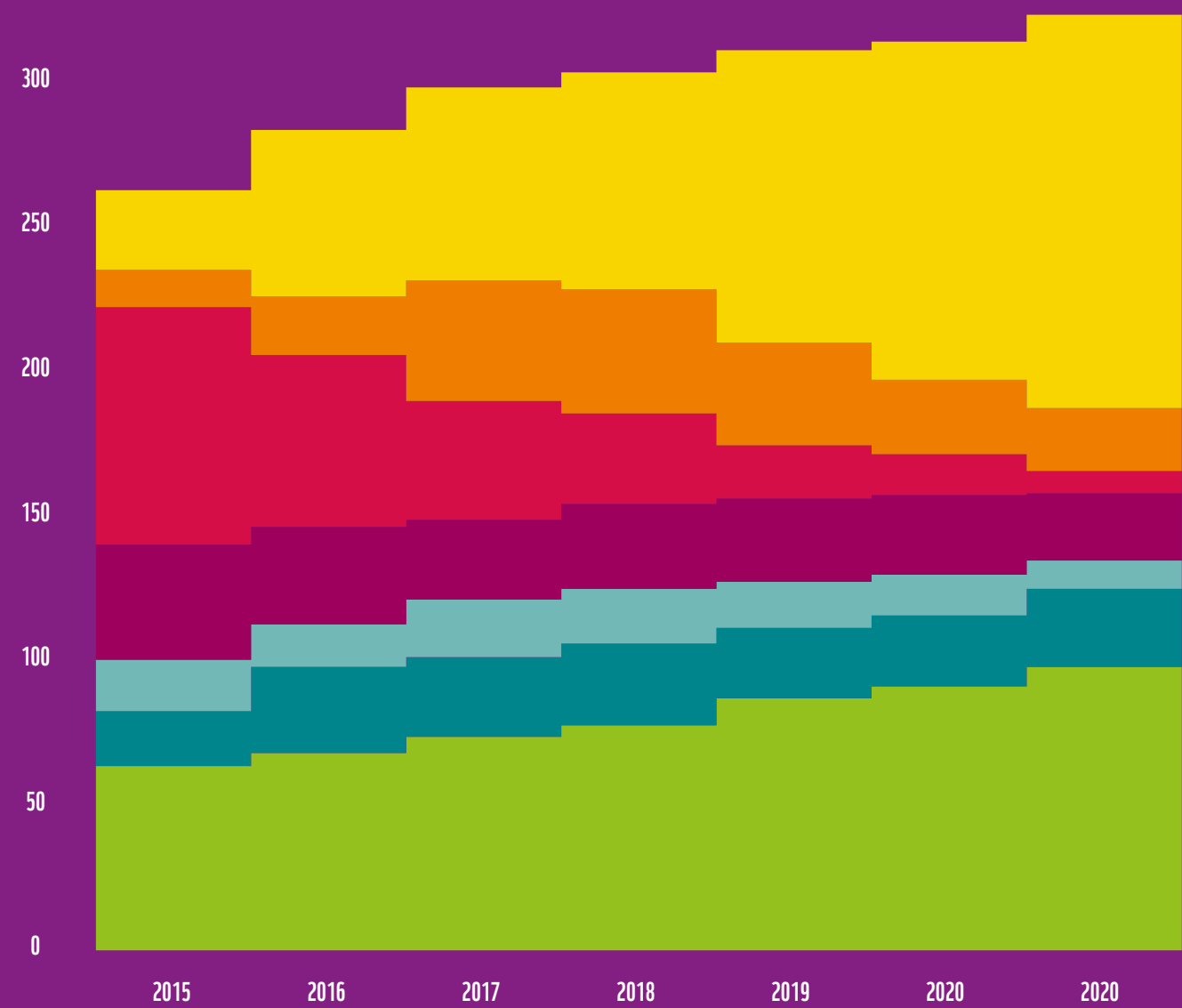


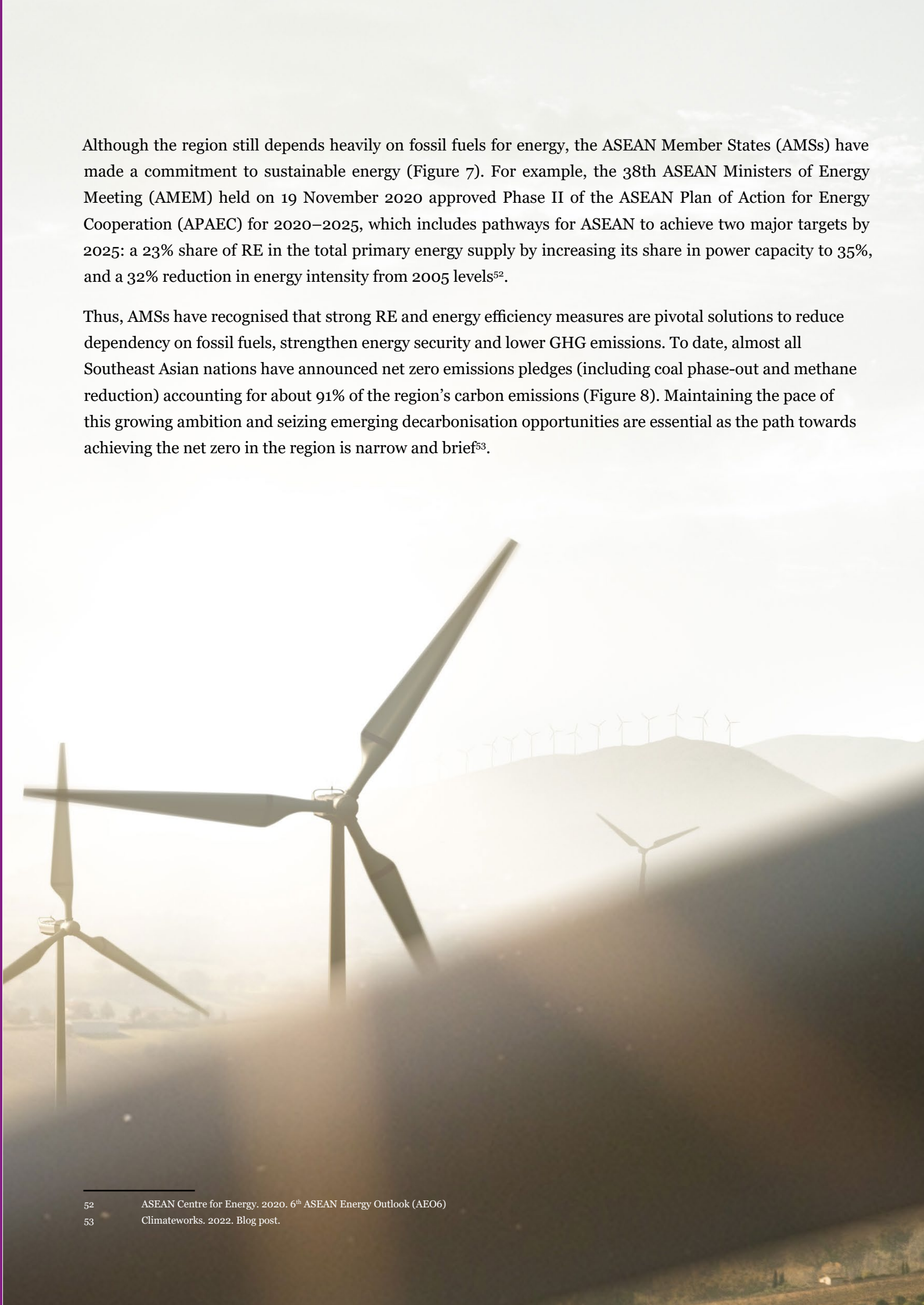
Figure 6. Southeast Asia coal power capacity by status, 2015–2021 (gigawatts) Cancelled= yellow, Shelved = orange, Announced = red, Pre-permit = dark fuchsia, Permitted = cyan, Construction = teal blue, Operating = green (Retired capacity by 2021 was <1 GW, not shown). Source: Global Energy Monitor, 2022.

51 Ibid

Although the region still depends heavily on fossil fuels for energy, the ASEAN Member States (AMSs) have made a commitment to sustainable energy (Figure 7). For example, the 38th ASEAN Ministers of Energy Meeting (AMEM) held on 19 November 2020 approved Phase II of the ASEAN Plan of Action for Energy Cooperation (APAEC) for 2020–2025, which includes pathways for ASEAN to achieve two major targets by 2025: a 23% share of RE in the total primary energy supply by increasing its share in power capacity to 35%, and a 32% reduction in energy intensity from 2005 levels⁵².

Thus, AMSs have recognised that strong RE and energy efficiency measures are pivotal solutions to reduce dependency on fossil fuels, strengthen energy security and lower GHG emissions. To date, almost all Southeast Asian nations have announced net zero emissions pledges (including coal phase-out and methane reduction) accounting for about 91% of the region’s carbon emissions (Figure 8). Maintaining the pace of this growing ambition and seizing emerging decarbonisation opportunities are essential as the path towards achieving the net zero in the region is narrow and brief⁵³.

52 ASEAN Centre for Energy. 2020. 6th ASEAN Energy Outlook (AEO6)
53 Climateworks. 2022. Blog post.



BOX 9. COAL STATUS QUO IN INDONESIA, THE PHILIPPINES AND VIET NAM



Indonesia has pledged to stop building new coal plants by 2023 and its new Electricity Supply Business Plan 2021–2030 (Rencana Usaha Penyediaan Tenaga Listrik or RUPTL) converts or cancels over 1.6 GW of coal and postpones another 3.6 GW. Indonesia also signed the Global Methane Pledge, endorsing its goal of reducing methane emissions 30% by 2030. The RUPTL also proposes 5.8 GW of new gas-fired power as a “clean” source of energy along with renewables such as geothermal. In total, there are plans to develop US\$32 billion of new gas-fired power plants, LNG import and export terminals, and gas pipelines in Indonesia⁵⁴.



The coal fleet in **Viet Nam** has grown faster than in almost any other country, adding 60% (12.4 GW) of its current 20.9 GW of operating coal power capacity since 2015. A September 2021 draft of Viet Nam’s Power Development Plan 8 (PDP8) proposed continued growth of coal power through 2035. Yet at COP26, the country was a full signatory to the Global Coal to Clean Power Transition Statement to stop permitting and building new coal power plants and pledged to become carbon neutral by 2050. Following the pledges, the Ministry of Industry and Trade was instructed to cut 7 GW of planned coal power from the PDP8. The latest draft of the plan also proposes cutting gas power generation capacity from new imported LNG to 55.8 GW by 2045, a 33% reduction from the 83.6 GW proposed in March. GEM has identified 21 mtpa of new LNG import capacity also under development in Viet Nam. Viet Nam signed the Global Methane Pledge, endorsing its goal of reducing methane emissions 30% by 2030.⁵⁵



The **Philippines’** reliance on coal rose dramatically from 2000 to 2020, with coal power operating capacity more than tripling from 3.4 GW to 10.5 GW. In October 2020, the Philippine Department of Energy declared a moratorium on new coal plants that were not already in the permitting pipeline. The government’s energy secretary said in November 2020 that instead it would promote other energy sources such as renewables and natural gas. There are plans to build US\$14 billion in new gas infrastructure in the Philippines. These plans include 16 GW of new gas-fired power capacity, which would represent a five-fold increase on existing capacity. The Philippines signed the Global Methane Pledge, endorsing its goal of reducing methane emissions 30% by 2030. In April 2021 the country raised its emissions reduction goal from 70% to 75% by 2030⁵⁶.

54 Global Energy Monitor. 2021. Briefing.
55 ibid
56 ibid

Figure 7. RE targets under the AMS’ domestic energy plans⁵⁷.









Country	RE Targets
 Cambodia	Power 3% of residential electricity demand through solar PV by 2035 ⁵⁸
 Indonesia	23% of renewables in the energy mix by 2025, and 32% by 2050
 Laos	Increase the share of small-scale renewables in total energy consumption to 30% by 2025
 Malaysia	20% of renewables in the energy mix by 2025 (excluding hydro)
 Myanmar	12% of renewables in the energy mix by 2025 (excluding hydro)
 Philippines	26.9% of renewables in the energy mix by 2030, updated NREP 35% renewable electricity by 2035
 Thailand	49% of renewables in the energy mix by 2037
 Viet Nam	The share of electricity produced by RE sources reach 31.5% in 2030, and increase to over 36.3% in 2045, with solar and wind power accounting for 11% in 2030 and 27.2% in 2045, respectively

Figure 8. Updates on climate issues and national commitments at COP26⁵⁹.

Country	Coal Phase- Out	Methane Reduction	Interconnected Green Grid	Product Efficiency	Carbon Neutral / Net Zero Target
Brunei Darussalam	Yes	No	No	No	2050
Cambodia	No	Yes	Yes	No	2050
Indonesia	Yes (partial)	Yes	No	Yes	2060
Lao PDR	No	No	No	No	2050
Malaysia	No	No	No	No	2050
Myanmar	No	No	Yes	No	2050
Philippines	Yes (partial)	Yes	No	No	No target set
Singapore	Yes	Yes	No	No	By or around mid-century
Thailand	No	No	No	No	2065
Viet Nam	Yes	Yes	No	No	2050

57 Ecobusiness. 2022.
58 This has been superseded by PDP 2021-2040.
59 ASEAN Studies Center. 2022. ASEAN commitment on COP 26: Taking a step forward in climate action.



