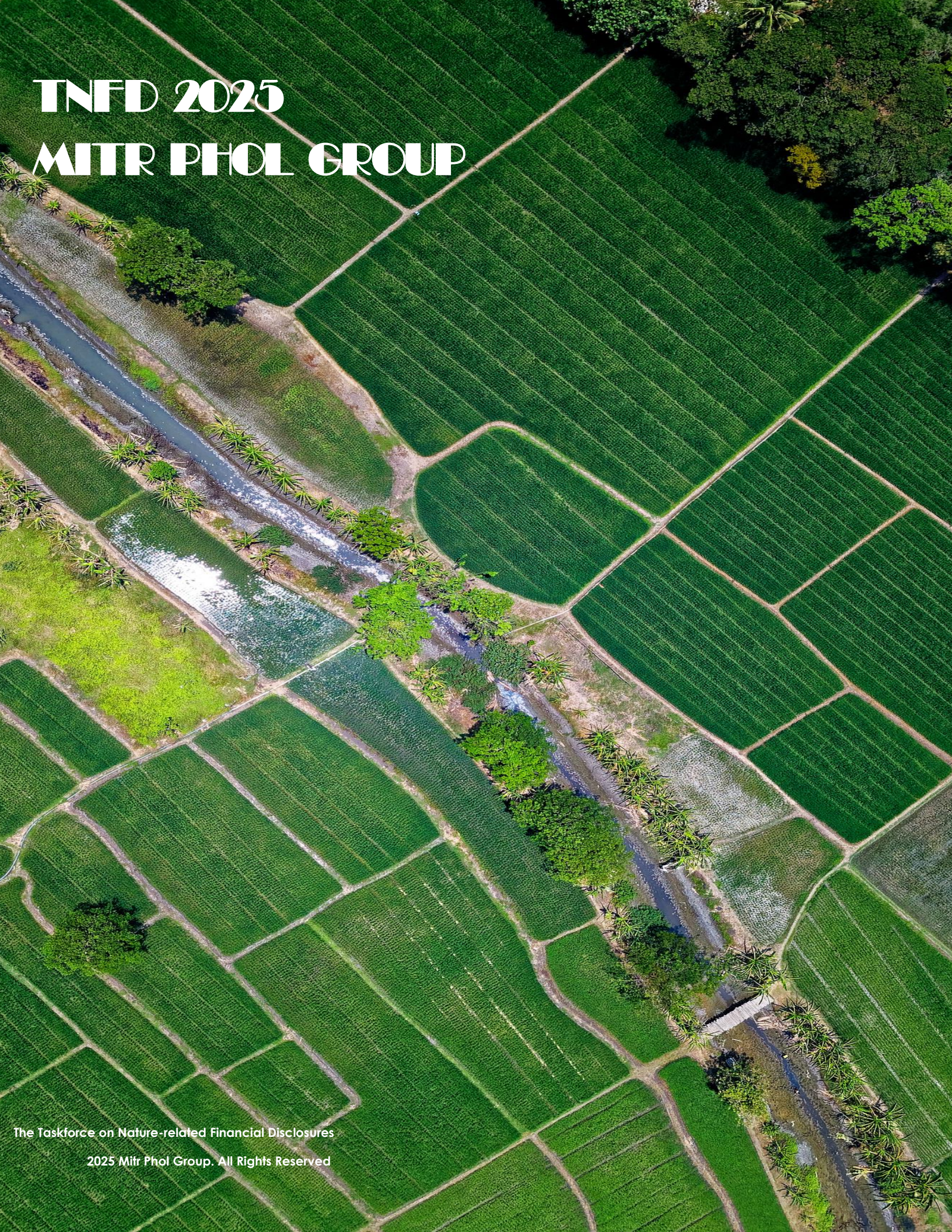
TNFD 2025
MITR PHOL GROUP



The Taskforce on Nature-related Financial Disclosures

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Message from the Chairman of Mitr Phol

"Grow Together" *has consistently guided Mitr Phol Group's approach to business operations. For over seven decades, we have remained committed to advancing Thailand's agricultural sector. This commitment is driven by the conviction that a sustainable future for both Thailand and the global community must be built upon collaboration across all sectors of the supply chain, including government, private enterprises, farmers, and civil society.*

Mitr Phol Group recognizes its responsibility to all stakeholders in fostering inclusive and high-quality growth across economic, social, and environmental dimensions. This commitment is especially critical in today's rapidly evolving global landscape, shaped by the intensifying impacts of climate change, widening inequality, geopolitical tensions, and economic volatility.

