Make REAL Change

# TCFD Report 2023

## Task Force on Climate-related Financial Disclosures

> "The role of bank is not to lead itself to Net Zero, but rather to empower businesses in their transition towards Net Zero."

# Net Zero

## Net Zero Commitment

Climate change is undeniably one of the most urgent challenges of our generation. As a bank, TMBThanachart Bank has both the responsibility and ability to create financial solutions that accelerate this transition. Thus, we aim to become a driving force in the ongoing endeavor to transition towards a net zero economy by financing, advising, and supporting our clients' transformation journeys.

In 2023, the Board of Directors has approved and oversaw ttb's net zero commitment of our own operations and our portfolio in alignment with Thailand's net zero commitment, simultaneously expediting this crucial journey whenever feasible. Our commitment extends beyond compliance; it's an integral part of our corporate identity and responsibility by ensuring the Bank's pivotal role in fostering a sustainable future.

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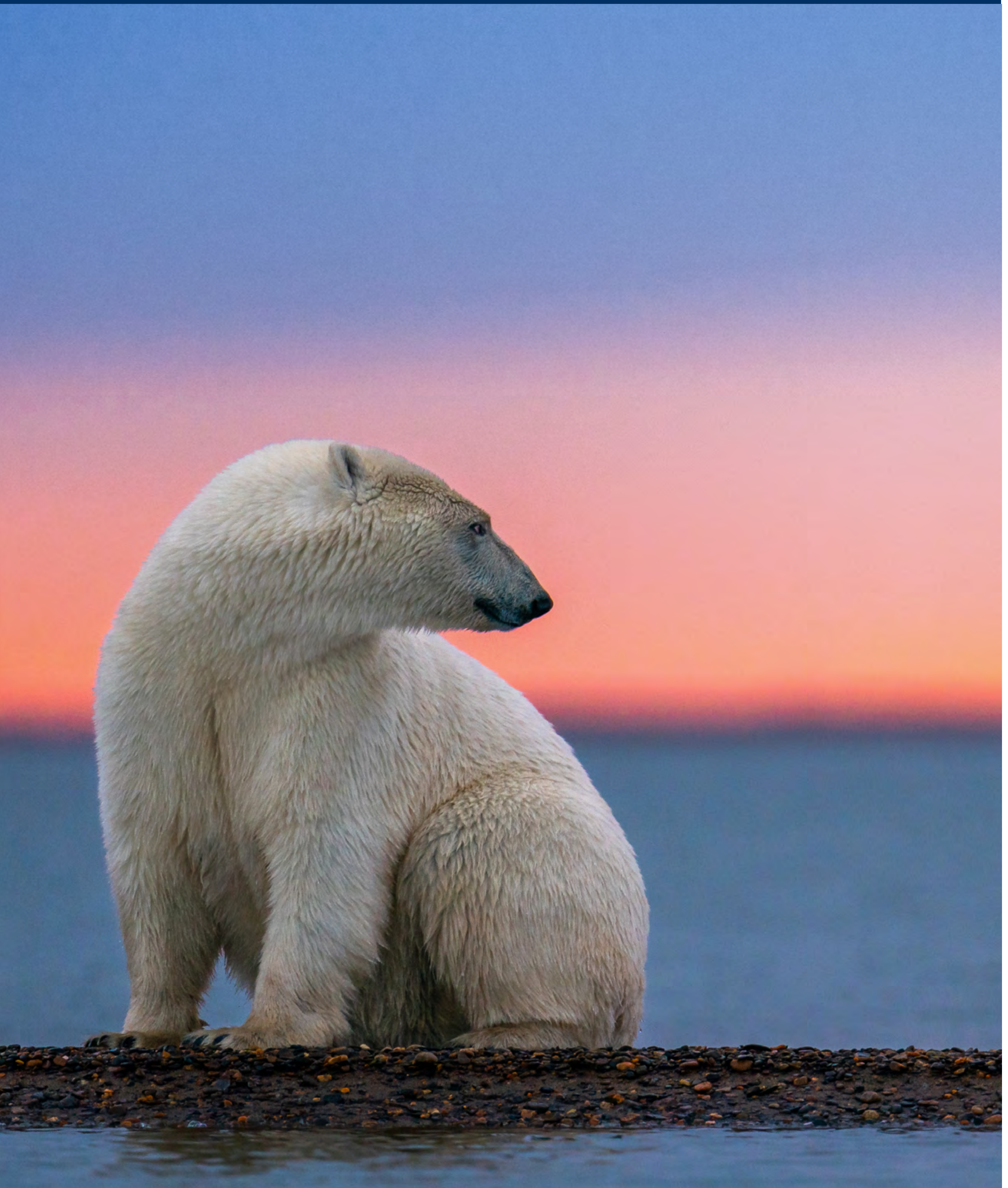
# Introduction



According to the Intergovernmental Panel on Climate Change (IPCC), the average global surface temperature has risen by 1.1°C from the pre-industrial era, based on records from 1850-1900, with this increase observed in the decade from 2011 to 2020.[1]

Greenhouse gas emissions have been on the rise due to a variety of factors, including energy use, land use changes, lifestyle choices, and consumption patterns. The human-induced climate change could lead to unparalleled effects on biodiversity, ecosystems, and various aspects of human well-being, including health, livelihoods, food and water supply, security, and economic prosperity. The negative effects of climate change caused by human activities are expected to become increasingly severe.

Thailand is considered to be highly vulnerable to the impacts of climate change. The country has experienced a significant rise in temperatures and has been identified as one of the regions that will be disproportionately affected by the consequences of climate change. Flooding stands as the most significant natural disaster in terms of its economic cost and impact on people's lives. The country ranks among the top ten globally for flood-related damages. Other significant natural threats include droughts and cyclones, and these events could become more severe with the changing climate.[2]

Undeniably, climate change is one of the most urgent challenges of our generation. As a domestic systemically important bank (D-SIB), ttb has both a responsibility and the ability to create financial solutions that accelerate the transition. Thus, we aim to become a driving force in the ongoing endeavor to transition towards a net zero economy by financing the transition, advising, and empowering our clients to achieve their transformation journeys.