But placing Asian economies on a net zero path requires an unprecedented shift in private investment and new financing models. A growing community of investors is seeking new climate- and environment-friendly opportunities, which financial institutions can use to diversify their funding base and reduce their funding costs. This requires commitment from all actors across the financing chain. It is simply not enough to allocate money to low-carbon causes – achieving the necessary scale requires a fundamental redesign of risk mitigants and investment enhancers. Both public and private financial institutions need to join forces with regulators and stakeholders to develop common standards and implement capacity as soon as possible.

DFIs must take the lead in the climate transition by establishing and implementing financing frameworks that successfully close the gap between the funds required to achieve global net zero emissions and the actual investments made. These frameworks should be consistent with their country's Paris Agreement targets, considering the distinct stages and transition pathways within each region. This methodology enables NDFIs to construct a more structured engagement strategy with private financial institutions that are critical to blended finance projects, as well as a replicable and standardised country-specific reporting system for tracking capital flows.

Against this backdrop, WWF-Singapore through its Asia Sustainable Finance Initiative (ASFI) and partners, are working to help DFIs in ASEAN to mainstream climate considerations across all levels of their institutions and accelerate capital allocation to low-carbon energy infrastructure. Through a combination of assessments, sustainable energy and climate finance guidance and capacity-building activities we aim to help DFIs align their direct and indirect investments with the Paris Agreement. This white paper is the first deliverable in this process and provides an overview of the findings from a high-level baseline assessment covering four NDFIs in Indonesia, the Philippines and Viet Nam, and shares broad recommendations to banks for developing and implementing science-based, energy transition processes for direct and indirect investments as well as to aid their implementation of net zero commitments.

RESULTS AND DISCUSSION

To collect the necessary baseline data an **assessment framework** was designed which incorporates environmental issues most relevant to the energy sector in the ASEAN region.

WWF-Singapore developed this framework with reference to its propriety Sustainable Banking Assessment (SUSBA) tool as well as existing international frameworks, standards, and initiatives, including the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, UNEP-FI Principles for Responsible Banking (PRB), Task Force on Climate-related Financial Disclosures (TCFD) recommendations, and the Sustainability Accounting Standards Board (SASB).

The assessment framework comprises 10 pillars that signify what WWF-Singapore considers to be robust integration of environmental sustainability in the energy sector (see Figure 16 in the Annex). The assessment is performed against 45 indicators with “yes/partial/no” answers and considers only publicly available, English-language disclosures in the form of fiscal years 2020 to 2022 annual reports, sustainability reports and information posted on corporate websites such as institution policies, statements, and press releases.

The surveyed NDFIs are typical national entities with the goal of serving as a catalyst for accelerating national infrastructure development. They tend to mobilise resources from multilateral and bilateral financial institutions to finance infrastructure projects including water, RE generation, transport, and agriculture-related infrastructure projects. Furthermore, the NDFIs offer a wide range of products and services that address specific funding and banking needs of various clients — from project financing to a wide choice of deposit and investment products and services, and from capital-intensive fundraising through loan syndication/arrangement and structuring for limited /non-recourse project finance transactions to issue management for debt securities in the capital markets to support the national government's key development programs.

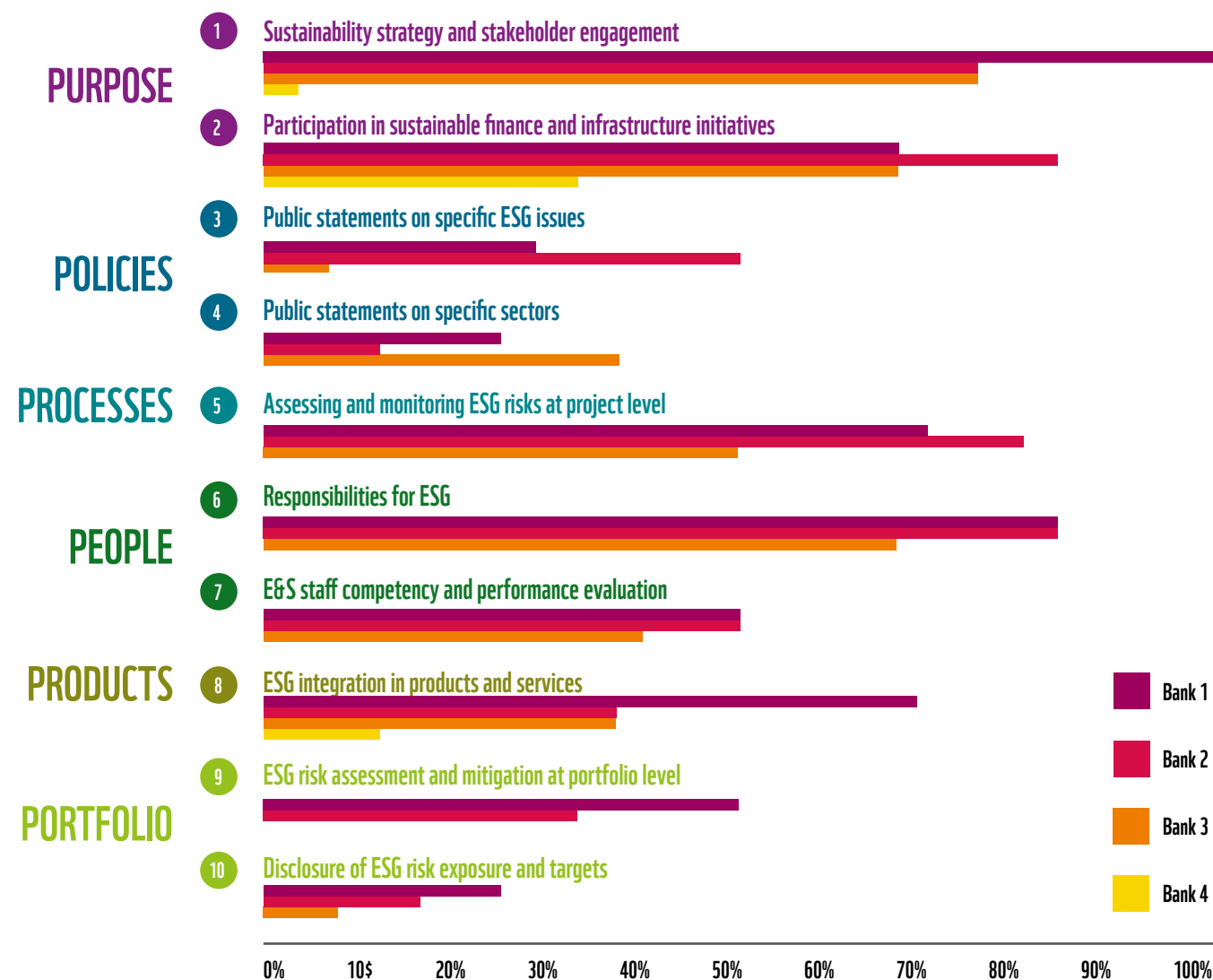


Figure 9. Summary results at the bank level.

PURPOSE

Acknowledging and engaging stakeholders about the E&S risks associated with climate change and energy financing is the first step and arguably one of the most important that NDFIs must take. This is also the stage where financial institutions make pledges⁶⁰ to align their financing with the goals of the Paris Agreement.

NDFIs increasingly **acknowledge** the E&S risks associated with climate change and that the financing of sustainable energy is a key opportunity for mitigating climate change, in their corporate strategy, vision, and mission. One bank in Indonesia goes further and specifically acknowledges the risks and opportunities associated with the transition to a low-carbon economy and refers to the national climate commitments and energy policies and how the bank's strategy and products/services relate to them.

⁶⁰ WWF has developed five criteria to define the level of credibility, depth, and robustness of netzero commitments by financial institutions (investment managers, asset owners, commercial banks). These criteria are anchored in the latest climate science, as most notably provided by the IPCC special report on 1.5°C warming. See Box in the Annex for more details.

However, most NDFIs could do more to engage more meaningfully with policymakers and civil society to update mandates with their respective national sustainability targets (e.g., net zero emissions commitments by a given date) and incorporate the latest climate finance methodologies (e.g., on the implementation of net zero pledges and transition planning⁶¹) and to participate in relevant commitment-based sustainable finance initiatives such as the UN-backed Principles for Responsible Banking (PRB) (Figure 10)⁶², the Net Zero Banking Alliance (NZBA) and the IDFC's Common Principles for Climate Mitigation Finance Tracking⁶³.

Through the former, banks can take effective action to align their core strategy, decision-making, lending, and investment with the SDGs and international agreements such as the Paris Climate Agreement. The PRB provides banks, (both public and private sector banks) with due diligence frameworks and ESG risk management for both project finance and corporate lending transactions whereas the Alliance reinforces, accelerates, and supports the implementation of decarbonisation strategies, providing an internationally coherent framework and guidelines in which NDFIs can operate to operate, supported by peer-learning from pioneering banks.

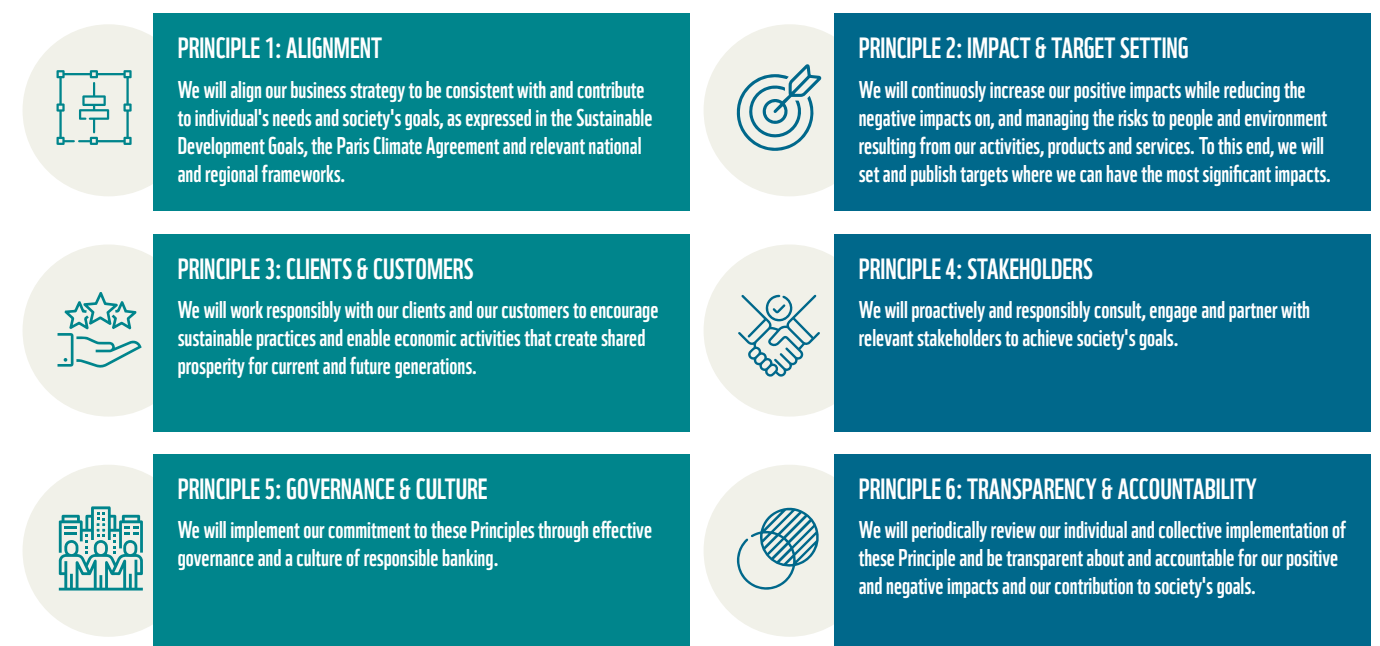


Figure 10. The PRB are a unique framework for ensuring that signatory banks' strategy and practice align with the vision society has set out for its future in the SDGs and the Paris Climate Agreement. The framework consists of 6 Principles designed to bring purpose, vision, and ambition to sustainable finance. They were created in 2019 through a partnership between founding banks and the United Nations. Signatory banks commit to embedding these 6 principles across all business areas, at the strategic, portfolio and transactional levels.

⁶¹ Transition plans are broadly understood to enable financial institutions (and corporates) to translate science-based climate and nature targets into clear and action-able steps, demonstrating how they intend to successfully manage the transition via measurable real-world outcomes. Through enhanced transparency and strong standards, credible transition plans can drive entity level action across the financial sector and set out clearer expectations for corporate transition plans.