We remain steadfast in our commitment to sustainable development, adopting a comprehensive approach aligned with the United Nations Sustainable Development Goals (SDGs). Our efforts focus on generating positive impact at both national and international levels. We continue to improve our operations in tangible and measurable ways by integrating sustainability principles across the organization.

This includes empowering farmers through modern farming practices that prioritize environmental stewardship, and promoting the efficient use of limited resources, especially water, which is a key resource for agro-industrial resilience. We also leverage innovation to enhance performance across the supply chain while supporting communities and broader society.

Today, Mitr Phol Group is recognized not only as a leader in the sugar sugarcane, renewable energy, and related industries in Thailand and abroad, but also as a global leader in sustainability. This recognition reflects our enduring commitment to purposeful growth and to delivering meaningful outcomes for both society and the environment.

On behalf of Mitr Phol Group, I would like to express our sincere appreciation to our business partners, suppliers, farmers, employees, and all valued stakeholders for their continued trust and confidence throughout our journey.

I reaffirm our unwavering commitment to conducting our business with responsibility, transparency, and integrity, creating long-term value for a sustainable future. We will continue to lead Thailand's sugarcane, sugar, and related industries, as well as the agricultural sector, toward a future that is resilient, secure, and truly sustainable.

Mr. Buntoeng Vongkusolkit
Chairman of Mitr Phol Group

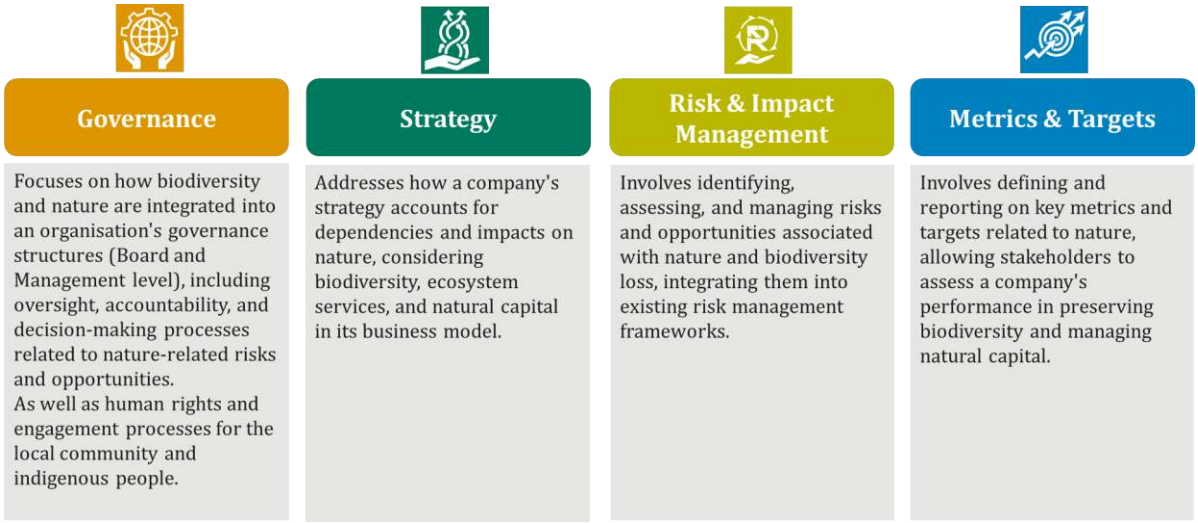
Taskforce on Nature-related Financial Disclosure

Introduction

Mitr Phol Group, as agriculturally based through the value chain business, is embedded within nature. So, adapting the TNFD framework marks a significant milestone in the global initiative to incorporate nature-related risks and opportunities into strategic decision-making.

The Taskforce on Nature-related Financial Disclosures (TNFD) provides a structured disclosure framework of assessing and reporting nature-related risks and opportunities. It outlines core elements including Governance, Strategy, Risk and Impact Management, and Metrics and Targets. This framework is supported by the methodological approach and recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), promoting consistency and comparability across environmental disclosures. Furthermore, it is closely aligned with the IFRS Sustainability Disclosure Standards developed by the International Sustainability Standards Board (ISSB), reinforcing its applicability within global sustainability reporting methodologies.