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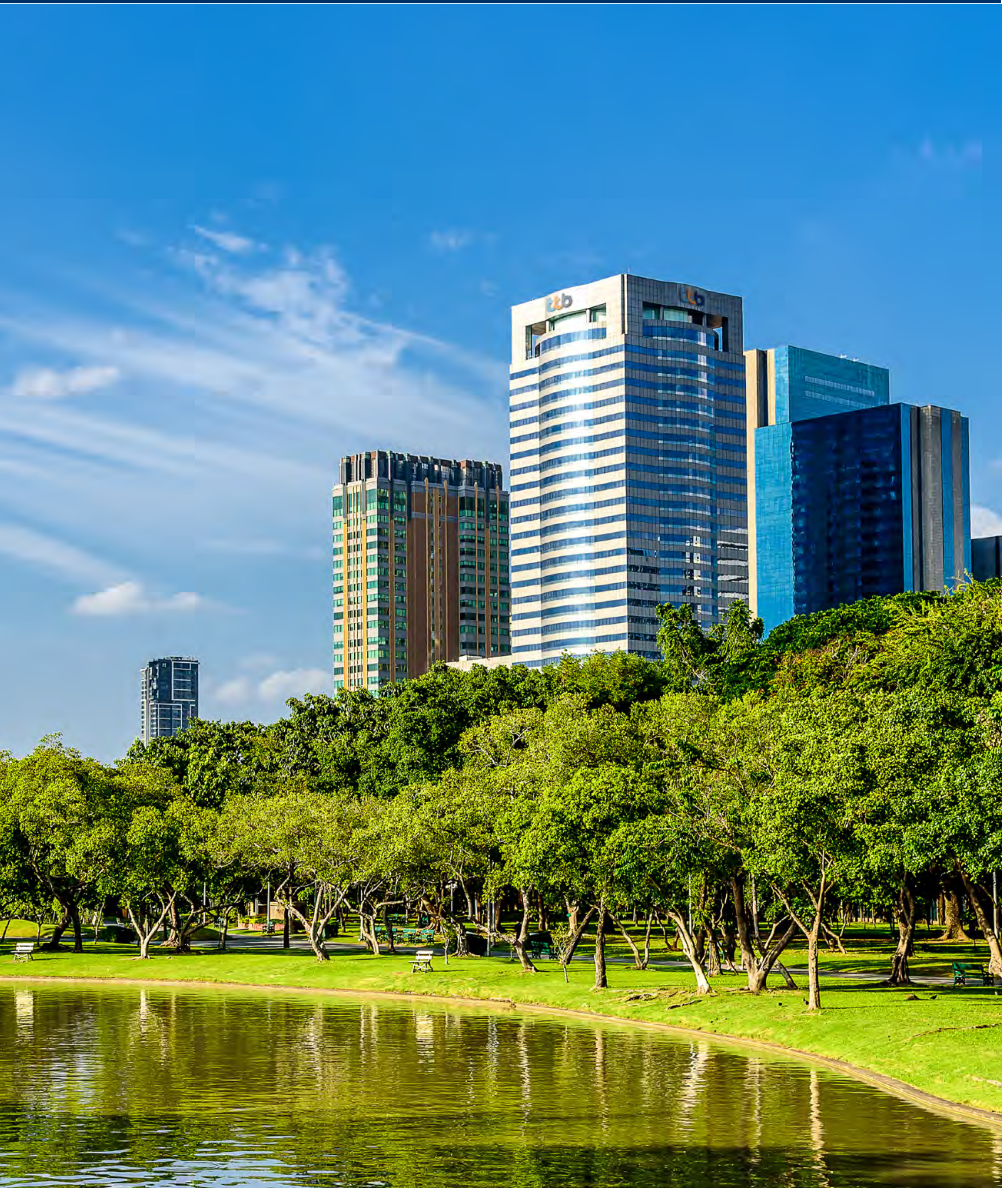
[1] IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J.Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR69789291691647.001

[2] Climate Risk Country Profile: Thailand (2021): The World Bank Group and the Asian Development Bank

# Governance



The Bank's Board of Directors (BoD) holds the highest responsibility for overseeing and managing climate-related risks and opportunities. This commitment includes ensuring the seamless integration of climate risk management, meticulously aligned with our corporate strategy. The governance structure is designed to uphold the highest standards of environmental stewardship and social responsibility, reflecting a profound understanding of the essential balance between financial stability and sustainability. In 2023, climate issues have been on the agenda for the BoD on quarterly basis, dedicating discussions to reaffirm this focus.