⁶² The Principles for Responsible Banking (PRB) are a framework for ensuring that signatory banks' strategy and practice align with the vision society has set out for its future as expressed in the SDGs and the Paris Climate Agreement. The PRB provide a framework for a sustainable banking system which helps the industry to demonstrate how it makes a positive contribution to society. The signatories embed sustainability in the strategic, portfolio and transactional levels, and across all business areas. Available [here](#).

⁶³ NewClimate Institute and the Institute for Climate Economics (I4CE). 2021. Operationalization Framework on Aligning with the Paris Agreement.



We recommend NDFIs that are not yet a signatory to the PRB, become one as soon as possible. For banks that are already PRB signatories, we recommend considering joining the PRB Collective Commitment to Climate Action (CCCA), which would enable them to fast-track their PRB commitment to align their business strategy with the goals of the Paris Climate Agreement and commit to setting and publishing sector-specific targets for aligning their portfolios with Paris Agreement.

BOX 10. BANK PEMBANGUNAN MALAYSIA BERHAD (BPMB) AND THE PRB – CASE STUDY

Bank Pembangunan Malaysia Berhad (BPMB) is a DFIs wholly owned by the Malaysian Government through the Minister of Finance and is mandated to provide medium to long-term financing to strategic sectors. The bank became a signatory to the PRB in November 2021 – the first DFI in Malaysia to do so.

As a PRB signatory, BPMB has committed to step up its capacity to deliver on the SDGs. For example, the DFI has aligned its organisational culture, business processes and talent towards developing a sustainable and inclusive Malaysia. Furthermore, in collaboration with the Government Ministries and the World Bank, BPMB has developed a framework known as MIND (Measuring Impact on National Development) which aims to enhance project evaluation from a credit-centric assessment to a holistic end-to-end assessment that includes reviewing the environmental, social, and economic impact of each transaction. The MIND framework will be primarily used to determine the impact and the contribution of the Bank’s financing activities towards selected SDGs. Apart from MIND, BPMB had in 2019 established a MYR2.0 billion (equivalent to USD476 million) Sustainable Development Financing Scheme (SDFS) to finance projects that contribute positively to any of the 17 SDG’s.

Furthermore, the BPMB also created a Sustainable Development Sukuk Framework, which sets the guidelines for the bank’s issuances of Sukuk, in a way that considers Malaysia’s commitment under the Paris Agreement, the indivisibility of climate change and sustainable development, and reflects national priority investment areas for the low emissions, climate-resilient transition. The framework contains eligibility criteria for the financing or refinancing the acquisition, construction, development, and installation of RE projects, including the infrastructure to support the integration of RE into the electricity grid and the transportation through the network⁶⁴.

POLICIES AND PROCESSES

After acknowledging the importance of sustainability and incorporating it into their strategies, NDFIs would begin to implement them across the organisation. The **implementation** of sustainability commitments is a rigorous process that usually involves the development of credible **sustainable financing strategies** such as those that support the decarbonisation of the energy sector. These should consider both the national context, objectives, and policies as well as the global level of ambition to achieve long-term climate objectives. To systematically apply sustainable financing strategies, banks are creating assessment and mitigation **frameworks** to outline the methodology and **processes** they use to embed various ESG criteria into their lending and investment decisions.

Leading DFIs typically employ E&S due diligence and screening processes that are informed by international best practices such as the IFC Performance Standards (IFC PS)⁶⁵, the Equator Principles version 4 (EP4), and the Partnership for Carbon Accounting Financials (PCAF), as well as seeking the support of third-party ESG advisors on the classification requirements of sustainable finance instruments. Policies and processes in this stage typically focus on **negative screening/exclusions** such as the financing for coal-fired power plants or projects linked to deforestation (see Box 9).

Leading NDFIs also typically screen new direct investments for climate-related physical risks. If initial screening identifies high levels of risk, NDFIs typically conduct additional, more in-depth risk assessments and incorporate resilience measures into the project design based on those assessments. DFIs use a range of tools for risk screening, from bespoke tools (e.g., the World Bank’s Climate and Disaster Risk Screening Tools) to commercially available off-the-shelf software (e.g., Acclimatise Aware). Ideally, risk assessments for medium- and high-risk projects would include detailed, quantitative calculations of risks. In some instances, the size or design of the project, coupled with data gaps and resource constraints, may make full qualitative assessments impossible or unnecessary. Quantitative assessments can, however, make it easier to include climate risks and adaptation options in the economic or financial analysis of the project⁶⁶.

64 BPMB. 2021. Sustainable Development Sukuk Framework Pre-Issuance Framework Assessment.

65 IFC. 2021. IFC Performance Standards on Environmental and Social Sustainability Effective January 1, 2012.

66 Fuchs, S., Kachi, A., Sidner, L., and Westphal, M. 2021. Aligning Financial Intermediary Investments with the Paris Agreement. *World Resources Institute*.

BOX 11. ESG SCREENING

Banks typically screen their lending portfolios against specific ESG risks as per the OECD Due Diligence guidance⁶⁷ and many embrace **negative or positive screening for potential corporate lending transactions or project finance transactions**. Screening strategies filter potential transactions using predetermined ESG criteria to rule companies or clients in or out of contention for financing⁶⁸.

Negative screening and norm-based screening involve the exclusion or avoidance of transactions not aligned with environmental, social, and ethical standards. Exclusion criteria often include issues like weapon manufacturing, tobacco sales or the production of fossil fuels. While negative and norm-based screening are the most popular techniques used for **ESG asset management**, these practices have been losing traction since 2015.

Positive screening, on the other hand, selects corporate borrowers that score highly on ESG factors relative to their peers. This can include best-in-class screening or the inclusion of investments in companies and sectors with higher ESG scores as compared to their peers or companies that are actively improving their ESG performance. This screening method does not necessarily exclude ESG laggards but rather focuses on those performing best regarding ESG in relation to comparable companies or industries. In comparison to corporate lending transactions, **the intensity of screening is often higher for project finance transactions** given due diligence requirements under best practices such as the **Equator Principles**.

The Equator Principles are intended to serve as a common baseline and framework for financial institutions to identify, assess and manage environmental and social risks when financing projects. When a project is proposed for financing, the **Equator Principles** financial institution (EPFI) will, as part of its internal environmental and social review and due diligence, categorise the project based on the magnitude of potential environmental and social risks and impacts, including those related to human rights, climate change, and biodiversity. Such categorisation is based on the **International Finance Corporation’s (IFC) environmental and social categorisation process**⁶⁹. The client is expected to include assessments of potential adverse Human Rights impacts and climate change risks as part of the **environmental and social impact assessment (ESIA)** or other Assessment, with these included in the Assessment Documentation. The client should refer to the **United Nations Guiding Principles on Business and Human Rights (UNGPs)** when assessing human rights risks and impacts, and the **Climate Change Risk Assessment** should be aligned with the climate physical risk and climate transition risk categories of the TCFD⁷⁰.

67 Due Diligence for Responsible Corporate Lending and Securities Underwriting provides a common global framework for financial institutions to identify, respond to and publicly communicate on environmental and social risks associated with their clients.

68 The Heartland Institute. 2022. Are financial institutions using ESG social credit scores to coerce individuals, small businesses?

69 Category A – Projects with potential significant adverse environmental and social risks and/or impacts that are diverse, irreversible or unprecedented; Category B – Projects with potential limited adverse environmental and social risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures²; and Category C – Projects with minimal or no adverse environmental and social risks and/or impacts.

70 The Equator Principles. 2021. Version 4.

Most of the surveyed NDFIs would typically have a Sustainable Business Development Strategy with goals that may include climate mitigation and/or more commonly linked to the achievement of one or more targets under the SDGs. Consider a well-known NDFI in the Philippines as an illustration. Its Sustainability Strategy and Transition Plan, which was approved by the Board on December 20, 2020, complies with the guidelines in Circular No. 1085 of the Central Bank of the Philippines on its Sustainable Finance Framework and gives the bank the opportunity to show its commitment to sustainable development. The strategy/plan focuses on five key areas: Sustainable Finance, Environmental and Social Risk Management, Operational Resource Management, Governance and Culture, and Stakeholder Engagement and is in line with the bank’s commitment to strategically align business operations with the SDGs and the Paris Agreement. Through it, the bank laid out the activities and timelines to help improve its sustainability implementation efforts to fully comply with the requirements of the UNEP FI PRB.

However, not all surveyed NDFIs have designed and implemented dedicated, time-bound **climate change/ decarbonisation strategies**, updated **exclusionary policies** that cover high-risk energy sub-sector investments such as fossil fuels, nuclear and hydropower, and set up specific policies prohibiting the financing of new coal-fired power plant projects and/or expansion in existing coal-fired power plants or requiring clients highly exposed to climate-related risks to develop a mitigation plan and ultimately align their activities with the objectives of the Paris Agreement. As illustrated later in this paper, NDFIs are also in the early phases of engaging with high-emission sectors on transition plans and have yet to establish financing conditions that enforce accelerated decarbonisation efforts. This also indicates that the historic collapse in coal projects projected in 2021 following announcements from the Philippines, Viet Nam, and Indonesia did not fully materialize, as coal projects were cancelled but not on the scale initially suggested by government announcements and plans⁷¹.

Although **sector policies** addressing the financing of activities that are not aligned with a 1.5°C scenario are largely underdeveloped, some banks are breaking this trend with commitments to end the financing of coal activities. One major NDFI in the Philippines for example has recognized that power generation from conventional sources was generating high environmental impacts such as GHG emissions, air pollution, water pollution, and waste and as a result, starting in 2016 the bank has stopped financing coal power. This action was eventually formalized into a Board approved policy in September 2018 putting power generation from non-RE on the negative list of borrowers and loan purposes. The bank now conducts due diligence as part of its lending process to ensure that environmental and social risks associated with the proposed projects for financing are identified, analysed, managed, and mitigated.



71 Global Energy Monitor, CREA, E3G, Sierra Club, SFOC, Kiko Network, CAN Europe, LIFE, and Bangladesh Groups. 2022. Boom and Bust Coal.

BOX 12. ELEMENTS OF A ROBUST SECTOR POLICY INCLUDE (BUT ARE NOT LIMITED TO)⁷²:

- Public disclosure of the full policy;
- Application of the policy to all banking operations and financial products;
- Requirements and thresholds based on internationally recognised standards for best E&S practices (e.g., IFC Performance Standards, Equator Principles);
- Written acknowledgement of the potential risks and dependencies related to natural capital: biodiversity loss, deforestation, marine environmental degradation, water risk, and human rights and/or labour rights violations associated with clients’ activities;
- Requirements for borrowers to adopt the following practices, as appropriate based on their exposure to the above-listed risks:
 - » Mitigation plans to align their activities with the objectives of the Paris Agreement;
 - » The adoption of “no deforestation” commitments;
 - » Performance of water risk assessments and commitment to water stewardship;
 - » Commitment to the UN Guiding Principles on Business and Human Rights; and
 - » Adherence to international labour standards equivalent to the ILO Fundamental Conventions.
- Metrics for measuring the environmental performance or impact of the sector portfolio (e.g., GHG emissions, land use change, biodiversity impacts);
- Details on the provision of incentives or financial products that support a transition towards sustainable practices in the sector;
- A commitment by the bank to disclose the percentage of clients that are sustainably certified and/or a time-bound plan to achieve 100% sustainability certification (as appropriate for the sector);
- Disclosure of processes for addressing non-compliance with the policy; and
- A commitment to periodic review of and updates to the policy.

For those NDFIs that lack such sector policies or sustainable finance frameworks they rely instead on **Environment and Social Safeguard (ESS) policies**, which typically include guidelines to minimise a project’s climate change impact on communities and reduce vulnerability and increase people’s resilience to climate change risks in different sectors.

For example, as part of one NDFI in the Philippines’ Green Financing programme, the bank requires clients to perform climate resiliency and disaster risk assessment and as well as an environmental impact assessment as part of project evaluation⁷³. Another bank in the Philippines carries out sensitivity analysis on E&S issues (presence of critical natural habitats, water quality/resource availability and use, presence of physical cultural property, settlements and presence of indigenous peoples) and vulnerability to natural hazards/climate change analysis including drought or El Nino, flooding or la Lina landslides sea level rise typhoons/heavy rains earthquakes volcanic eruptions storm surge using national geospatial-based physical risk datasets and hazard assessment tools.

BOX 13. ENVIRONMENT AND SOCIAL SAFEGUARDS (ESS) VS INTEGRATED STRATEGIC PLANNING AND OUTCOME-BASED REQUIREMENTS

Safeguards are essentially a reactive mechanism to avoid risks and reduce harm. This contrasts with the more ‘upstream’ proactive approach of **integrated strategic planning**. Nevertheless, safeguards are considered to have great value, not least in defining a clear process and checkpoints that force consideration and management of risk. Well-applied safeguards strongly encourage developers to apply the **mitigation hierarchy**, especially to avoid potential project impacts through early planning and alternatives analysis.