Figure 1: THE TNFD Framework



Application of Materiality

The Taskforce on Nature-related Financial Disclosures (TNFD) is a broad framework for companies to identify, assess, manage, and disclose nature-related risks, impact, dependencies, and opportunities. TNFD's recommendations are aligned with global policy goals, such as underscore the importance of promoting transparency in corporate reporting.

To consider materiality regarding TNFD disclosure, Mitr Phol has identified (1) Occupation Health Safety and Work Environment Management, (2) Supply Chain Management, (3) Corporate Governance and Risk Management, (4) Climate Strategy and (5) Digitalization and Technology Additionally, Mitr Phol has positioned agriculture-based products, particularly sugarcane and wood, as key issues. When identifying nature-related dependencies, impacts, risks, and opportunities, we approach this as a group business.

Scope of Disclosure

This report outlines the assessment of nature-related issues associated with Mitr Phol Group's business activities across the value chain in Thailand, including upstream, own operations, and downstream total 96 locations in Thailand. This disclosure is in line with TNFD recommendations, and its details provided result of analysis of relationship between business and nature on both aspect dependencies and impacts and the assessment of risks and opportunities.

Figure 2: MITR PHOL's Business Value Chain

MITR PHOL'S BUSINESS VALUE CHAIN AND LOCATIONS REGISTERED IN THE BIODIVERSITY ASSESSMENT

Business Value Chain	Number of Sites		
Upstream (Suppliers)	18		
Own Operation	73	27 sites in 4 complexes	46 standalone sites
Downstream (Customer)	5		
Total	96		

Governance

1.1 The Board's Oversight and mamagement Responsibilities

Mitr Phol Group's Board of Directors ultimately oversees all ESG-related matters, including climate change and nature-related governance structures. To ensure effective oversight of these critical issues, Mitr Phol Group has established two committees, a Sustainability Committee and a Risk Management Committee (RMC) to provide support to the board's policy. While their responsibilities differ; they share a common goal of managing climate and nature-related risks. The RMC acts as an independent advisory panel, supporting the Board in areas of governance, enterprise risk, policy development, and risk management frameworks. Meanwhile, the Sustainability Committee focuses on strategic planning, risk and opportunity assessment, and disclosure. At the management and operational level, the Executive Committee is responsible for monitoring and acting on risks and opportunities management, ensuring alignment with the Group's overall strategy.