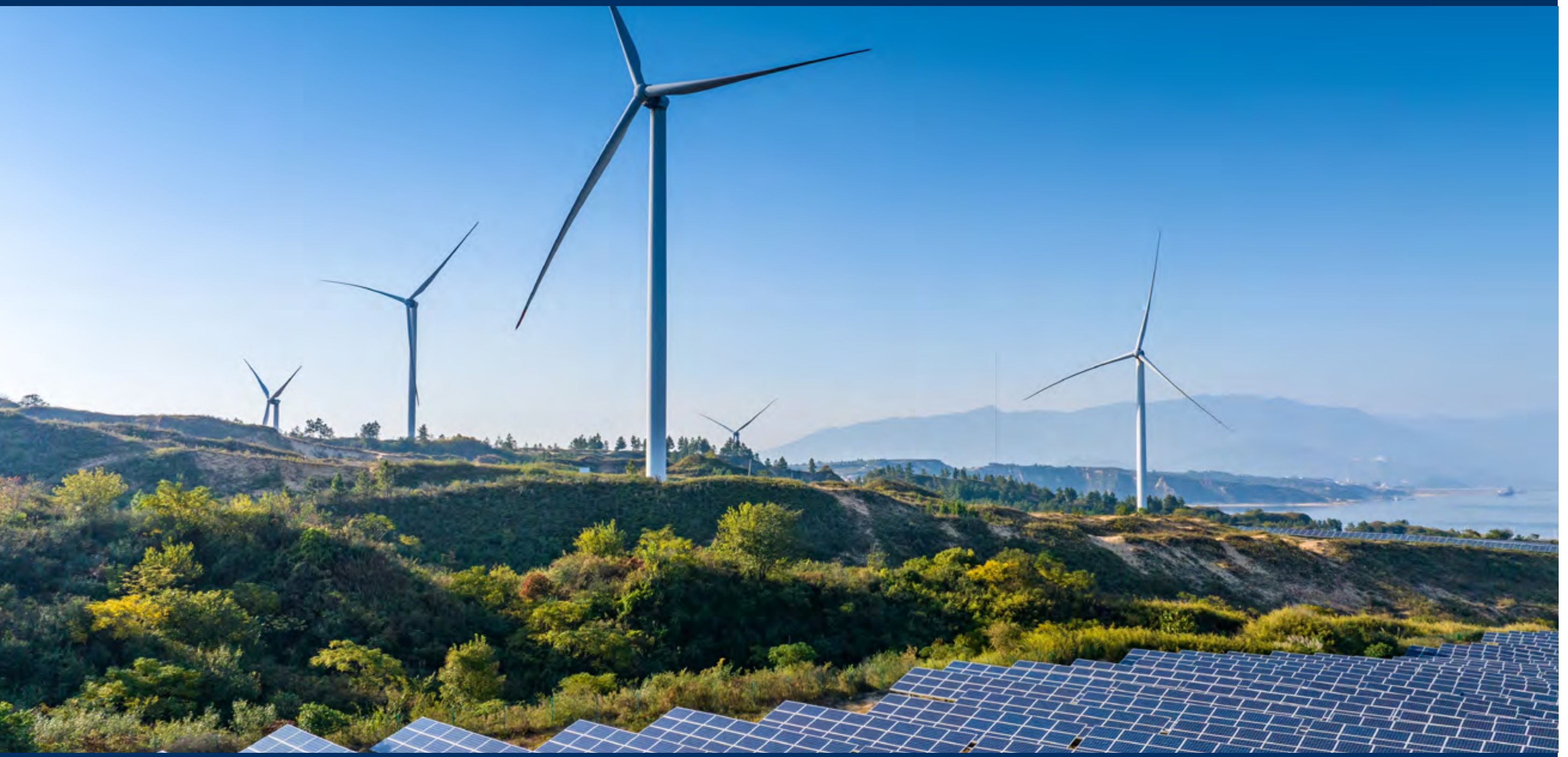
Central to this governance structure is the delegation of authority to the Risk Oversight Committee (ROC). The ROC is entrusted with the critical task of overseeing the management of climate-related risks, the practice of responsible lending, and the evaluation of environmental and social risks. These activities underscore the Bank's dedication to cultivating a sustainable and ethically sound operational environment. Additionally, the ROC is responsible for rigorously reviewing and endorsing strategic directions and key policies, further strengthening our commitment to sustainable finance. Climate-related risk indicators are quarterly reported to the ROC to manage and mitigate impacts from climate-related risks on the long-term strategic direction and financial performance of the Bank.

Furthermore, the Chief Risk Officer (CRO) is tasked with the responsibilities of assessment and management of climate-related risks, ensuring that our strategies and actions remain agile and effective. This includes monitoring the progress of our implementation plans and regularly reporting on climate risk-related issues, thereby providing a more focused and granular view of our risk management efforts.

Risk management functions are dedicated to effectively managing climate-related risks, which include climate risk identification and assessment, climate scenarios, stress testing, monitoring, and reporting. On the other hand, the Chief Commercial Banking Officer is tasked with the responsibilities of management of climate-related opportunities, ensuring the execution of sustainability-linked transactions and client engagement and advisory.

Moreover, the Bank's corporate key performance indicators include climate-related risks and opportunities to managing, monitoring, and improving the practices and performance. The corporate KPIs serve as the basis for determining the variable copensation for the CEO, executives, and all employees of the Bank. This governance structure reflects our unwavering commitment to climate-related risk management and opportunities, demonstrating our dedication to sustainable banking that align with global standards and respond proactively to the evolving challenges of climate and environmental change. Through this approach, we are poised to contribute meaningfully to the broader dialogue and actions surrounding sustainable finance and climate change mitigation.

# Strategy



The Bank is committed to achieving net zero emissions within our own operations and aligning our portfolio with Thailand's net zero commitment, all the while expediting this crucial journey whenever feasible. In doing so, we ground our approach and actions in science and feasible technologies to ensure realistic and tangible results. With this commitment, we adopt the global GHG accounting and reporting standard established by the Partnership for Carbon Accounting Financials (PCAF) to assess our greenhouse gas emissions and align our goals with the Paris Agreement, aiming to limit global warming to 1.5 degrees Celsius. We will also adhere the financial sector's science-based target guidance from the Science Based Targets Initiative (SBTi).

**Vision**

To become the recommended bank of choice by our customers

**Mission**

To improve our customers' life-long Financial Well-being

**Climate Commitment**

The Bank is committed to achieve net zero emissions in line with thailand's commitment by empowering customers towards net zero economy

**Strategic Directions**

| Reducing GHG emissions in own operations | Managing environmental and climate-related risk | Financing and advising clients' transition to net zero |
|---|---|---|
| Responsibly manage and reduce our enery consumption by continuously improving energy efficiency and investing in renewable energy where feasible. | Enchancing our risk framework policies and processes. Our goal is to identify, assess, and mitigate climate-related risks witin our operations and portfolio, reducing exposure to high-risk sectors and minimizing their financial impacts. | Finance, advise, and support clients in their transformation journey towards sustainablillity and fund signIficant growth of green assests in our portfolio through sustainable finance solutions. |