Upstream planning (sometimes incorporated in Strategic Environmental Assessment - SEA) is a highly valuable and important tool for enabling impact avoidance and reducing project risks and mitigation costs. However, it is still little deployed by NDFIs and there are many barriers that prevent it from happening. It involves working with the government and many other stakeholders; the responsibility of individual NDFIs and remit for their involvement may not be clear; it requires significant resources (which are not guaranteed to return from future investment) and can be a lengthy and contentious process. Nevertheless, some banks are leading the way through proactive engagement in upstream planning, such as the International Finance Corporation’s (IFC) work at the country and sector level to de-risk potential investments.

As pointed in a previous WWF study⁷⁴, despite the encouragement from MDBs, adopting more rigorous **outcome-based requirements for safeguards** (i.e., net zero or zero carbon) would be new for many NDFIs. This is due to lack of capacity (finance, staffing and knowledge) and project-level data quality and availability issues. The issue is further complicated by resource limitations to providing support for the implementation of safeguards to clients who undertake DFI projects (i.e., intermediaries, mainly in the context of private sector operations). Financial intermediation projects present special challenges from a safeguard perspective. This is because DFIs do not have direct oversight of or strong leverage in relation to subprojects, because these are often unknown when a financial intermediary is appraised, and funds are dispersed widely to many subprojects and financial intermediation financing can entail several layers of intermediation that complicate E&S risk management.

⁷² ASFI Academy. 2022. Strategies for responsible banking in energy.

⁷³ Development Bank of the Philippines. 2018. Development Programs and Plans to Support PDP 2017-2022.

⁷⁴ WWF. 2021. Mapping ESG integration in public infrastructure finance in the Asia Pacific.

We recommend NDFIs that their direct financing should be analysed through the lens of decarbonisation and climate change mitigation by evaluating the lifecycle carbon footprint of a project with respect to the GHG reduction goals as outlined in the country’s sector-specific plans on climate mitigation. Relevant climate mitigation tracking methodologies may be used including the Common Principles for Climate Mitigation Finance Tracking (see Box 14), the ASEAN and the Climate Bond Initiative Taxonomies, the FAST-Infra Sustainable Infrastructure Label (SI Label)⁷⁵ guidelines, and the recommendations of the TCFD⁷⁶ to name a few. The project screening process should aim to:

- Identify eligible sub-sectors/activities/processes and add misaligned investment areas to existing exclusion lists which should be forward-looking and dynamic, with revisions at least every five years;
- Calculate GHG emissions of the proposed solutions (e.g., gCO₂ e/unit of production) and identify the key elements that contribute to these emissions). GHG accounting for all relevant investments is typically a prerequisite for Paris alignment assessment. NDFIs should conduct GHG accounting for projects in all sectors, covering scope 1 (direct emissions) and 2 (emissions from the generation of electricity or heat used). Under Scope 3 (other indirect emissions), at a minimum, for all projects with significant emissions, NDFIs should account for emissions from extraction and production of materials used as well as induced emissions from the use of product/project GHG emissions should be publicly disclosed;
- Identify entry points where GHG reduction measures/mitigation options could be incorporated (e.g., the use of solar power for infrastructure lighting or implementation of carbon capture and storage technology in a large CO₂ point source infrastructure such as a cement factory or a biomass power plant);
- Consider introducing nature-based solutions that protect biodiversity and reduce GHG emissions;
- Consider entry points for blue-green Infrastructure, sustainable alternatives, and good practices such as replacement of high embedded-emissions materials with eco-friendly materials, coastal mangrove protection, green roofs, rammed earth, reclaimed wood, etc.;
- Consider the broader chain in which the project is dependent or interconnected (e.g., an electric bus project also needs to consider charging stations and the origin of the electricity provided); and
- Identify entry points for engaging with circular economy approaches (e.g., the use of construction techniques that reuse/recycle/repurpose end-of-life materials and infrastructure components to promote efficient material utilisation).

⁷⁵ Climate Policy Initiative. 2021. FAST-Infra Sustainable Infrastructure Label.
⁷⁶ Financial Stability Board. 2017. Final Report, Recommendations of The Task Force on Climate-Related Financial Disclosures.



BOX 14. COMMON PRINCIPLES FOR CLIMATE MITIGATION FINANCE TRACKING⁷⁷

The Common Principles for Climate Mitigation Finance Tracking consist of a set of definitions and guidelines and a list of eligible activities that allow for consistent accounting and reporting of financial flows for climate change mitigation finance. The principles have been developed by the Joint Climate Finance Tracking Group of MDBs and a group of representatives of the IDFC member banks, based on their experience and knowledge of climate change mitigation activities and available low-carbon technologies.

The Common Principles recognise that a substantial contribution to climate change mitigation can involve the following three categories of climate change mitigation activities:



























- 1 Negative- or very-low-emission activities, which result in negative, zero or very low GHG emissions and are fully consistent with the long-term temperature goal of the Paris Agreement, e.g., carbon sequestration in land use or some forms of renewable energy;
- 2 Transitional activities, which are still part of GHG-emissive systems, but are important for and contribute to the transition towards a climate-neutral economy, e.g., energy efficiency improvement in manufacturing that directly or indirectly uses fossil fuels; and
- 3 Enabling activities, which are instrumental in enabling other activities to make a substantial contribution to climate change mitigation, e.g., manufacture of very-low emission technologies.

The Common Principles represent a minimum standard which could be supplemented by additional criteria and tools to ensure that climate mitigation finance is Paris-aligned. Specifically, it is important that activities not only reduce emissions but also accelerate the transition of national economies to net zero emissions by 2050 and maximize impact. In addition, it is important that activities do not cause significant harm and lead to maladaptation and lock-in of emissions.

⁷⁷ IDFC. 2021. Common Principles for Climate Mitigation Finance Tracking.

In addition, we recommend that NDFIs explore some of the tools introduced by MDBs in recent years to integrate climate considerations into their decision-making. These tools can be applied either at the level of individual projects or at the country, sector, or bank strategy level (see Figure 11). Not all tools from the toolbox must be used simultaneously to ensure Paris alignment.

Figure 11. Climate toolbox - selection of tools that can support alignment with the temperature goal. *Note: Tools with a green symbol help to incentivize investments that actively support the achievement of the Paris temperature goal. Tools with a red symbol help ensure that investments that risk undermining the achievement of the Paris temperature goal are excluded.* Source: Germanwatch and NewClimate Institute, 2018⁷⁸.

Bank Strategy Level	Country/Sector Strategy Level	Project Level
 GHG accounting + Portfolio emission target 	 Supporting and enhancing NDCs and LTS  	 Negative List/Positive List  
 Climate finance target 	 Country emission pathways 	 GHG accounting + Emission Benchmarks 
 Setting standards for financial institutions world wide through financial intermediary lending  	 GHG account + Sector emission targets 	 GHG accounting + Shadow carbon pricing 
 Supporting the enabling environment through policy based lending  		 Decision trees combining several tools (including country & sector decarbonization pathways) 

PRODUCTS

To increase positive impact, banks also typically launch **sustainability-linked and/or green financial products** during the implementation phase of their sustainability commitments. Good performance is important as integrating ESG issues into business operations does not only entail adequate risk assessment but also tapping into business opportunities. These include green bonds and loans, sustainability-linked loans (SLL), green deposits, green guarantees, and letters of credit to name a few. To protect the credibility of sustainable financial products, many banks apply the Green, Social & Sustainability Bond Principles and utilise third-party verification for the development and issuance of sustainable financial instruments. Third-party reviews are necessary for the issuance of certain products such as SLL, which require corporate borrowers to secure third-party verification of their performance against the SLL’s Sustainability Performance Targets. Market standards, such as the updated Green Bond Principles and the Climate Bond Initiative Standards, recommend that bond issuers appoint a third party to assess and verify the alignment of the management of proceeds with the Principles/ Standards.

We found that most NDFIs have been issuing such products. One Indonesian NDFI for example, established a Sustainable Finance Division to finance RE projects. It also offers solutions via its Blended Finance Platform to support the SDGs. The same bank also has a Green Bond/Green Sukuk Framework which serves as a reference for the issuance of green bonds particularly in geothermal energy. In fact, the bank became the first issuer of a corporate green bond in Indonesia, compliant with Green Bond Principles (GBP), ASEAN Green Bond Standards, OJK Regulation (POJK Number 60/2017) and received a favourable Second Opinion from CICERO. The DFI also has a Geothermal Fund Management and offers innovative products in this space.

However, the same bank only prohibits the financing of fossil fuel and nuclear power as part of their Green Bond/Green Sukuk Framework, leaving other services and products open to fossil fuels. In this study, only one NDFI prohibits all financial products or services dedicated to the exploration, development or expansion of new fossil fuel assets such as new thermal coal ore extraction and processing facilities and/or for unconventional oil/gas infrastructure, such as pipelines.

PEOPLE

Implementation requires dedicated sustainability-focused **teams** as well as **training** for all staff on E&S policies and processes including emerging tools and frameworks (net zero strategy implementation guidance). This is in effect about climate governance i.e., evaluating how a bank incorporates climate strategy into its governance structure and remuneration policies. Good performance is important as effectively implementing policies and processes requires sufficient staff capacity and clear allocation of responsibilities to different departments and senior management.

Most NDFIs establish board-level oversight of their climate change policy and of climate risk management. However, board-level oversight of the bank’s net zero policy is rare as such pledges are inexistent. Furthermore, executive remuneration is yet to be tied to progress against financed emissions reduction targets. There is also a scarcity of specialized technical knowledge. Staff training is still in its infancy, focusing mostly on those directly associated with sustainability issues, and is frequently voluntary, failing to fully prepare employees to appraise climate risks and opportunities.

It is imperative that decision-making bodies are made aware of climate change issues so that they can provide effective accountability and oversight. Furthermore, staff appraisal should consider performance relating to ESG issues. Making these changes will ensure staff capacity and clear allocation of responsibilities to different departments and senior management with respect to implementing policies and processes. While most NDFIs have sustainability teams and offer some general training opportunities to their staff, none integrate sustainability-related criteria as part of the staff and senior management appraisal process and/or remuneration. However, one bank has established a governance structure to ensure that the PRB are implemented effectively.

78 Germanwatch and NewClimate Institute. 2018. Aligning investments with the Paris Agreement Temperature Goal – Challenges and Opportunities for Multilateral Development Banks. Cologne/Bonn/Berlin.

“WE HAVE OUR CHIEF SUSTAINABILITY OFFICER WHO IS RESPONSIBLE FOR THE OVERSIGHT OF THE IMPLEMENTATION OF BANKS' SUSTAINABILITY PROGRAMS AND INITIATIVES. WE HAVE IDENTIFIED BUSINESS UNITS AND THEIR RESPONSIBILITIES IN ACHIEVING THE BANK'S TARGETS UNDER ITS SUSTAINABILITY PROGRAMS.”

NDFI Senior staff member

NDFIs are also developing and/or updating their client engagement plans. Some are building up their ESS due diligence capacity, including on the assessment of climate transition and physical risks, and the capacity of Account Officers to engage with clients on these issues, especially those in high-impact sectors.

PORTFOLIO

At a **portfolio** level, banks **analyse high-risk energy sector exposure** to climate-related physical and transition risks using portfolio alignment, climate scenario analysis, and stress testing. They then **disclose the results**, including absolute emissions in the public realm and **set science-based targets** that align portfolio lending and investment activities with the Paris Agreement (see example from a commercial bank in Box 15). Bank policies are also typically strengthened to require clients to follow international best practices as opposed to just locally applicable laws. Banks also work with clients to increase positive E&S impact through outreach activities and allocate specific pools of capital to support positive impact. This phase is challenging as banks must balance incorporating international best practices on sustainability issues with local regulations, competition, and growth dynamics. Good performance is important as the assessment of key E&S risks at client and transaction level only provides a micro-level snapshot of issues which ultimately accumulate at the portfolio level. Disclosure of risk exposure indicators and setting targets helps progress assessment in dealing with material ESG risks and business model transitioning.

The studied NDFIs are in the process of setting portfolio science-based targets. One bank from the Philippines as an illustration, currently sets targets on its key priority thrusts that are aligned with the Philippine Development Plan and SDGs Taking off from the identified top four sectors with the highest loan portfolio, the bank will deepen the impact analysis of these sectors and identify at least two industries/ areas of the most significant impact. After which, targets linked to and aligned with SDGs, the goals of Paris Agreement and national or regional frameworks will be set, and impacts will be assessed.

Evidence of assessing physical and transition-related risks for energy portfolios and developing plans to mitigate these risks is limited. Disclosures on sensitive energy sub-sectors such as the detailed composition of power generation portfolios are largely missing. One bank, however, which became a UNEP PRB signatory in 2019, disclosed that its power generation share in 2020 was 7.51% of its total loan portfolio, of which RE accounted for 4.31% while conventional energy had a 3.20% share. This indicates a slight tilt towards RE over conventional energy. To advance the implementation of its Sustainability Strategy and Sustainability Transition Plan the bank plans to develop guidelines and procedures on portfolio risk impact analysis and (b) conduct impact analysis, starting on its lending portfolio. The NDFI shall make use of UNEP's Guidance Document on Impact Analysis and Portfolio Impact Identification Tool to be able to fulfil the prescribed elements of Impact Analysis. It has mainstreamed in its credit process the identification and evaluation of the environmental and social impact on a per-project level. Now the bank is working on expanding its impact analysis to obtain an objective understanding of the significant impacts of its core services at a portfolio level. Taking off from the identified top four (4) sectors with the highest loan portfolio, the bank will deepen the impact analysis of these sectors and identify at least two (2) most significant areas.