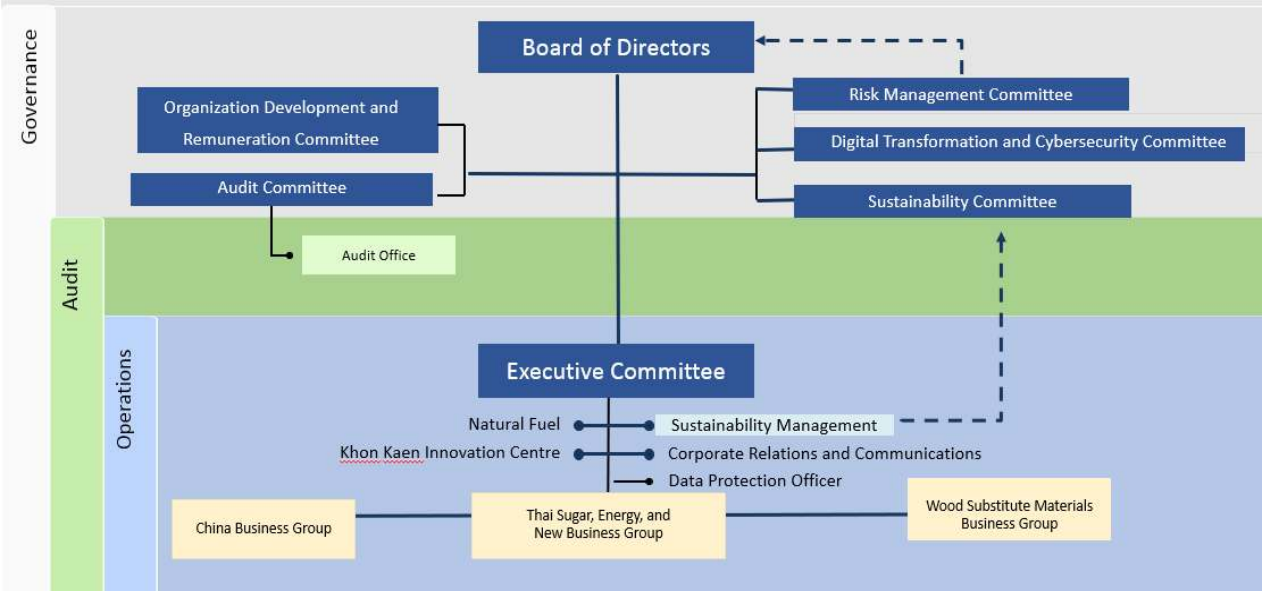


Figure 3: MITR PHOL's Management Structure

1.2 Role and responsibilities

Governing Body	Role and Responsibility	Meeting Frequency
Board of Directors (BOD)[1/]	• The BOD is ultimately collectively responsible for oversight of all strategic matters and supervision and control of all groups' business units via regular reporting system, risk management system, and annual strategy revision. The BOD has six committees, each with specific duties: the Organization Development Remuneration Committee, the Audit Committee, the Risk Management Committee, the Digital Transformation and Cybersecurity Committee, the Executive Committee, and the Sustainability Committee.	Every 2 months
Sustainability Committee	• Develop and review sustainability policy, performance, risk and opportunity relating to ESG issues including sustainability reporting processes and strategies to mitigate negative environmental impacts and enhance positive contributions to nature conservation. • Provide advisory support to ensure effective implementation and ongoing improvement across the organization. • Report progress against goals and targets to address nature-related dependencies, impacts, risks, and opportunities to BOD.	Quarterly

Governing Body	Role and Responsibility	Meeting Frequency
	• Oversee and acknowledge on nature-related issues including major capital expenditure of business unit activities covering nature-related projects	
Risk Management Committee (RMC)	• The Risk Management Committee (RMC) was established to support the Board of Directors in overseeing the company's enterprise-wide risk management, including environmental and other nature-related issues. • Implement policies and standards to monitor and mitigate enterprise risks associated with biodiversity, climate, and other environmental factors. • Review key business risks annually, including nature-related risks, and hold quarterly meetings to address enterprise risk issue. • Report on risk management matters to the Audit Committee for setting risk-based audit plan.	Quarterly
Executive Committee	• The Executive Committee is responsible for implementing risk management at the business unit level and ensuring continuous oversight, with strategic support from the governance body.	Monthly
Sustainability Management Sub-business group	• Manage day-to-day work of sustainability, governance, risk, and compliance. • Monitor and support Business Units to implement assessments of nature-related impacts, dependencies, risks and opportunities before reporting to the Sustainability Committee	On an Ongoing Basis

Remark: 1/ To oversee enterprise risk and nature-related issues, the **Board of Directors (BOD)** has delegated decision-making on operational matters to **executive committees** to drive strategy, implementation, and execution at the operational level. Regarding nature-related risks and opportunities, two key departments, Enterprise Risk Management and Sustainable Development—share responsibility. Furthermore, the results of nature-related assessments are integrated into the ESG framework and reported annually to BOD. These insights serve as critical input for the **Risk Management Committee (RMC)** in developing and refining the organization's risk strategy and planning.

1.3 Human Rights Policy and Management Process

1.3.1 Human Rights Policy

Mitr Phol Group's operates businesses in compliance with the principles of corporate governance and the Mitr Phol code of conduct. Regarding human rights, our human rights policy has consistently and strictly adhered to both laws and international human rights principles and standards. This commitment is in alignment with the Universal Declaration of Human Rights (UDHR), the United Nations Global Compact (UNGC), and the United Nations Guiding Principles on Business and Human Rights (UNGP). The commitment also extends to adherence to the International Labor Organization's Declaration on Fundamental Principles and Rights at Work as well as the principle of Free, Prior, and Informed Consent (FPIC) under United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

1.3.2 Human Rights Due Diligence

Mitr Phol's operations adhere to the UN's guiding principles on business framework and human rights issue and align with other international standards such as the Universal Declaration of Human Rights (UDHR), the United Nations Global Compact (UNGC), and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work.