**Key Enablers**

Capacity Building | Process & System | Data collection | Incentive

# Our Strategic Directions on Climate Actions

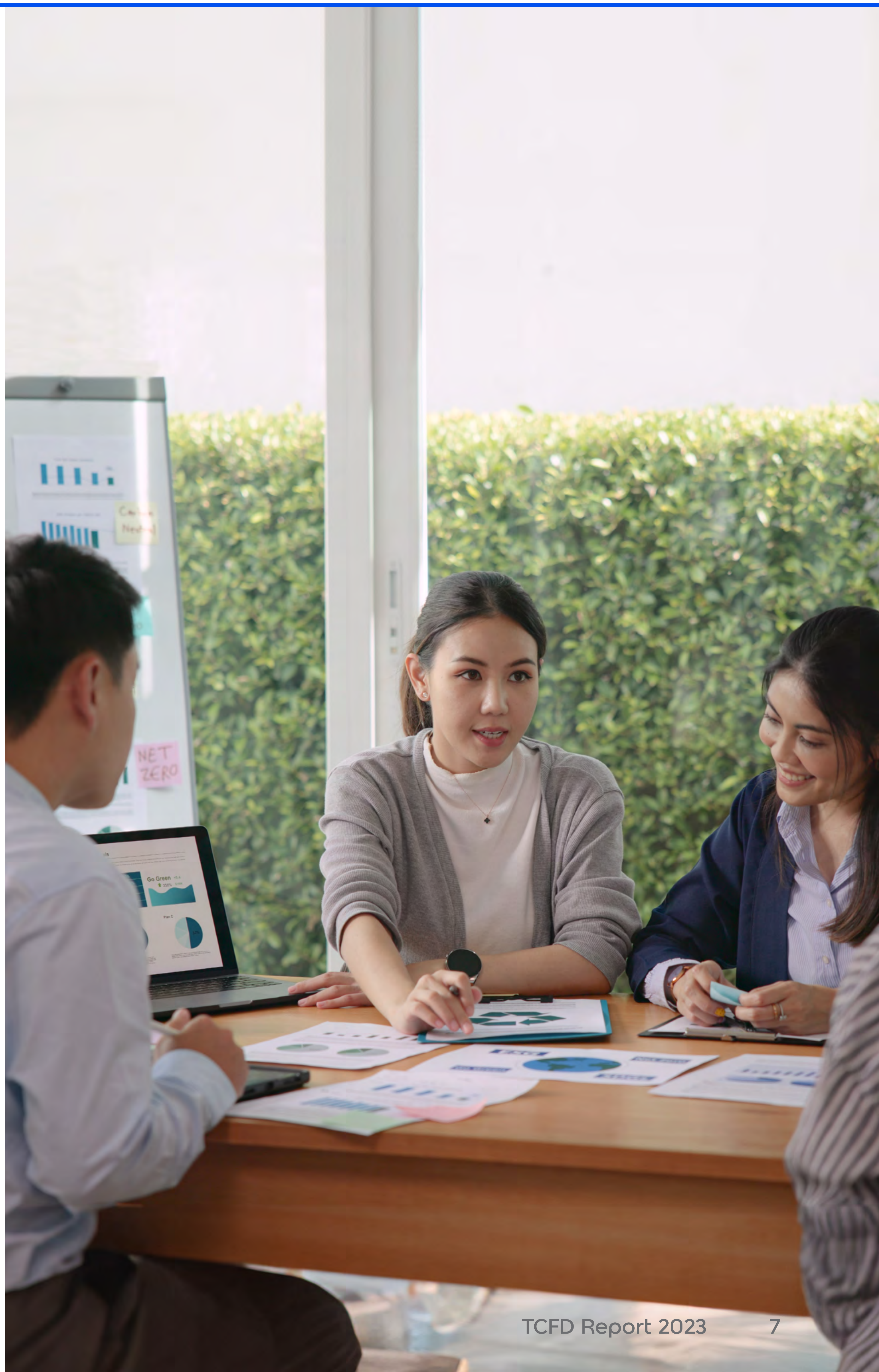
## Reducing Own GHG Emissions

Our goal is to contribute actively to the essential shift towards a net zero society, starting with our own business operation. This involves managing our buildings, branches, data centers, and corporate travel with the standards of a future net zero economy. Managing our own environmental footprints with a wide range of initiatives and environmental saving programs to create awareness of environmental issues and to encourage all employees to help reduce their internal consumption of energy and resources.

## Empowering Customers to Transition to Net Zero Economy

We are committed to significantly expanding our green asset portfolio, which will help accelerate the net zero economy through sustainable financing solutions and client engagement. Additionally, we continue to innovate new sustainable products and services to assist individuals and companies in reducing their carbon footprint and transitioning to sustainable business models. The following are key highlights of our sustainable financing solutions:

- Introduced green and sustainability-linked loan issued since 2018
- Became the first Thai commercial bank to issue green bond in 2018, the second green bond was issued in 2022, and Thailand's first blue bond in 2022
- Established the ttb Green and Blue Bond Framework with Second Party Opinion in 2022
- Hosted ESG seminars in 2023 for corporate and SME clients



# Aligning Our Lending Portfolio with Thailand's Commitment

In order to limit the impact of climate change and remain on a 1.5°C pathway requires moving away from economic activities with high GHG emissions. With our decarbonization journey, the Bank focuses on the sectors in our portfolio that are responsible for most greenhouse gas emissions and has announced the following commitment. Our commitment to reducing the impact of unconventional oil and gas, coal mining, and coal power generation exceeds the expectations set by the IPCC's recommended phase-out period for coal by 2030 and for oil and gas by 2050.

No longer finance transaction or investment related to oil sand (also called tar sand).

No longer finance transaction or investment related to nuclear energy.

No longer finance transaction or investment related to Arctic Oil & Gas.

No longer finance transaction or investment related to Shale Oil & Gas.