BOX 15. DBS SECTOR-SPECIFIC DECARBONISATION GOALS: POWER

DBS, a commercial bank based in Singapore, made a commitment to achieve net zero consistent levels of emissions intensity for their energy sector financing, using the IEA NZE scenario as the reference pathway. An emissions intensity target was set for this sector, measured in kilograms of CO2 emissions per megawatt hour of power produced (kgCO2/MWh). Two subsectors were included in the targets:

- 1 Companies involved in power generation (both fossil fuels based and RE) based on their Scope 1 emissions (i.e., the emissions released from power generation); and
- 2 Power equipment manufacturers based on their Scope 3 emissions (i.e., the energy equipment produced is tagged to the type of power that the equipment generates). This, in turn, motivates DBS’s financing towards companies manufacturing RE equipment, such as wind turbines and solar panels, which are critical to the scaling up of RE. It also reflects the industry trend towards distributed power generation at a smaller scale, for instance, using rooftop solar panels.

DBS’s targets are set based on the activities that are being financed. The bank’s energy portfolio starts with a notably lower emissions intensity than the IEA NZE scenario, reflecting the reshaping of the portfolio towards lower-emission activities in recent years. RE now comprises nearly half of DBS’s total energy portfolio.

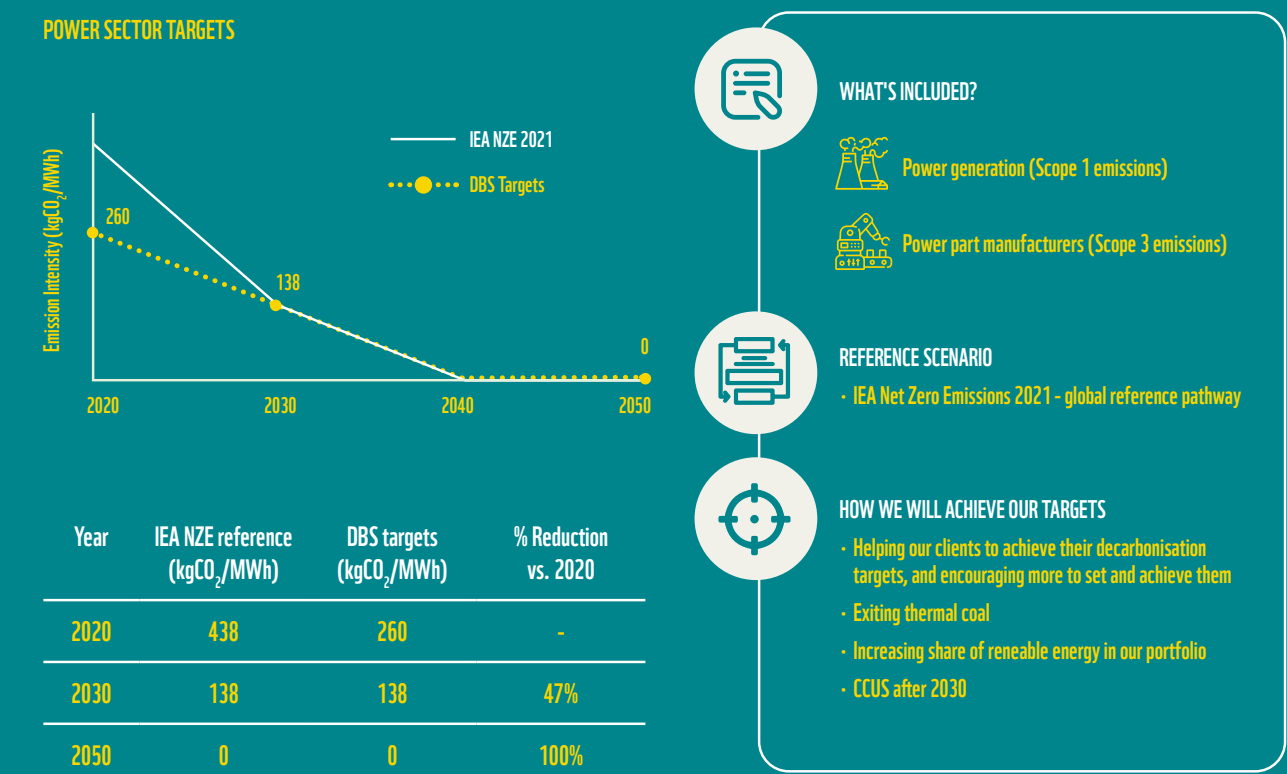


Figure 12. DBS Net zero targets for the energy sector at glance. Source: DBS, 2022⁷⁹.

In line with IEA’s NZE scenario, DBS is committed to a 47% reduction in emissions intensity by 2030 compared with a 2020 baseline position. The banks recognises that this is ambitious given its footprint in Asia, where demand for power is expected to continue to grow and where many governments have so far made plans to achieve net zero only beyond 2050. Nonetheless, DBS is committed to net zero by 2050, and will proactively direct financing towards lower emissions activities through the following key commitments:

- phasing out thermal coal exposure;
- encouraging and supporting clients in setting and achieving their decarbonisation targets by financing their transition activities and focusing on clients with ambitious decarbonisation targets; and
- increasing the share of renewable activities in the power portfolio (i.e. specialist renewable companies, through ring-fenced specific purpose lending to renewable activities, or to the renewable subsidiaries of parent corporates).

As regulators signal expectations for enhanced climate risk disclosures, which for some financial institutions will likely include an analysis of carbon exposures in their portfolios, building the infrastructure to adequately calculate financed emissions across a bank’s entire portfolio is becoming increasingly important.

For NDFIs to develop a robust approach for measuring and setting targets for emissions within their portfolios, they need the best available economic and technological knowledge of what it will take for the real economy to transition to net zero. These net zero strategies must then translate into material progress towards closing the transition finance gap, and active collaboration with clients and policymakers to enable a net zero real economy. To ensure the credibility of their strategies to align these emissions to net zero pathways, they will need to disclose progress to all stakeholders.

A typical process for implementing net zero strategies at the portfolio level is described in Box 16 below. Although this guide focuses more on client emissions related to a private/commercial bank’s financing and investment, as opposed to banks’ own operational emissions, most of the recommendations are transferable and can be applied to DFIs’ energy portfolios.

79 DBS. 2022. Our Path to Net Zero - Supporting Asia’s transition to a low-carbon economy.

BOX 16. IMPLEMENTING A NET ZERO STRATEGY: A STEPWISE GUIDE⁸⁰

- The first step in constructing a net zero strategy is to **define the scope** of client-generated emissions resulting from financing activities.
 - » Many banks are assessing emissions associated with their on-balance sheet financing because this provides a good starting point for them to monitor their activities to finance a net zero economy;
 - » There is not an industry consensus on the inclusion of capital markets financing within scope. Some believe including capital markets is important where the activity is material (this view is supported by NZBA, subject to the development of methodology), while others believe it leads to emissions double counting and is removed from directly funding emissions.
- Next, the **emissions baseline must be measured** to establish a reference point for target setting.
 - » The Partnership for Carbon Accounting Financials (PCAF) is emerging as a leading standard for measuring an emissions baseline which conforms with the Greenhouse Gas (GHG) Protocol. The PCAF Standard currently provides detailed guidance to measure emissions associated with six asset classes: listed equity and corporate bonds; business loans and unlisted equity, project finance, commercial real estate, mortgages and motor vehicle loans;
 - » Key technicalities for emissions measurement continue to be debated, for example, the use of committed or outstanding loan values in the baseline calculation;
 - » In addition, the lack of consistent, granular emissions data from the real economy makes emissions measurement challenging.
- Then, banks must **select net zero outcome emissions scenarios** to help set portfolio targets and provide a benchmark to monitor progress.
 - » A credible net zero strategy ideally uses scenarios that meet minimum, industry-agreed criteria such as those issued by NZBA and the Science Based Targets Initiative (SBTi). These include credible sources, no- or low-overshoot and conservative reliance on negative emissions technologies;
 - » Current limitations include the availability of disaggregated net zero scenarios with a high ambition level (1.5°C or net zero by 2050) that can be operationalised into a sector and geography decision-useful toolkit.
- Banks must also **measure their portfolio alignment** to assess the status of financed emissions versus the chosen net zero emissions scenario pathway.
 - » Toolkits that identify how banks’ financed emissions portfolios are performing versus net zero sector emissions pathways are varied and iterating fast;
 - » Most commonly, banks compare current and forecast portfolio emissions metrics to the expected trajectory from a scenario. Some banks calculate implied temperature rise metrics.

- Then, they must **set targets to reduce financed emissions** and provide a measure against which progress can be assessed.
 - » There is emerging industry consensus that banks should: prioritise carbon-intensive sectors, set long-term and interim targets aligned to credible scenarios, use absolute emissions or emissions intensity metrics, publish action plans;
 - » The choice of absolute emissions and/or emissions intensity targets for fossil fuels is a point of debate.
- Banks must **understand how and where to use carbon offsets**. Offsetting is the act of financing emissions reductions outside an organisation’s own baseline or removals from the atmosphere to compensate for or neutralise emissions the organisation has not yet reduced. Credits are transferable units of emissions reduction or removal generated from verified carbon projects.
 - » The industry is aligned on a few high-level principles (e.g., that entities should first prioritise their own emissions reductions and credits should be of high quality);
 - » Compensation and neutralisation contribute to society’s net zero transition; some debates remain on how banks can recognise client offsets and credits and whether banks should be able to use credits to offset their financed emissions.
- Banks must **disclose progress**. The public disclosure of information about a bank’s net zero strategy and progress is a new and evolving process within the banking industry. Banks recognise that disclosures increase the credibility of and accountability for their net zero strategies, but there is not currently a standardised approach.
 - » Banks must decide between disclosing in stand-alone reports and their annual reports with associated regulatory and assurance requirements;
 - » They must also determine how they can make disclosures as credible as possible, given inconsistent data about client emissions.
- As providers and arrangers of capital for the real economy, banks play a crucial role in **financing the transition to net zero**.
 - » Banks must balance the need to finance emerging technologies to support the transition against the increased capital necessary for these potentially riskier investments;
 - » The development of some products supporting climate mitigation (e.g., transition bonds) will depend on clear definitions.
- **Engage with customers** to understand their strategies and support their transitions is essential to enabling change in the real economy.
 - » Bank roles can include raising awareness, supporting decarbonisation strategy development, sharing best practices, and developing financing solutions;
 - » There is no ‘one-size fits all’ engagement approach (e.g., smaller businesses may be less aware of opportunities as they have fewer internal sustainability resources);
 - » The transition must balance emissions reduction and social and ecological goals.

RECOMMENDATIONS

SHIFT AND ALIGN MANDATES AND POLICIES

At the strategic level, NDFIs should **review the compatibility of their institution's mandate with the Paris Agreement, the SDGs** (e.g. SDG 7 - Ensure access to affordable, reliable, sustainable, and modern energy for all) **and national climate and energy objectives** and have senior management take institutional commitments in line with those objectives.

- This commitment should guide the institution's integration of climate considerations as a new 'lens' and be integrated across its business lines and operations. In this process, it is important that the changes in the scope of action, the time horizon of impact, and the scale of action are taken into consideration;
- This requires senior management and supervisory and management boards to **regularly evaluate current mandates** and identify if there is a need to enhance or narrow down their scope. Importantly, NDFIs should proactively seek mandate enhancements and clarifications from their respective governments/shareholders as well as from NGOs and the local communities affected by their financing plans to integrate the latest environmental and social considerations into their founding statutes, goals, target sectors, and geographical scope of their activities.

Next, NDFIs must build **appropriate delivery models** to complement their mandates.

- This requires the tailoring of policies and products to market needs depending upon the degree of institutional development of the country, the structure of the financial system and the risk aversion of other financial players;
- NDFIs could make use of the Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and Low-Emission Development Strategy (LEDS) mechanisms to develop sustainability-themed policies, products, and processes.



NDFIs have a critical role to play in providing the financial sector with a clear line of sight on national ambition, forthcoming initiatives, and available programmes. They can finance SMEs and corporates on their transition journeys through the provision of climate focused loans, guarantees and insurance products.

NDFI should **develop and adopt a transition finance framework**, which could be in the form of a transition taxonomy (e.g. inspired from, and aligned with the ASEAN Taxonomy Sustainable for Finance⁸⁴, Singapore's Taxonomy⁸⁵, Bank Negara Malaysia Climate Change and Principle-based Taxonomy⁸⁶), and incorporate the High-Level Principles for MDB Support for a Just Transition to clarify the eligibility criteria for transition activities and establish the rules for issuing innovative fixed-income instruments without the risk of greenwashing:

- To this end, the guidelines should specify how the transition funds will contribute to their countries' Paris Agreement targets by defining the financial instruments employed and their connection with the various stages of a rigorous transition plan;
- Additionally, it is critical to define the sustainability accounting standards they will follow and report on the impact of the funds received;
- NDFIs should include an external reviewer to ensure the use of funds is transparent and credible;
- Demonstration projects should be developed to highlight the feasibility of transition finance, which is relatively new to most in the financial sector. Concrete examples are needed to counter the perception of high costs and risks. These could include transition projects in coal-fired power generation;
- Launch transition funds (in partnership with governments or multilateral international organizations) to reduce the funding costs and risks for these transactions and help attract private-sector investment.