Accordingly, the Board of Directors has established the Human Rights Policy, which is reviewed annually, and established a Human Rights Due Diligence process in cooperation with the relevant business activities. The Sustainability Development under the Corporate Sustainability Division, is responsible for operation and coordination with other departments across all Mitr Phol's businesses in Thailand. They review and assess current human rights risk trends from business activities, suppliers, partners and vulnerable groups throughout the value chain to ensure compliance with laws and international human rights principles.

2. Strategy

2.1 LEAP -Assessment

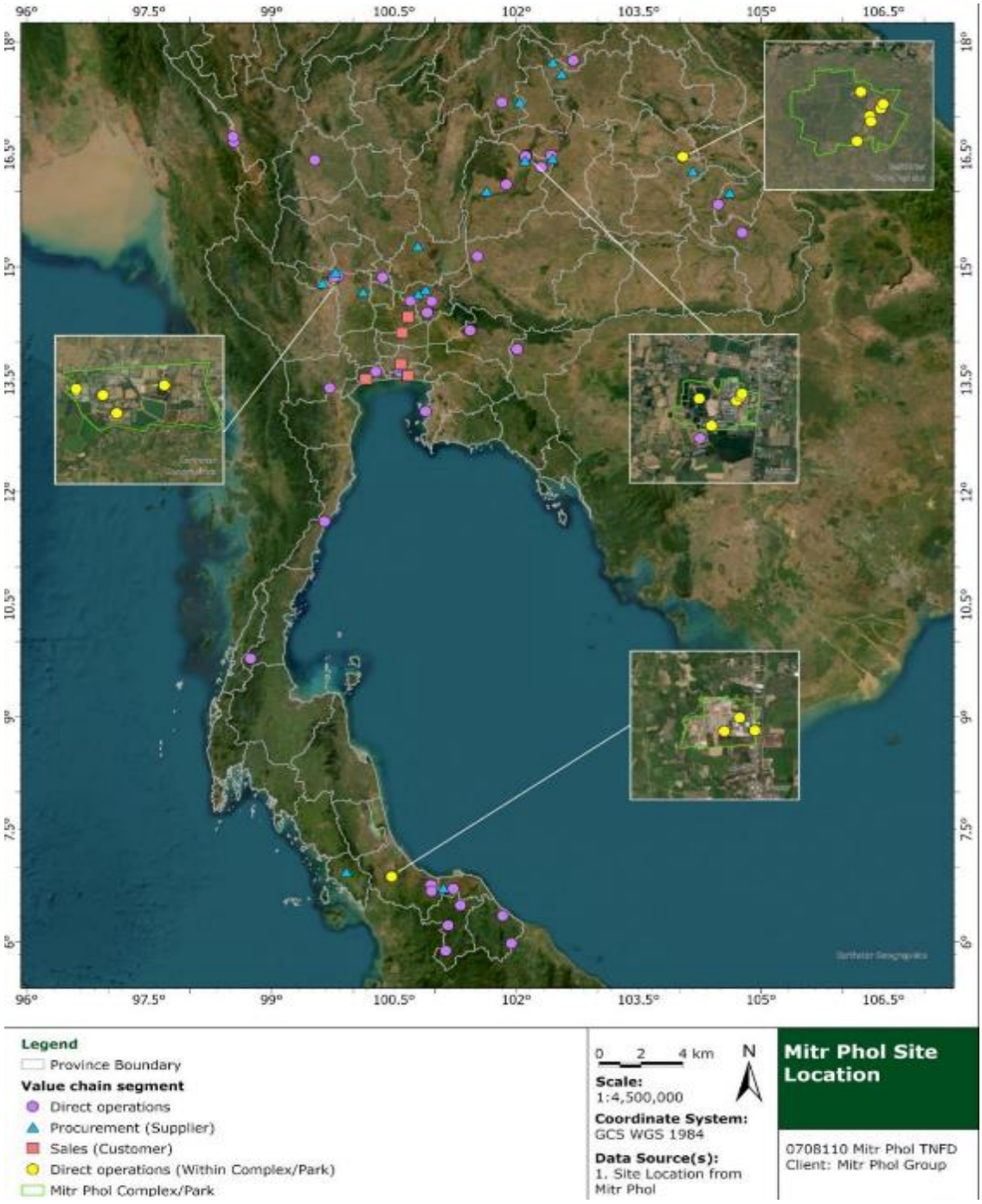
According to the TNFD Framework, Mitr Phol applied the LEAP methodology to identify nature related, **dependencies, impacts, risks** and **opportunities.** This "LEAP" approach is for assessing and managing nature-related issues and involves four phases of assessment: 1) Locate their interfaces with nature across geographies, sectors and value chains; 2) Evaluate their dependencies and impacts on nature; 3) Assess nature-related risks and opportunities; and 4) Prepare a response to nature-related risks and opportunities, including reporting on material nature-related issues to the primary users of financial reports and other stakeholders, aligned with the TNFD's recommended disclosures.