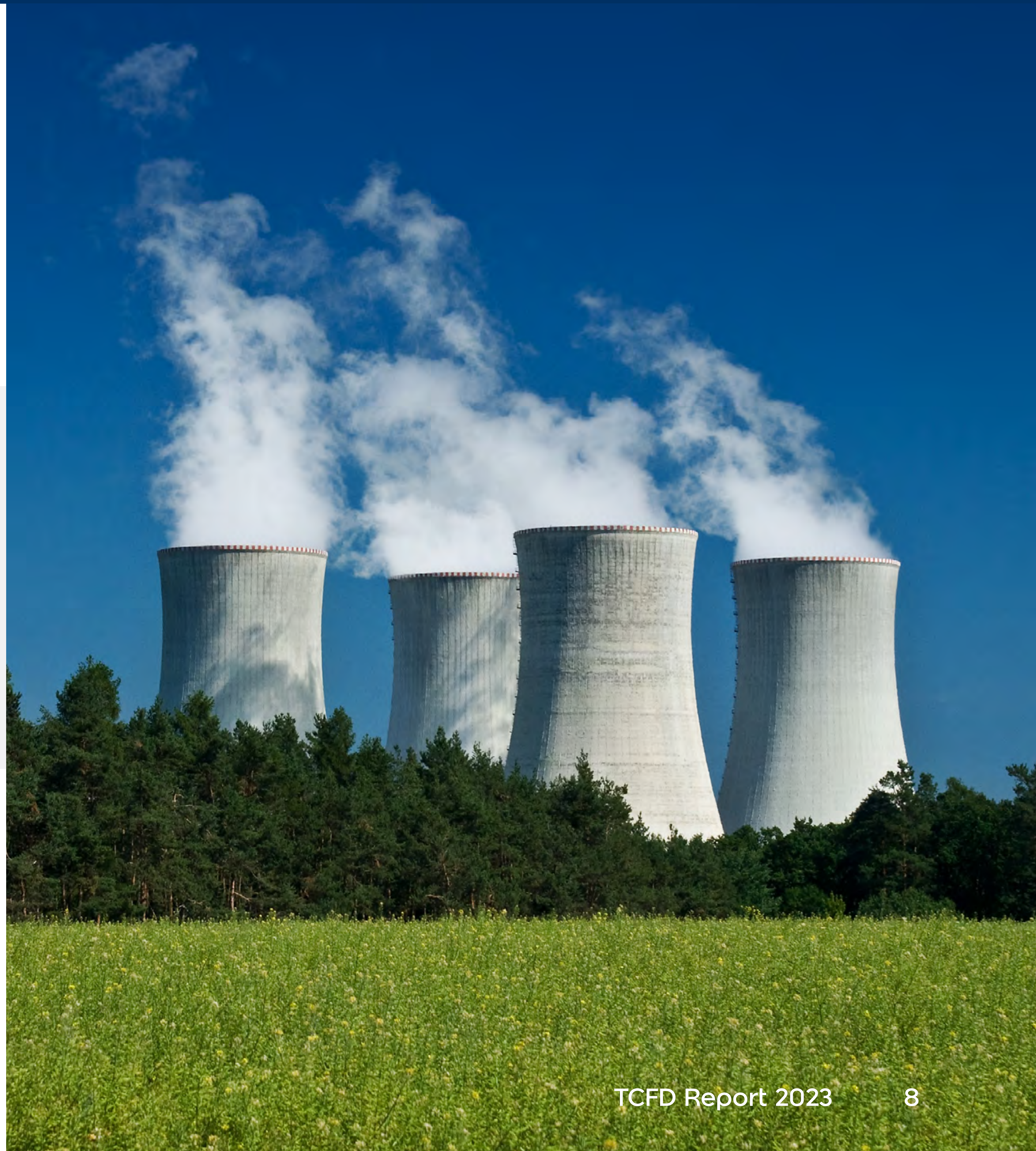
No longer finance transaction or investment related to Ultra-Deep-Water (UDW) Oil & Gas.

No longer finance activities or investment related to coal mining and exploration, applicable to the coal mining entity, while existing financings are to be run down to zero by 2028.

No longer finance or investment any new coal-fired power plant projects while existing financings are to be run down to zero by 2028.

No longer finance or investment tobacco upstream activities while existing financings are to be run down to zero by 2023.

Restrict the total portfolio to 5% in upstream oil and gas activities.



# Climate-related Risks and Opportunities

In 2023, there was significant momentum in ESG regulations, both domestically and internationally. On the domestic front, Thailand implemented key policies such as the Alternative Energy Development Plan, Transportation Development Framework, the National Electric Vehicle Policy Committee, and Thailand's Taxonomy. Internationally, the EU's Carbon Border Adjustment Mechanism and the United States' Clean Competition Act were noteworthy developments. These regulatory changes pose short- to medium-term (5-10 years) transition risks as well as opportunities. In terms of physical risk, Thailand has faced significant consequences from climate-induced events, such as air pollution (notably PM 2.5), rising temperatures, and increasingly severe droughts and floods. These physical risks impact not only the Bank operations but also those of our customers, leading to financial losses across assets, operations, and the loan portfolio. Potential impacts, for example, include business disruptions, elevated costs for prevention and recovery from natural disasters, increased R&D investments, and ultimately, jeopardized overall financial stability. Physical risk poses a medium to long-term (over 10 years) challenge to the Bank.

Moreover, the Bank acknowledges the critical need to transition away from coal-fired power plants, recognizing the significant climate-related risks associated with continued investment in such energy sources. Our decision to stop financing coal projects is driven by multiple factors: the imperative to mitigate climate change impacts, the goal to align with environmental objectives, the need to adapt to the evolving energy market dynamics, compliance with increasingly stringent regulatory mandates, and the aim to meet societal expectations for sustainable and responsible banking practices.

Concurrently, regulations governing the development and operation of coal-fired power plants have tightened, imposing more stringent requirements and penalties. In response to these risks, the Bank has set a target to cease project financing for coal-fired power plants by 2028. If the Bank did not take any action, the estimated financial implications would be THB 3,658 mn within a 5-year timeframe. However, with our proactive steps to phase out such financing, we anticipate no annual costs associated with this transition.

In terms of physical risks, the sugarcane industry is directly impacted by climate-induced events, including drought, flooding, and typhoons. To aid our clients in both mitigating and adapting to these climate change impacts, we have introduced a sustainability-linked loan. This innovative scheme ties the interest rate to the client's success in adopting 'green harvesting' methods, such as non-burn sugarcane harvesting, a practice crucial for reducing greenhouse gas emissions and pollution that negatively affect public health and safety. To facilitate these sustainable practices, the program incurs an annual cost of THB 440,000. Without such precautionary actions, the Bank could face estimated financial losses of THB 250 mn over the next decade due to the compounded effects of climate risks.