NDFIs should strive to **make “climate-smart” investments** (i.e., where the policies and plans governing their identification, preparation, design, and assessment combine the following attributes:

- Alignment of a country's climate targets and policies (e.g., NAPs, NDCs, LEDS);
- Contribution to global mitigation goals for reducing CO₂ emissions;
- Building resilience to the risks of climate change projected during a project's lifetime.

NDFIs should **accelerate investments in RE infrastructure**, such as the deployment of smart grids, energy management systems, and transmission infrastructures:

- Target private funding sources and consider issuing debt instruments to investors seeking low-yield, low-risk, and long-term assets.

They should also allocate a certain portion of the investment portfolio towards **new and emerging low-carbon technologies and business models** (e.g., green hydrogen, battery exchange stations etc.) through innovative financial mechanisms, blended financing, guarantees and credit enhancement:

- Funds should be prioritised at the early stages of projects to ensure that manageable financial risks are faced by private institutions in later stages of projects.

NDFIs should **accelerate investments to various customer segments** like residential and industrial for rooftop solar, and energy service companies (ESCOs) to finance energy-efficient technologies in new buildings and retrofits etc.

NDFIs must play a stewardship role, while actively taking steps to prevent the crowding out of private capital.

- NDFIs, should look to use their financing abilities to serve as anchor investors. They should create capacity in the system, lead on origination breakthrough technology-based projects and provide technical assistance on expanding innovative opportunities to corporates and partner financial institutions. They can better leverage public capital through blended finance and insurance instruments.

ASSESS AND INTEGRATE CLIMATE RISKS AND BUILD INTERNAL CAPACITY

On an operational level, NDFIs must **adjust their incentive structures and support systems**. This means upgrading and implementing operational rules and procedures to build internal capacity and improve risk assessment frameworks and tools to identify, assess and mitigate the climate impact of projects, portfolio activities, and non-portfolio operations, and manage climate-related risks more effectively.

NDFIs need to ensure that they as well as their clients have the commitment, capacity, and corresponding **governance processes** in place to implement Paris-aligned E&S policies such as screening safeguards policies.

NDFIs can build on existing experience in requesting and assessing clients' E&S policies and governance systems. For example, some DFIs are already assessing whether a client is committed to and has the capacity to implement robust ESS safeguards to the projects they finance.

- A good example of best practice is the IFC, which requires its clients to develop an E&S policy. The IFC further requires that the client's senior management and board endorse this policy and commit to “*develop[ing] and maintain[ing] the necessary internal capacity and structure for its implementation.*” Additionally, the IFC requires the client to actively communicate the E&S policy to all employees (though not to the public). Best practice would require public disclosure of the client's policies, as well as an independent evaluation of adherence to the policy.

84 ASEAN Taxonomy Board (ATB). 2022. ASEAN Taxonomy Sustainable for Finance Version 1.

85 Green Finance Industry Taskforce. 2022. Identifying a Green Taxonomy and Relevant Standards for Singapore and ASEAN.

86 Bank Negara Malaysia. 2021. Climate Change and Principle-based Taxonomy (CCPT).



REPORT ON CLIMATE RISKS

Transparency is a prerequisite to ensuring accountability on Paris alignment commitments. A lack of transparency as to what a NDFI or its clients are investing in, limits their ability to conduct due diligence, mitigate risks, and meet their public interest mandate.

First, NDFIs should **disclose all their** financing activities concerning **fossil-fuels** (i.e., power generation and upstream fossil fuel extraction **projects** covering coal, gas, and oil but also the supporting, midstream infrastructure such as transmission and distribution lines from fossils fuels generation assets, pipelines etc.

Next, NDFIs should require clients to report on the end use of funds and disclose this information to demonstrate alignment of their investments.

They should then advise clients on strategies to build a climate-resilient portfolio and facilitate the transition to low-carbon activities.

- NDFIs could consider offering technical assistance to their clients on scenario analysis and adaptation planning. They could also support them to identify and incorporate resilience measures into project design and ensure compliance with these requirements through monitoring and oversight, including audits, on a sample basis;
- Next NDFIs should then engage with fossil-fuel companies to adopt net zero targets and action plans, with divestment for companies that are unable or unwilling to **transition** in line with net zero pathways.

Some NDFI clients might be willing to make a high-level commitment to align their financial flows with the Paris Agreement but not be ready to commit to the Paris alignment criteria and implementation processes within a proposed timeline. It would be valuable for NDFIs to continue to engage with these clients and highlight the value of integrating climate-related considerations into their operations or supporting them in developing concrete plans for Paris alignment.

- NDFIs could support capacity-building efforts to help clients identify and understand climate risks, develop the governance structures and tools needed to address those risks, and take concrete steps toward alignment. The better a client understands climate risks and opportunities, the more likely it is to engage with NDFIs on a Paris alignment process;
- One entry point for engagement between the NDFI and a client on climate risk may be to include the client's staff in workshops and trainings where the NDFI discusses issues related to climate risk and Paris alignment. Further, advisory, and consultative services to support the client's ability to conduct risk screening and disclose under the TCFD may enhance understanding the importance of Paris alignment.

NDFIs should invest in **building adequate E&S risk frameworks and structures** (incorporating TCFD/EP4/IFC Performance Standards recommendations⁸⁷) to assess the impact of climate-related risks on their operations, projects, and financing portfolios.

this means screening projects for climate-related risks and categorising them as presenting high medium, or low physical climate risk using a range of tools, from bespoke (e.g., the World Bank's Climate and Disaster Risk Screening Tools⁸⁸, and Coalition for Climate Resilient Investment's Physical Climate Risk Assessment Methodology or PCRAM⁸⁹ - which provides guidelines for integrating physical climate risks in infrastructure investment appraisal) to commercially available off-the-shelf software (e.g., Acclimatise Aware Climate Risk Screening Tool⁹⁰);

- Ensure that **risk assessments for medium- and high-risk projects include detailed, quantitative calculations of risks** (i.e., to include climate risks and adaptation options into the economic or financial analysis of a project. In particular, quantitative risk assessments should do the following: i) include short (10 years), medium (20–30 years), and long-term (30–50 years) climate risks; ii) explore a range of emission scenarios and climate models; and ii) consider uncertainty and, where possible, present impacts in terms of probabilities;
- **Integrate climate risk** into credit assessments, climate stress testing of own lending portfolio, measurable and transparent decarbonisation targets, and report progress to regulators and investors.

87 IFC. 2021. IFC Performance Standards on Environmental and Social Sustainability Effective January 1, 2012.

88 World Bank Climate and Disaster Risk Screening Tools. Available [here](#).

89 Coalition for Climate Resilient Investment (CCRI). Undated. Physical Climate Risk Assessment Methodology (PCRAM) Guidelines for Integrating Physical Climate Risks in Infrastructure Investment Appraisal. Available [here](#).

90 Acclimatise Aware Climate Risk Screening Tool. Available [here](#).

ENGAGE WITH STAKEHOLDERS AND BUILD EXTERNAL CAPACITY

NDFIs could collaborate among themselves and with NGOs and academia to develop and maintain further lists of companies engaged in other misaligned activities and provide them to clients.

- For example, the IFC asks its clients to use a list of companies engaged in coal-related activities developed by the NGO Urgewald to determine their level of coal exposure⁹¹.

NDFIs could support initiatives that accelerate decommissioning of coal-fired power plants whilst ensuring a just transition for coal-dependent communities.

- ADB’s Energy Transition Mechanism (ETM)⁹² is a great example which aims to provide finance to accelerate the early retirement of coal power plants;
- Other initiatives worth mentioning include the Asia Energy Transition Initiative (AETI)⁹³, the Cleaner Energy Future Initiative for ASEAN (CEFIA)⁹⁴ and the Energy Transition Partnership (ETP)⁹⁵.

Work with other multilateral organizations to provide credit enhancement support, such as first-loss provisions and guarantees, to de-risk RE investments in the region while also enhancing credit ratings.

Collaborate with other DFIs in the region and/or MDBs to boost green bond issuances in ASEAN, either by facilitating issuances or providing cornerstone investments, to enhance capacity, track record and market maturity across the region.

We also recommend that NDFIs tap into the resources of the newly established **GFANZ Asia-Pacific (APAC) Network** to receive guidance on how they can facilitate the managed phase-out of coal power generation in the Asia Pacific. This guidance aims to provide the clarity that is needed to help drive capital into such projects⁹⁶.

⁹¹ Urgewald. 2020. NGOs Release the 2020 Global Coal Exit List: 935 Companies that Banks, Investors and Insurers Need to Avoid.

⁹² ADB. Energy Transition Mechanism.

⁹³ Ministry of Economy, Trade and Industry of Japan. 2021. Asia Energy Transition Initiative (AETI). Press release.

⁹⁴ Ministry of Economy, Trade and Industry of Japan. Undated. Cleaner Energy Future Initiatives for ASEAN.

⁹⁵ Southeast Asia Energy Transition Partnership (ETP). Undated.

⁹⁶ GFANZ. 2022. GFANZ Launches Asia-Pacific Network to Support Asia-Pacific Financial Institutions’ Move to Net Zero.

CALL TO ACTION

The 2022 UN Emissions Gap Report 2022⁹⁷ estimates the current combined national climate pledges will put the world on the pathway for around 2.5°C of warming by the end of this century, a full degree above the Paris Agreement’s 1.5°C global temperature goal. To meet the goals of the Paris Agreement and limit global warming, we will need to mitigate GHGs and find new pathways to decarbonisation.

This requires an urgent system-wide transformation. To prioritise mitigation, governments will need to step up their commitments as part of the latest 5-year cycle of ramping up Paris NDCs. Translating their NDC commitments into pipelines of investments are critical next steps for achieving GHG emissions reduction in energy infrastructure and beyond.

As significant providers of capital to the real economy, banks must play their part in decarbonising the economy by reducing the financing of carbon-intensive operations, while simultaneously increasing the financing of low-carbon solutions. Financial institutions that continue to finance activities misaligned with the low-carbon transition create significant transition risks, such as stranded assets, and physical risks associated with accelerating global warming. Delaying action further raises the likely severity of economic and market disruption in the future. But there is good news too.

Both international and national financial institutions, and local authorities have begun to develop new instruments in the form of green financing opportunities to support the energy transition. Green and sustainable-linked bonds and loans, climate derivatives, and other instruments are being developed and offered by private and commercial banks, DFIs, governments, and development agencies to accelerate the uptake of sustainable climate action. DFIs have a particularly important role to play based on their SDGs-linked mandates and the comparative advantages they have in piloting and scaling up investment in RE such as the provision of affordable patient capital, technical expertise, country risk mitigation, demonstration effect to overcome the first-mover challenge and a coordinated approach to scale up RE. Much of the support that NDFIs provide for project development is funded in part by external concessional finance. This reinforces once more the need to channel more international public climate finance through NDFIs and for greater collaboration.

Repeated announcements, such as those at the One Earth Summit in December 2017, in Glasgow in November 2021 and Sharm el-Sheikh in November 2022, left no doubt: large clubs of influential financial institutions and many industrialised nations’ governments both realise the need for a profound change of course^{98,99}. They should continue to heed the Paris Agreement’s goals, fully align their strategies and activities with climate change considerations, direct financial flows and investments in ways that benefit climate action and support their peers in developing countries to catch-up. Failing to do so would be a dereliction of their duty and would put humanity’s future well-being and prosperity at risk.

⁹⁷ UNEP. 2022. Emissions Gap Report: The Closing Window – Climate crisis calls for rapid transformation of societies.

⁹⁸ Agence française de développement. 2017. Together Major Development Finance Institutions Align Financial Flows with the Paris Agreement.

⁹⁹ UN Climate Change Conference UK. 2021. Statement on International Public Support for the Clean Energy Transition.

ANNEX

Figure 13. Key RE types important for the transition to net zero.