L	Location	1. Interface with nature across geographies 2. Screening for the priority sites using 4 keys four key of nature-related dimensions—water stress, biodiversity importance, ecosystem integrity, and ecosystem service delivery importance. Tool: GIS Analysis
E	Evaluation	1. Assessment of nature-related impacts and dependencies at sector level and at the prioritized locations. 2. We prioritize 64 of 96 sites. Tool: ENCORE
A	Assess	1. Nature-Related Risk Identification 2. Nature-Related Opportunities Identification 3. Evaluate their potential on organization. Tool: World Wildlife Fund's Biodiversity Risk Filer (WWF BRF)
P	Prepare	Develop strategies to respond to and mitigate the identified risks, and to capitalize on the identified opportunities.

2.1.1 Location Analysis

All Mitr Phol group's placement and seating of facilities, 96 sites in Thailand, are addressed on the geographical information system (GiSs), included of 73 own operations, 18 locations of 1 tier upstream suppliers and 5 locations of customers.

Mitr Phol's Locations and Sites in Value Chain



Upstream	Own Operation	Downstream	Total (site)
18	73 (sitting in complex 27 site standalone 46 site)	5	96

2.1.2 Location Prioritization

This map is used to interface with four biological criteria to prioritize sensitivity locations. Four key indicators and sensitivity scale are mentioned below:

Four Keys Criteria

Four criteria to be evaluated:

- Biodiversity Importance
- Ecosystem Integrity
- Water Stress
- Ecosystem service delivery importance

Distance /Sensitive level (Adjacent Area)	Low Impact Operation	5 km buffer
	Medium impact Operation	10 km buffer

Own Operation priority site Criteria	Sensitivity Scale
Medium – Hight sensitivity	Low
Hight Financial impact and high environment impact and the importance of suppliers	Medium
Mitr Phol Group Key Materiality	High

Result of interface with four key criteria

Upstream Supplier			Direct Operation			Downstream			Total		
18 Locations			73 Locations			5 Locations			96 Locations		
8	9	1	24	47	2	0	4	1	32	60	4

Result of Location Sensibility **64 Location were prioritized.**	Medium Sensitivity 60 Locations	High Sensitivity 4 sites

2.1.3 Prioritized Site

Prioritized sensitive location refers to the location analysis that goes beyond the resulting of location analysis itself. Mitr Phol Group specifically identifies and assesses locations that are in the material business groups. Mitr Phol Group has assessed 58 sites in **the key business groups of Sugar, Energy, Wood Substitute Materials, and value chain** which contribute approximately 95% of the total revenue-generating business groups. Additionally, the Sugarcane Farming business is included as a critical supporting sector. This approach enables the company to effectively manage risks while promoting environmental stewardship and adhering to global conservation standards.

Based on the criteria for sensitive locations, 64 sites have been initially identified as priority locations. Among these, 58 sites are aligned with our key business areas—sugar production and sugarcane farming, energy business, and wood substitute materials. These include 47 sites from our own operations, 6 upstream sites, and 5 downstream sites, as detailed in the table below. For these sensitive locations, particular attention and management are required to mitigate potential environmental risks. The screening process prioritized sites based on factors such as exposure to water stress, proximity to biodiversity-sensitive areas, and reliance on ecosystem services. These priority sites will undergo further evaluation during the next phase, where all facilities will be assessed according to their respective sub-industries.