As a D-SIB in Thailand, ttb is committed to empowering customers in their transition towards a net-zero future while staying competitive amid evolving climate-related challenges. To this end, our commercial business has strategized to not only offer sustainable financing but also to provide corporate and SME clients with knowledge and expertise on the business impacts of climate change. We provide ESG seminars that include sector-specific insights from experts in the field, tailored for our clients. Armed with this knowledge and our sustainable finance products, our clients can navigate various financial risks, such as increased raw material costs, shifts in consumer demand, and the expenses associated with carbon taxes.

# Risk Management

## Environmental and Climate (E&C)-related risks as part of the Bank's Risk Culture and Risk Management Framework

The Bank recognizes that climate change is one of the most important environmental issues. E&C-related risks may directly and indirectly affect the household sector, business sector, operations of financial institutions and overall economic and financial stability especially during the transition period.

Although E&C-related risks may not pose immediate impact to the bank, the Bank has established "Environmental and Social Responsibility (ESR) Policy" with the long-term sustainability in mind. The ESR policy provides a framework for assessing the environmental and social (E&S) risks of the clients and/or transactions prior to carrying out financial activities with them. Our ESR policy has been embedded into the normal business operations to ensure responsible lending by managing environmental and social risks.

## Three lines of defense

As climate-related risk management is part of under the Bank's normal business operations, it then falls under the Bank's existing overarching three lines of defense structure.

| 1st Line of Defense | 2nd Line of Defense | 3rd Line of Defense |
|---|---|---|
| Business Units | Risk Management Units | Internal Audit |
| In this structure, the employees in the Business Units (the 1st line of defense) identify risks, consider the impact, report if necessary, and apply appropriate risk mitigation strategies. Specific to the climate-related risk, Business Units follow the related policies and guidelines to evaluate E&C risk of the clients and transactions, and take such risk into consideration during credit decisioning and or/deal structuring. | Risk Management units under the Chief Risk Officer perform the 2nd line of defense duties of formulating risk strategy and appetite, policies, guidelines, standards, and appropriate risk structures, as well as overseeing, monitoring, and actively challenging the risk–return trade-off in the Business units. Risk management units adopted E&C risk into their business operations. For example, Risk Policy team (jointly with BU and other relevant functions) developed ESR policy, underwriters take E&C risk into consideration during credit decisioning, and E&C related regulations are also part of Compliance function's scope of work. | Internal audit as the 3rd line of defense provides independent and objective assurance on the effectiveness of controls and recommends improvements to the governance, risk & control framework. |

## Credit Risk

Credit risk is the risk of potential loss as a result of borrowers and/or counterparties failing to meet their financial and contractual obligations in accordance with agreed terms. It arises primarily from granting loans and undertaking contingent liabilities, and also from certain off-balance sheet products such as credit derivatives. From E&C aspect, higher probability of default can occur from clients that exposed to severe impact from either physical risks and transition risks – which they might not be able to generate adequate income to repay financial institutions [Ref: Bank of Thailand].

### Managing E&C-related risks in credit portfolio

Our "Environmental and Social Responsibility (ESR) Policy", which governs the Bank in handling ESR aspect, is applicable to both credit and investment portfolios, ranging from large corporate clients to retail (Secured and Unsecured) and AL (Retail) clients.

The Policy indicates the "Exclusion List" (applicable to non-retail clients), a list of businesses in which the Bank must not get involved at all due to the ESR concerns. Our Exclusion List serves as a guide, steering us away from specific loan types that could pose potential harm to the environment

Carbon-intensive businesses which are part of the exclusion list include:

1. Energy
   a. Transactions related to oil sand, nuclear energy, arctic oil & gas, shale oil & gas, ultra-deep-water oil & gas.
   b. Coal-fired power plants project.
2. Coal mining
   a. Activities related to coal mining and exploration, applicable to the coal mining entity.

In addition to the exclusion list, the Bank also has policy statement on "Environmental and Social Concerns on Specific Industries" which applies for transactions / engagements that may have an impact on the environment. This helps us be extra careful in those situations. Moreover, we reviewed our credit policies and guidelines and incorporate E&C-related risk elements to the relevant documents. The ESR policy and other credit policies and guidelines are subject to be an annual review or as and when there are material changes in the regulatory requirements, business strategy and operations, or risk factors pertaining to the policy, to ensure they stay relevant.

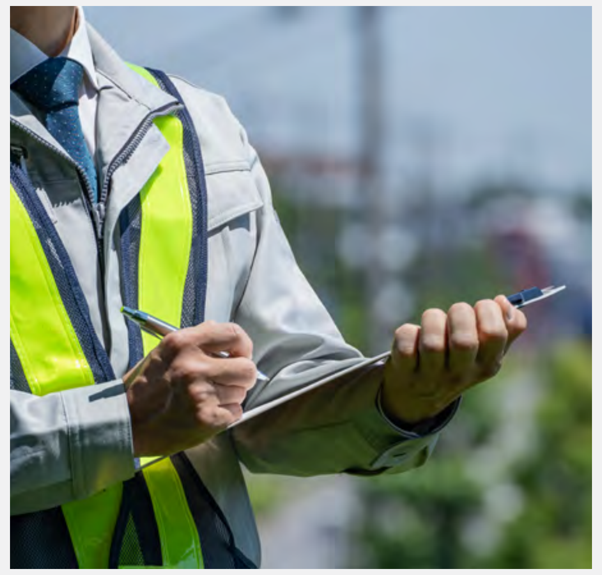
## E&C-related Risk in key risk management processes

### Risk Identification and Assessment

As part of normal business operation, the Bank conducts due diligence to assess the client's Environmental & Social (E&S) risks associated with their business activities and/or transactions to which the Bank provides financing/services by using the following tools:

**1. General Questionnaires** are used to assess E&S risks in general, depending on the nature of the transaction. Upon the completion of General Questionnaires, a risk rating which indicates E&S risk profile will be generated. Clients and/or transactions of different E&S risk ratings are subject to different E&S consideration and/or treatment. For example, for High and Medium Risk transactions, the time bound action plan and relevant supporting documents and covenants are to be considered, and the transactions are to be escalated to the higher approval authority.