TECHNOLOGY	DESCRIPTION
Solar – photovoltaics (PV)	Radiant sunlight excites electrons in PV cells to generate electricity directly. PV cells are connected to form PV panels which can be aggregated into arrays. The stronger the sunlight, the more electricity is produced. The energy can be used directly or stored in a battery system to be used as needed. Solar PV panels can be spatially efficient as they can be mounted on any surface exposed to the sun such as rooftops or structures floating on water surfaces such as reservoirs.
Solar – Concentrated solar power (CSP)	Concentrated solar power makes use of the heat of the sun to generate electricity indirectly. CSP technologies use large arrays of mirrors that track the sun to reflect its rays to a single point known as a heliostat. The focussed rays heat a working liquid which is then used to generate electricity in a conventional turbine. The energy is then stored in a battery or thermal storage system before being used. Areas with strong sunlight and clear skies are particularly suited to CSP.
Wind – onshore and offshore	Wind power is generated from turbines powered by large blades rotated by the wind. Turbines can be located onshore or offshore in places where wind resources are abundant. Offshore turbines are typically made with fixed foundations but can also be mounted on floating structures, which are anchored to the seabed. Individual wind turbines have increased notably in size and power output since their introduction in the 1980s.
Hydropower	Hydropower harnesses the power of flowing fresh water to power turbines that generate electricity. Its design varies depending on geographical constraints and energy demand patterns. The two broad categories are conventional hydropower (sub-divided into reservoir and run-of-river hydropower) and pumped-storage hydropower. Larger projects tend to include a large reservoir and dam, while smaller ones might have no storage component. Hydropower dams with reservoirs can be used for other purposes such as irrigation, transport, and water storage.
Bioenergy	Bioenergy uses organic material to generate energy. This energy can be used to generate electricity or directly as a heat source. Bioenergy sources are diverse and can include wood and residues from the forestry/arboricultural sector, crops/residues/livestock waste from the agricultural sector, waste from the manufacturing sector, food/domestic/municipal waste from the residential sector, and microalgae. Dry combustible materials are burned to heat water, creating steam which drives a turbine to generate electricity. Wet materials are stored in tanks where they break down forming methane gas. This gas is then burned to heat water, creating steam which drives a turbine to generate energy.
Hydrogen	Hydrogen is an energy carrier (not an energy source) that can be used to store, move, and deliver energy produced from other sources. Hydrogen can be produced from a variety of methods, but the most common today is through reforming natural gas – this is known as “Grey Hydrogen”. Newer methods of hydrogen production are less emissions-intensive, including reforming natural gas with carbon capture and storage - this is known as “Blue Hydrogen”, and electrolysis of water powered by RE - this is known as “Green Hydrogen”. Hydrogen can be used in a variety of applications across the economy, including as a fuel for transportation, as a feedstock for chemical production, and for power generation/electricity storage. ^{100, 101}

100 US Office of Energy Efficiency & Renewable Energy. Hydrogen Fuel Basics.
101 IEA. 2019. The Future of Hydrogen.

Figure 14. Official Energy Targets and Policies of ASEAN Member States. Source: Multiple Official documents.

COUNTRY	SECTOR	OFFICIAL TARGET
Brunei Darussalam	Efficiency / Intensity	• Reduce electricity consumption by 30% by 2035 compared to the base year 2011 in all sectors (residential, commercial, industrial, and governmental) • Increase the total share of EVs to 60% of the total annual vehicle sales by 2035
	Renewables	• Achieve a 30% share of RE in the power generation mix by 2035
Cambodia	Access	• At least 90% of the household will have access to the electricity grid by 2030
	Efficiency / Intensity	• 15% reduction in energy demand by 2030 relative to baseline ⁸
	Renewables	• 25% increase in RE in the power mix (generation capacity) by 2030 (solar, wind, hydro, biomass)
Indonesia	Access	• Reach 100% electrification rate by 2022
	Efficiency / Intensity	• Reduce energy intensity (TPES per GDP) by 1%/year through 2025 • Achieve ₹19,000 4-wheeled EVs and ₹750,000 2-wheeled EVs by 2025 • Achieve 2 million units of electric cars and 13 million units of electric motorbikes by 2030
Lao PDR	Renewables	• Increase RE share to 23% in primary energy supply by 2025 and 31% by 2050 • Biodiesel blending ratio target 30% by 2025; Bioethanol blending ratio 20% by 2025 and 50% by 2050 • Achieve a 19.6% share of RE in electricity production in 2030
	Access	• Increase the electricity access rate to 98% of total households by 2025
	Efficiency / Intensity	• Reduce TFEC by 10% by 2030 and 20% by 2040 compared to the baseline
Malaysia	Renewables	• 30% share of RE in total energy consumption by 2025, including 20% renewable electricity share (excluding large-scale hydro) and 10% biofuel share (blending ratio 5%-10%) • 13 GW total hydropower capacity (domestic and export use) in the country by 2030
	Efficiency / Intensity	• 52,233 GWh of electricity savings over a 10-year period from 2016 to 2025 against BAU, corresponding to an electricity demand growth reduction of 8% at the end of the plan
	Renewables	• Increase the RE share to 31% in the power capacity mix by 2025 and 40% by 2035
Myanmar	Access	• Increase electricity access rate to 60% by 2025-2026 and 100% by 2030
	Efficiency / Intensity	• Achieve energy savings from the 2012 baseline by 16% by 2025 and 20% by 2030 • 5% reduction by 2025 and 7% by 2030 in traditional biomass use, relative to 2012 levels, via the promotion of energy-efficient cooking stoves
	Renewables	• Increase the share of RE to 39% in electricity generation by 2030 (28% hydro or 5156 MW, and 11% other RE or 2000 MW)

COUNTRY	SECTOR	OFFICIAL TARGET
Philippines	Access	• Achieve a 100% household electrification rate by 2022
	Efficiency / Intensity	• Save 5% energy from oil products and electricity by 2040 compared to BAU • Reach 10% penetration rate of EV for road transportation (motorcycles, cars, jeepneys) by 2040
	Renewables	• Increase the RE share to 35% in the power generation mix by 2030 and 50% share by 2040 • Implement 5% blending for biodiesel starting in 2022
Singapore	Efficiency / Intensity	• Improve energy intensity by 35% in 2030, compared to the 2005 level • Achieve 1%–2% annual improvement in industrial energy efficiency • Achieve 100% cleaner-energy public bus fleet and taxis by 2040 (electric or hybrid vehicles) • Reduce total energy consumption by more than 8 million MWh per year
	Renewables	• Increase solar energy deployment to at least 1.5 GWp by 2025 and 2 GWp in 2030
Thailand	Efficiency / Intensity	• Reduce 30% energy intensity (TFEC/GDP) by 2037 relative to the 2010 level • Achieve 30% electric vehicles manufactured by 2030
	Renewables	• Increase the RE share to 30% in TFEC by 2037, including 15%–20% renewable electricity in total generation; 30%–35% of consumed heat from renewables; and a 20%–25% biofuel share in TFEC
Viet Nam	Efficiency / Intensity	• In 2025, reduce energy intensity in TFEC by 5%–7% and keep power losses under 6.5% • In 2030, reduce energy intensity in TFEC by 8%–10%, keep power losses under 6%, and reduce 5% fuel and oil consumption in transportation
	Renewables	• Increase the RE share in TFEC to 32.3% by 2030 and 44% by 2050 • Increase the RE share in power generation to 32% by 2030 and 43% by 2050

Figure 15. ASEAN’s international and regional commitments on energy transition and policies.

AGREEMENTS	COMMITMENTS	
2016 Paris Agreement	Limit global warming to well below 2, preferably to 1.5 degree Celsius, compared to pre-industrial levels (Ratified by all ASEAN members)	
ASEAN Plan of Action for Energy Cooperation Phase II (2021 – 2025)	ASEAN Power Grid	To expand regional multilateral electricity trading, strengthen grid resilience and modernisation, and promote clean and RE integration.
	Energy Efficiency and Conservation	To reduce energy intensity by 32% in 2025 based on 2005 levels and encourage further energy efficiency and conservation efforts, especially in the transport and industry sectors.
	Renewable Energy	To achieve an aspirational target for increasing the component of RE to 23% by 2025 in the ASEAN energy mix, including through increasing the share of RE in installed power capacity to 35% by 2025.

AGREEMENTS	COMMITMENTS	
ASEAN Plan of Action for Energy Cooperation Phase II (2021 – 2025)	Regional Energy Policy and Planning	To advance energy policy and planning to accelerate the region’s energy transition and resilience.
	Civilian Nuclear Energy	To build human resource capabilities on nuclear science and technology for power generation.
ASEAN Comprehensive Recovery Framework	Strategy 5b	Facilitating [the] transition to sustainable energy
Brunei’s 2021 ASEAN Chairmanship	Sustainability Thrust	8th PED – ASEAN Joint Declaration on Energy Transition and Energy Security
ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy)	To establish the ASEAN Taxonomy Board and develop a “multi-tiered” ASEAN-wide sustainable finance taxonomy.	

Figure 16. The key strategies of the seven (7) Programme Areas of the APAEC Phase II: 2021-2025¹⁰².

PROGRAMME AREAS	PROGRAMME AREAS
ASEAN Power Grid	To expand regional multilateral electricity trading, strengthen grid resilience and modernisation, and promote clean and renewable energy integration.
Trans-ASEAN Gas Pipeline	To optimise the role of clean coal technology in facilitating the transition towards sustainable and lower emission development.
Coal and Clean Coal Technology	To optimise the role of clean coal technology in facilitating the transition towards sustainable and lower emission development.
Energy Efficiency and Conservation	To reduce energy intensity by 32% in 2025 based on 2005 levels and encourage further energy efficiency and conservation efforts, especially in transport and industry sectors.
Renewable Energy	To achieve aspirational target for increasing the component of renewable energy to 23% by 2025 in the ASEAN energy mix, including through increasing the share of RE in installed power capacity to 35% by 2025.
Regional Energy Policy and Planning	To advance energy policy and planning to accelerate the region’s energy transition and resilience.
Civilian Nuclear Energy	To build human resource capabilities on nuclear science and technology for power generation.

Figure 17. Results from the baseline assessment. Note that a full score (1) is typically given when explicit evidence is identified (e.g., explicit policy, target, acknowledgement, responsibility, plentiful details etc). A half score (0.5) is typically awarded for incomplete evidence (e.g., implicit acknowledgement of an issue, policy requirement of some kind, but not mentioned in full or with measurable indicators, deadlines, targets, partial disclosure. A zero score is awarded for lack of evidence (no policy, criteria, metric, classification of project risks etc).

					Score			
					Bank 1	Bank 2	Bank 3	Bank 4
1) PURPOSE - SUSTAINABILITY STRATEGY								
1.1	Does the bank explicitly acknowledge the societal and economic risks and opportunities associated with climate change?	1	1	1	0			
1.2	Has the bank identified energy financing as a key issue for adapting to and mitigating climate change?	1	0.5	0.5	0			
2) PURPOSE - STAKEHOLDER ENGAGEMENT AND PARTICIPATION IN SUSTAINABLE FINANCE INITIATIVES								
2.1	Does the bank engage with regulators, policy makers and civil society to regularly update mandates with the latest sustainable finance topics such as a clean and just energy transition?	0.5	1	0.5	0			
2.2	Does the bank participate in relevant commitment-based sustainable finance initiatives such as Principles for Responsible Banking (PRBs) and Net-Zero Banking Alliance (NZBA) where applicable?	0.5	1	1	0.5			
2.3	Has the bank made or showed willingness to make a commitment to align all financial flows with the Paris Agreement?	1.00	0.5	0.5	0.5			
3) POLICIES - PUBLIC STATEMENTS ON SPECIFIC E&S ISSUES								
3.1	Does the bank have a climate change strategy? (e.g., explaining that climate change is incorporated into investment decision-making)	0.5	0.5	0	0			
3.2	Does the bank have exclusionary principles/policies that cover high risk energy sector investments (fossil fuels, nuclear, hydropower)	0.5	1	0	0			
3.3	Does the bank have a policy prohibiting the financing of new coal-fired power plant projects and/or new capacity/expansion in existing coal-fired power plants?	0.5	1	0	0			
3.4	Does the bank require clients to phase out all thermal coal power generation and distribution by 2030?	0	0	0	0			
3.5	Does the bank have a policy to add new renewable capacity and/or energy efficiency?	0.5	0.5	0.5	0			
3.6	Does the bank have a policy laying out expectations from clients to add new renewable capacity and/or energy efficiency?	0	0.5	0	0			
3.7	Does the bank require clients highly exposed to climate-related risks to develop a mitigation plan and ultimately align their activities with the objectives of the Paris Agreement?	0	0	0	0			

					Score			
					Bank 1	Bank 2	Bank 3	Bank 4
4) POLICIES - PUBLIC STATEMENTS ON SPECIFIC SECTORS								
4.2	Does the bank publicly disclose its energy sector policy?	0	0	0	0			
4.3	Do the bank's E&S policies include minimum requirements or recommendations based on internationally recognized standards for best E&S practices (e.g., IFC Performance Standards)?	0.5	0.5	1	0			
4.4	Does the bank periodically review its E&S and energy policies or stated that last date of review was within the past 2 years?	0.5	0	0.5	0			
5) PROCESSES - ASSESSING E&S RISKS IN CLIENT & TRANSACTION APPROVALS								
5.1	Does the bank screen projects for climate physical and transition risk? (e.g., using EP4 guidance or other)	0.5	0.5	0.5	0			
5.2	Does the bank assess its clients' capacity, commitment, and track record as part of its E&S due diligence process?	0	1	0.5	0			
5.3	Does the bank use standardized frameworks for E&S due diligence (e.g., tools, checklists, questionnaires, external data providers) when reviewing clients or transactions subject to its policies?	1	1	0	0			
5.4	As part of the approval process does the bank classify its clients, projects and transactions based on E&S risk assessment?	1	1	1	0			
5.5	Do the E&S risk assessment outcomes influence transaction and client acceptance decisions?	1	0.5	0.5	0			
6) PEOPLE - RESPONSIBILITIES FOR E&S								
6.1	Is senior management responsible for the implementation of the bank's energy policy, ESG and/or climate change strategy?	1	0.5	0.5	0			
6.2	Do senior management's responsibilities include management of climate change risks and opportunities (as they related to the energy sector) relevant to the bank's activities?	0.5	1	1	0			
6.3	Does the bank describe the roles and responsibilities of the various departments, committees or teams involved in developing and implementing its E&S and energy policies?	1	1	0.5	0			