2.1.4 Sensitive Sites in Key Business Area

Value Chain	Business Group	Sub-Industry	High	Medium	Low
Own Operation Total 39 Sites 2 32 5	Sugarcane Farming	Agricultural Product		1	
	Sugar	Packaged Food & Meat		5	5
	Energy	Renewable Energy	2	17	
		Forest Product		2	
		Commodity Chemical		1	
	Wood substitute Material	Forest Product		6	
		Home Furnishing			
Upstream 14 sites 1 5 8	Supplier	Agricultural Product		3	5
		Forest Product	1	2	3
Downstream 5 sites 1 4	Customer	Packaged Food & Meat	1	2	
		Oil & Gas Refining Marketing		1	
		Packaged Food & Meat		1	

2.2 Evaluation

The Evaluation phase emphasizes identifying, assessing, and prioritizing nature-related impacts and dependencies (I&D). Mitr Phol conducted an evaluation of business activities across all its operations, then prioritizing selected sites based on key areas: sugar, sugarcane farming, energy, and wood substitute materials business for its operations, as well as agricultural and forest products for upstream activities. These priority sites were assessed by examining the interconnections between material impacts and dependencies. This strategic approach is crucial for effectively managing risks and opportunities while ensuring the resilience of both business operations and natural ecosystems.

ENCORE

Impact pathways Impact pathways refer to the processes or mechanisms through which impact drivers—such as land use, pollution, or natural resource exploitation—lead to changes in the state of nature and the provision of ecosystem services. This process is essential for assessing nature-related risks and opportunities in risk assessment.

Dependency pathways refer to how business activities can depend on ecosystem services, but with the negative or positive changes in the state of nature, the availability of ecosystem services will certainly be decreased or increased to the loss or benefit of the group. The dependency-related biodiversity risk is considered in risk assessment.

Result of the evaluation of Mitr Phol group's nature-related Impact and Dependencies

Mitr Phol Group Businesses	Impacts Materiality Level									Dependency Materiality Level															
	Terrestrial	Water use	GHG emissions	Non-GHG air pollutants	Water pollutant	Soil pollutant	Solid waste	Disturbances	Marine ecosystem	Ground water	Surface water	Soil quality	Ventilation	Water flow maintenance	Water quality	Bio-remediation	Dilution by atmosphere and ecosystems	Filtration	Mediation of sensory impacts	Buffering and attenuation of mass flows	Climate regulation	Disease control	Flood and storm protection	Mass stabilization and erosion control	Pest Control
Own Operation																									
Sugar Business																									
Energy Business																									
Wood Substitute Materials Business																									
Sugarcane Farming Business																									
Prioritization	Low	High	High	Medium	Low	Medium	High	Low	Low	Medium	High 1/	Low	Medium	High	High	High	Medium	Medium	Medium	Low	High	Low	Medium	Medium	Low
Value Chain																									
Upstream	*	*	*							*	*			*							*				
Downstream		*	*				*			*	*														

Remark: ■ High Materiality Level ■ Medium Materiality Level ■ Low Materiality Level,
* refer to the impacts and dependencies that are prioritized as high materiality for upstream and downstream
1/ The materiality level of surface water dependency, based on the calculation, is medium. However, Mitr Phol Group considers surface water dependency to be crucial and important to our core business and therefore has adjusted the level to high.

Key Impact Drivers of Major Business Groups

Impact Drivers	Description of Impact Drivers	Change to State of Nature	Change in Availability of Ecosystem Services
Own Operations: Sugar, Energy, Wood Substitute Materials and Sugarcane Farming			
Water Use	Mitr Phol's operations are water-intensive across various sectors: the sugar business requires water for extraction and cooling, bio-power plants use it for steam generation and cooling, wood substitute material production involves processing water, and sugarcane farming relies on surface for irrigation.	Reduced hydrological cycles.	Reduced access to freshwater ecosystem services for drinking, irrigation, and habitat support poses a threat to biodiversity and agricultural productivity.
GHG Emissions	• In the Sugar Business, wood substitute material, fossil fuel is used for transportation and machinery contributes to GHG emissions. • Bio-power plants emit GHGs from biomass combustion. • Sugarcane Farming is associated with emissions of nitrous oxide (N2O) from the application of fertilizers	Increases in greenhouse gas emissions accelerate climate change and affect air quality.	Loss of ecosystem services like climate regulation, affecting biodiversity, agricultural productivity, and human well-being.
Solid Waste	• In the Sugar Business, bagasse (byproduct) is used in bioenergy, but other waste streams such as filter cake require proper disposal. • In Bio-Power Plants, ash and residue management is necessary.	Soil and water contamination impacts soil fertility and water quality, degrading ecosystems and posing risks to human health.	Reduced soil fertility, water purification, and overall ecosystem stability impacting biodiversity and agricultural use.