**2. Specific Questionnaires** are used to assess E&S risks on specific industries (Industries for which the Bank has concerns related to carbon-intensive operations). The result of Specific Questionnaire is part of decision making and determination of approval authority.



In sum, the questionnaires help us understand how climate factors might affect businesses seeking our financial support. By looking into different aspects of a client's operations, it gives us insights into how well they can handle E&C-related challenges, and allow us to steer our portfolio / actions towards our environmental goal.

### Risk Control and Mitigation

The Bank continuously controls and monitors the client's E&S performance by assessing existing and emerging E&S risks associated with the client's operations during the transaction to ensure the client's ongoing compliance with the E&S clauses stipulated in the legal agreement as part of credit review (at least once a year, or earlier when the Bank is aware of any material changes impacting the borrower). E&S covenants are monitored and reported as part of the normal business operations.

### Risk Monitoring, Reporting, and Communication

At portfolio level, ESR and climate-related risk (on credit portfolio) indicators are part of the risk indicators which are regularly monitored and reported to the Risk Oversight Committee and the Board of Directors through the periodic risk dashboard.

### Supporting our clients to develop sustainable business model

Whilst having an exclusion list and a process for transactions/ engagements that may have negative impact on the environment in place, the Bank plays a proactive role in supporting clients who are looking to develop sustainable business models. The Bank offers ESG lending to customers in the form of green loans that promote financing to solar energy, biomass energy and waste management projects, as well as sustainability-linked loans with interest rates tied to the borrower's sustainability performance, which is measured based on social or environmental criteria. Predetermined sustainability-related goals are set and companies that achieve these goals earn benefits such as reduced interest rates.

## Operational Risk

The Bank has established its Business Continuity Management (BCM) Policies and Standards which covers continuity risks from environmental change and climate change to provide guidance and standards for all units to develop a Business Continuity Plan. The Business Continuity Management is set up to oversee the implementation of BCM Policies and Standards, monitor and lead the co-ordination of group-wide BCP initiatives to raise the overall BCP / DRP readiness of The Bank.

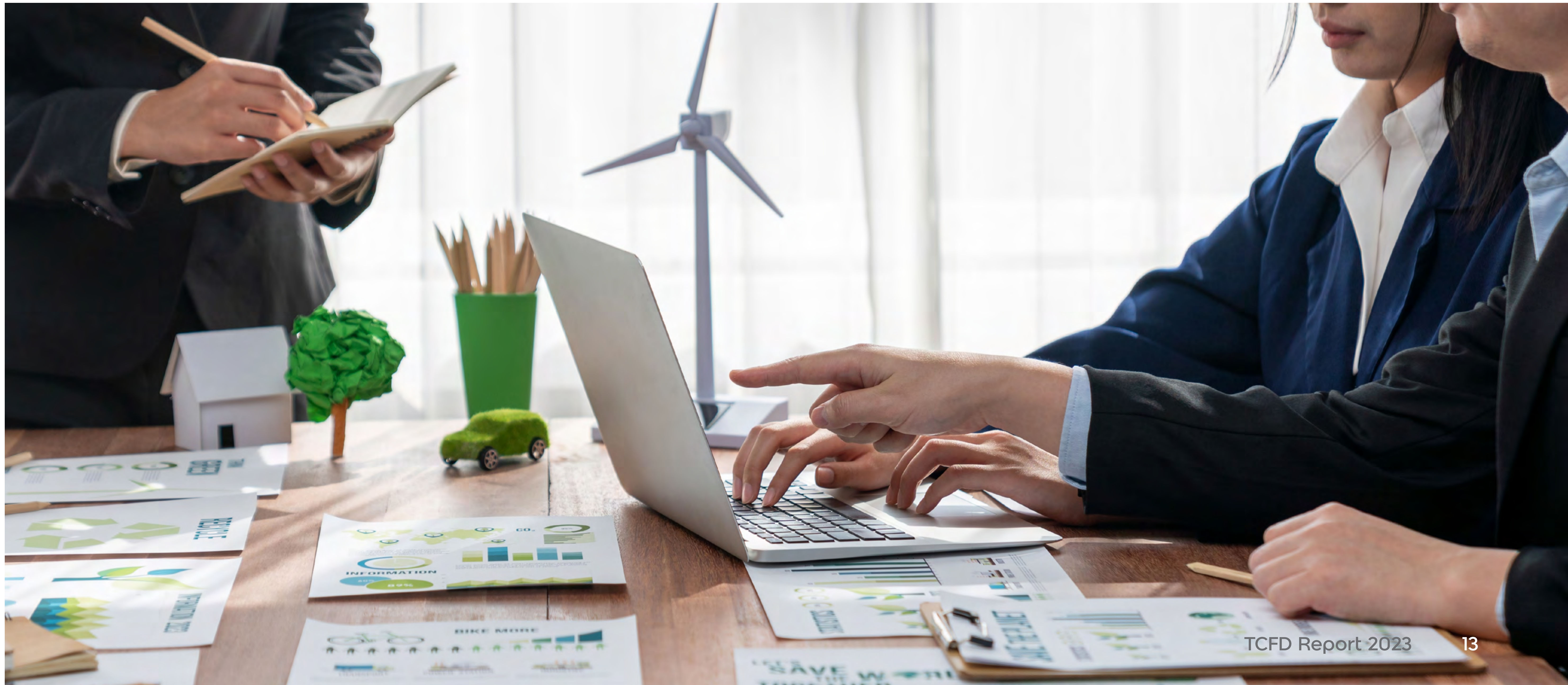
## Strategic Risk

The Bank is aware of the possible strategic risk from both internal factors and external business environments that could possibly affect strategic execution and operating outcome.