	Score			
	Bank 1	Bank 2	Bank 3	Bank 4
7) PEOPLE - STAFF E&S TRAINING AND PERFORMANCE EVALUATION				
7.1 Does the bank have a dedicated ESG team to implement E&S policies and procedures?	1	1	1	0
7.2 Does the bank train its staff on E&S policies and implementation processes?	1	1	0.5	0
7.3 Does the bank provide specific training for its senior management, covering sustainability issues?	0.5	0.5	0.5	0
7.4 Are sustainability-related criteria part of the staff appraisal process and/or integrated into their KPIs?	0	0	0	0
7.5 Are sustainability-related criteria part of the senior management appraisal process and/or integrated into their KPIs?	0	0	0	0

8) PRODUCTS - E&S INTEGRATION IN PRODUCTS AND SERVICES				
8.1 Does the bank prohibit financial products or services dedicated to the exploration and development of new fossil fuel assets such as new thermal coal ore extraction or processing facilities?	0.5	0	0	0
8.2 Does the bank prohibit financial products or services that facilitate the expansion of existing thermal coal power generation capacity?	0.5	0	0	0
8.3 Does the bank prohibit offer financial products and services for unconventional oil/gas infrastructure, such as pipelines?	0.5	0	0	0
8.4 Does the bank prohibit the financing of companies with significant (>30%) of revenue deriving from thermal coal exposure?	0.5	0	0	0
8.5 Does the bank impose restrictions on financial products or services to clients involved in physical coal trading?	0.5	0	0	0
8.6 Does the bank have specific product lines and services (e.g., green bonds, sustainability-linked loans, impact financing) that support the mitigation of E&S issues (e.g. climate change and the energy transition)?	1	1	1	0
8.7 Does the bank have specific product lines or advisory services that support sustainability improvements in the energy sector?	1	1	1	1
8.8 Has the bank published frameworks for its sustainable financial products & services (e.g., a green bond framework, which are aligned with credible international standards)?	1	1	1	0

	Score			
	Bank 1	Bank 2	Bank 3	Bank 4
9) Portfolio - E&S risk assessment and mitigation at portfolio level				
9.1 Does the bank periodically review its energy portfolio exposure to E&S risks (e.g., deforestation, biodiversity loss, water scarcity, or human rights violations)?	1	1	0	0
9.2 Does the bank periodically review its energy portfolio exposure to climate-related physical and/or transition risks, using scenario analysis, and disclose the results and methodology used?	0	0	0	0
9.3 Does the bank have a strategy to manage and mitigate climate-related risks across its energy portfolio?	0.5	0	0	0

10) Portfolio - Disclosure of E&S risk exposure and targets				
10.1 Does the bank disclose the composition of its lending portfolios in the power generation (e.g., fossil fuel vs. renewable energy) and upstream energy exploration and production (e.g., conventional vs. unconventional oil & gas, coal) sectors?	0.5	0.5	0	0
10.2 Does the bank disclose the GHG emissions or carbon intensity of its energy portfolio?	0	0.5	0.5	0
10.3 Does the bank set GHG emissions reduction targets? For example, has the bank set science-based targets to align its energy portfolio with the objectives of the Paris Agreement (including net-zero targets with interim defined milestones), and disclosed progress of achieving these targets?	0	0	0	0
10.4 Do the bank produce ESG, climate- or energy-related disclosures (e.g., using TCFD, CDP, GRI, EcoVadis guidance)?	0	0	0	0
10.5 Does the bank set specific targets to reduce fossil fuels exposure (thermal coal, oil & gas, etc.)?	0.5	0	0	0
10.6 Does the bank set a specific target allocated for renewable energy financing (number or portfolio share)?	0.5	0	0	0

BOX 17. WWF’S CRITERIA FOR CREDIBLE NET ZERO COMMITMENTS BY FINANCIAL INSTITUTIONS

WWF has developed five criteria to define the level of credibility, depth, and robustness of net zero commitments by financial institutions¹⁰³. The five criteria aim to provide an initial high-level checklist.

- 1 **Pledge** at the head-of-organization level to reach net zero by 2050 or sooner, in line with global efforts to limit warming to 1.5°C.
- 2 **Plan**. Explain what steps will be taken toward achieving net zero and commit to calibrating all activities (see point 3 below) on science-based no/low overshoot 1.5°C scenarios (e.g., P1 or P2 pathways of the IPCC special report on 1.5°C warming) that do not rely on excessive carbon dioxide removal technologies, and hence require a global reduction in CO2 of approximately 50%¹⁰⁴ by 2030.
- 3 **Proceed**. Take immediate action toward achieving net zero by COP26 – aligned with the scientific requirements set out in point 2 above – including
 - Setting a combination of short-term targets that cover all (i.e., no cherry-picking) of the following levels and activities: (sub-)portfolio level targets, targets for sectors, targets for company engagement and green investments targets;
 - Adopt investment policies for the most material sectors that involve fossil fuels¹⁰⁵, deforestation- and conversion-related sectors (agriculture and forestry), high-carbon transport, high-carbon industry (e.g., cement, steel, chemicals, etc.); and
 - Commit to strive towards achieving impact in the real economy by developing a robust and publicly disclosed engagement strategy¹⁰⁶ towards investee companies, policy makers and service providers as the primary tactic to achieve (sub-)portfolio targets. Such a strategy must include time-bound objectives and escalation steps⁶ in case engagement is not bearing fruit.
- 4 **Publish**. Commit to measure and report progress towards 1.5°C alignment at least annually, including via, to the extent possible, platforms that feed into the UNFCCC Global Climate Action Portal.
- 5 **Contribute** to the development and application of credible portfolio alignment methodologies that drive and measure the financial institution’s contribution to real-world reductions in line with a 1.5°C pathway. This notably implies going beyond measuring ‘financed emissions’, including the need for financial institutions to immediately avoid investments in new high emitting infrastructure¹⁰⁷.

BOX 18. WHAT IS TRANSITION FINANCE?

Transition finance is a concept **where financial services are provided to high carbon-emitting industries** – such as coal-fired power generation, steel, cement, chemical, paper making, aviation and construction – to fund the transition to decarbonisation. Transition finance emerged from the understanding that effective decarbonisation of the entire global economy will require much more than green finance.

The key challenge to transition finance is the lack of private sector financing for decarbonisation activities due to various barriers, including the **lack of a clear definition of transition activities**, which may lead to investor fears that their participation may be seen as “greenwashing,” or claiming to invest in an eco-friendly business that isn’t; lack of disclosure; which may encourage false transition activities; the lack of financial instruments that provide incentives better performance of emission reductions; and the lack of demonstration projects that show successful decarbonisation is achievable in most of the high-emitting sectors.

To address these issues, and to effectively mobilize private investment in transition activities, a **transition finance framework needs to be established**. To make transition finance feasible, this policy framework should consider the following elements: identification of transition activities; disclosure and reporting; financing tools; incentives and mitigating social impact.

- First, there needs to be a credible approach to identifying and labelling transition activities. Any activity supporting a credible transition towards net zero greenhouse gas emissions should be considered as transitional. One way to identify transition activities is to develop a “transition finance taxonomy” in which specific transition activities are presented with descriptions of technical pathways and emission reduction targets;
- Second, good reporting practices are also necessary to help prevent transition activities that convey a false impression or support an unsubstantiated claim on sustainability, where firms may claim to invest in emission reduction activities but are in fact involved in projects that lock-in high carbon emissions– a behaviour;
- Third, a toolbox of financial instruments should be developed to support transition activities. This can include debt instruments such as transition and sustainability-linked loans and bonds. The toolbox can also include equity-related instruments, such as the transition funds launched in Europe. Additionally, existing instruments such as private equity, venture capital funds, buyout funds, and mezzanine financing facilities can also be adapted to facilitate transition activities. De-risking facilities should also be developed to help lower the perceived risks of transition;
- Fourth, fiscal subsidies, tax incentives, and green finance-related incentives such as central bank financing facilities should be considered to support transition finance and enhance the bankability of transition projects; and
- Fifth, socioeconomic costs, such as unemployment, energy shortages, and inflation, need to be accounted for and disclosed during the design of transition activities. To mitigate these costs, assessing employment implications thoroughly and including mitigation measures in transition plans, such as employee training and reskilling programs, are crucial to realize “just transition.” Efforts are also encouraged to integrate such social elements (e.g., employment performance) in the key performance indicator design of sustainability-linked products¹⁰⁸.

103 WWF. 2021. Criteria for credible net zero commitments by financial institutions.

104 The IPCC P1 pathway forecasts a 54% reduction by 2030, and the P2 pathway a 47% reduction.

105 Based on an available carbon budget calculation for an IPCC scenario of 50–66% chance of staying below 1.5°C of global warming, with low or now overshoot and limited carbon dioxide removals, thermal coal should be phased out from the energy system by 2030 in OECD/Europe/Russia and by 2040 globally, oil and gas should be phased out by 2040 in OECD/Europe/Russia and by 2050 globally (IEA Beyond Two Degrees, 2017). Financial institutions should ensure that their own portfolio is free from fossil fuels by the same timelines, by assessing and taking action to guarantee (e.g., engaging and/or reducing exposure and/or divesting) that the companies they invest in and/or provide financial services to have corresponding transition plans in place.

106 An engagement strategy should include: engagement targets; a description of how sectors/companies for engagement were identified; the climate requests towards sectors/companies; the number and sectoral breakdown of engagement conducted with regard to climate change over the last 12 months; a description of the engagement escalation strategy (disclosure and rationale of voting on climate shareholder resolutions, votes against management for climate reason, divestment decisions in case of unsuccessful engagement, etc.)

107 This includes direct investments in infrastructure projects and/or providing financing or services (e.g. project loans, financing through corporate instruments (corporate loans, equity, bonds), insurance underwriting, loan underwriting, etc.) to companies that are investing/planning to invest in high-emitting infrastructure.

ABBREVIATIONS

AETI	Asia Energy Transition Initiative
AMS	ASEAN Members States
APAC	Asia-Pacific
APAEC	ASEAN Plan of Action for Energy Cooperation
ASEAN	Association Of Southeast Asian Nations
ASFI	Asia Sustainable Finance Initiative
BPMB	Bank Pembangunan Malaysia Berhad
CBD	Convention On Biological Diversity
CCCA	(PRB) Collective Commitment to Climate Action
CCS	Carbon Dioxide Capture and Storage
CCUS	Carbon Dioxide Capture, Utilisation and Storage
CDR	Carbon Dioxide Removal
CEFIA	Cleaner Energy Future Initiative for ASEAN
CO2	Carbon Dioxide
COP	Conference Of the Parties
CSP	Solar – Concentrated Solar Power
DBS	Development Bank of Singapore
DFI	Development Financer Institution
E&S	Environment And Social
EP4	Equator Principles Version 4
ESG	Environmental, Social and Governance
ESS	Environment And Social Safeguard
ETM	Energy Transition Mechanism
ETP	Energy Transition Partnership
GBP	Green Bond Principles
GFANZ	Glasgow Financial Alliance for Net Zero
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft Für Internationale Zusammenarbeit
GRI	Global Reporting Initiative
IDFC	International Development Finance Club

IEA	International Energy Agency
IFC	International Finance Corporation
IFC PS	International Finance Corporation Performance Standards
IFI	International Finance Institutions
IIGCC	Institutional Investors Group on Climate Change
IPCC	Intergovernmental Panel on Climate Change
LEDs	Low-Emission Development Strategy
MDB	Multilateral Development Bank
MIND	Measuring Impact on National Development
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
NDFI	National Development Finance Institution
NZAM	Net Zero Asset Managers Initiative
NZBA	Net Zero Banking Alliance
NZE	Net Zero Emissions
PACTA	Paris Agreement Capital Transition Assessment
PCAF	Partnership For Carbon Accounting Financials
PRB	UNEP-FI Principles for Responsible Banking
PV	Solar – Photovoltaics
RE	Renewable Energy
SASB	Sustainability Accounting Standards Board
SBTI	Science Based Targets Initiative
SDGs	Sustainable Development Goals
SLL	Sustainability-Linked Loans
SME	Small Medium Enterprises
SUSBA	Sustainable Banking Assessment
TCFD	Task Force on Climate-Related Financial Disclosures
TFEC	Total Final Energy Consumption
USAID	United States Agency for International Development

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