In order to manage the strategic risk, The Bank has set performance tracking process and strategic risk control. Moreover, regular meetings of the management team and business units are held to review performance results together with remedial planning in case of target shortfalls. A strategic risk dashboard has been developed and is updated regularly to keep management informed and aware of the changing strategic risk status. A self-assessment of strategic risk is also regularly evaluated by management.

With risks arising from the Environmental, Social, and Governance (ESG), The Bank has incorporated those risks to be an important factor to develop strategic direction and strategic risk assessment; this is to ensure The Bank can not only meet changing expectations from customers, employees, shareholders, and regulators but also adopt ESG factor as a catalyze to change the way to operate business and create positive impact to social and environment. The Bank's ESG risk factors and related policies have been updated to ensure alignment with regulatory requirements and international standards.

In all, The Bank strongly determined to maintain a high level of strategic risk management. Starting from the process of strategic planning, organization restructuring, staffing and project implementation as well as performance monitoring, all must be in line with The Bank's key strategies. In addition, the strategic plan itself is reviewed regularly to ensure it stays relevant with the changing business environment.



# Metrics and Targets

Recognizing our significant role in the financial ecosystem, we have established metrics and targets aimed at reducing both our own carbon footprint and the emissions financed through our lending and investment activities. Our approach involves a rigorous assessment of our internal operations to identify areas where we can reduce energy consumption and greenhouse gas emissions, implementing sustainable pratices from our office space to our digital infrastructure. Concurrently, we dedicatedly support environmentally sustainable projects and businesses, while actively moving away from high GHG emissions business activities. By setting ambitious yet achievable targets, we are not only aligning our operations with international climate goals but also pioneering a path for the financial industry to contribute positively to the global fight against climate change.

| Objective | Boundary | Metrics | Targets |
|---|---|---|---|
| Taking responsibility for reducing our own emissions to align our business operations with the net zero commitment | Operations | Scope 1 and 2 GHG emission reduction | • **15%** reduction by 2026 from a baseline year of 2019, while annual reduction target is 12% from the same baseline year |
| Taking responsibility for reducing our financed emissions to align our portfolio with the net zero commitment | Financed emissions | Scope 3 GHG emission reduction | • Drawing down existing financing of coal mining, exploration, and power generation by 2028<br>• **5%** restriction of upstream oil and gas activities the total portfolio<br>• Exiting all existing finance of upstream tobacco by 2023 |
| Empowering customers to transition towards sustainable business and stay competitive with new ESG regulations | Products and services | Sustainable finance | • THB **9,000** mn has been allocated to ESG financing in 2023, with an increased allocation of THB **20,000** mn planned for 2024 |

# 2023 Climate Performance

| Our Targets | 2023 Progress Against Targets |
|---|---|
| **12% reduction** reduction of GHG emissions Scope 1&2 compared to the 2019 baseline (HQ only) | • The Bank **achieved a 21% reduction** in Scope 1 and 2 GHG emissions compared to the 2019 baseline (HQ only) |
| **Drawing down** existing financing of coal mining, exploration, and power generation by 2028 | • Exposure in coal mining and exploration **decreased by 35% in 2023,** compared to the 2021 baseline<br>• Exposure in coal-fired power plants **decreased by 48% in 2023,** compared to the 2021 baseline |
| **5% restriction** of upstream oil and gas activities the total portfolio | • The exposure to upstream oil and gas activities is still **under 5% of total portfolio** |
| THB **9,000** mn for ESG financing | • The Bank fully allocated THB **9,000** mn to support clients in their transition towards more sustainable practices In fact, the amount exceeded the set target and totaled THB **17,829** mn |

## The Bank's Own Footprints

The Bank recognizes the importance of transparency and accountability in addressing its environmental impact. By actively monitoring and reducing emissions, the Bank demonstrates leadership in corporate sustainability and environmental responsibility and take accountability of its own emissions.

| Scope | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|
| Scope 1 GHG emissions ($tCO_2e$) | 971 | 286 | 3,666 | **3,042** |
| Scope 2 GHG emissions ($tCO_2e$) | 15,409 | 22,306 | 22,018 | **21,600** |
| Scope 3 GHG emissions ($tCO_2e$) | 492 | 209 | 327 | **8,016** |
| Overall total emissions ($tCO_2e$) | 16,872 | 22,801 | 26,001 | **32,658** |

Remark:

- The boundary of reporting covers the head office, other buildings, branches, and subsidiaries not bcated in the head office.
- The boundary of scope 3 emissions in 2023 includes activities: paper consumption, waste generated in operations, business travel by read operated by external party, upstream leased assets, downstream transportation of armored car, and LPG usage by lessee. The Scope 3 in this context excludes Category 15, with data for this category presented in the section 'The Bank's Financed Emissions.'
- The boundary of reporting has been continuously expanding each year to incorporate data from both operational and non-operational controls, allowing for a more accurate account of resource consumption and emissions.
- The environmental data has been partially assured by a third party. For more information on the assurance statement, please visit ttb 2023 Sustainability Report.

## The Bank's Financed Emissions

In our efforts to monitor our climate impact, we measure the absolute amount of GHG emissions associated with our portfolio, using the methodology of the Partnership for Carbon Accounting Financials (PCAF) standard. The scope includes financed absolute emissions and emission intensity of the energy sector in Thailand, encompassing coal, power generation, and oil and gas. These accounted for 10.70% of the outstanding commercial portfolio.

### Scope 3 GHG Emissions Category 15

| Sectors | Financed absolute emission | Financed emission intensity | Weighted data of quality score[3] |
|---|---|---|---|
| Coal | 60,636.0 | - | 4.00 |
| Power generation | 1,404,262.9 | - | 3.04 |
| Oil and gas | 1,350.9 | - | 1.03 |
| **Total** | **1,466,250** | **0.08** | **-** |

Remark:

- GRI 305-3: Other indirect GHG emissions (Category 15).
- The measurement and calculation were conducted subject to limited data availability on a best-effort basis.
- The data quality scores were calculated in accordance with PCAF's calculation standard and reports of financed emissions (Highest quality = 1, Lowest quality = 5).

ttb | Make **REAL** Change

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