Impact Drivers	Description of Impact Drivers	Change to State of Nature	Change in Availability of Ecosystem Services
Upstream – sugarcane farmer, biomass supplier etc.			
Terrestrial ecosystem use	Land conversion for upstream Sugarcane Farmer affects natural ecosystems, including deforestation and habitat loss.	Loss of natural landscapes and critical ecosystems, decreasing biodiversity and carbon sequestration capacity.	Converting natural landscapes for agriculture or industrial purposes, disrupted ecosystem services such as carbon sequestration, water purification, and habitat provision.
GHG emissions	Transportation of raw materials and fossil fuels used in agricultural activities like land clearing and fertilizer application in the sugar industry contributes to GHG emissions.	Intensified climate change impacts, disrupting ecosystems and increasing vulnerability to environmental risks	Changes in climate regulation services that adversely affect biodiversity and productivity.
Water use	Irrigation in sugarcane farmers relies on groundwater and surface water extraction. Poor irrigation practices may exacerbate local water scarcity.	Excessive withdrawal of water resources may disrupt hydrological cycles and increase water scarcity.	Reduced availability of clean water for ecosystems and human use, threatening aquatic biodiversity.

Downstream – Customers			
GHG emissions	Downstream operating processes emit GHG emissions into the atmosphere.	Nature changes through greenhouse gas (GHG) emissions by producing and transporting goods and services, their operations, including energy-intensive manufacturing, resource extraction, and logistics, release GHG into climate change.	The alteration of climate regulation services affects biodiversity, agricultural productivity, and human well-being, disrupting ecosystems and increasing vulnerability to environmental changes.
Water use	Water used for the activity includes groundwater and surface water.	Extracting of water for operations, such as manufacturing and processing, potentially leads to a reduction in the availability of local water sources	Consuming water for manufacturing, , and processing, often depleting local water resources and altering natural water cycles can lead to water scarcity, and habitat destruction, affecting aquatic ecosystems and local communities.
Solid waste	Operating processes generate solid waste that may cause negative impacts.	The generation of solid waste contributes to pollution and resource depletion, as the disposal of products, packaging, and other waste materials frequently results in landfill overflow, habitat destruction, and the contamination of soil and water.	Improper solid waste disposal can contaminate waterways, soil, and air, leading to damage to ecosystems and the ecosystem service, including water filtration, soil fertility, and biodiversity.

Key dependencies drivers of major business groups

Dependencies	Description of Dependencies	Change to State of Nature	Change in Availability of Ecosystem Services
Own Operations			
Surface Water	Sugar and bio-power operations require stable surface water availability for processing.	Seasonal variations and reduced rainfall diminish surface water availability, leading to increased competition for water resources	Limited surface water availability directly impacts agricultural output, production, efficiency, and local community water supplies.
Water Flow Maintenance	The hydrological cycle is essential for maintaining water availability. Mitr Phol's sugarcane farming operations rely on irrigation, while sugar and bio-power	Changes in water extraction for irrigation and industrial use disrupt hydrological cycles, leading to water stress and reduced groundwater recharge.	Reduced water flow regulation and availability impact agricultural productivity, energy operations, and community water access.

Dependencies	Description of Dependencies	Change to State of Nature	Change in Availability of Ecosystem Services
	plants use significant water for processing.		
Water quality	Sugarcane farming operations require clean water for irrigation, while Sugar plants, bio-power plants and wood substitute material production depend on high water quality for processing and cooling.	Mitr Phol Group particularly improves water quality through production processes and agricultural practices such as water management, reducing pollutants, and adopting sustainable practices, to avoid changes to the state of water sources.	The operations impact ecosystem services like water regulation and nutrient cycling. Over-extraction and agrochemical runoff can degrade ecosystems, reduce groundwater recharge, and affect downstream water users.
Bio-remediation	Mitr Phol uses natural processes like wetland systems to treat wastewater generated from sugar milling and bio-power operations. This reduces dependence on synthetic treatments.	Without effective bio-remediation, natural water and soil cleaning capacities would be exceeded, causing environmental degradation.	Mitr Phol Group's use of ponds with wetland plants and bacteria has improved water purification, restored soil health, supported biodiversity, and contributed to climate regulation, thereby strengthening bioremediation efforts. This approach aids in providing clean water, enhancing soil nutrient cycling, and lowering operational risks.
Climate regulation	Mitr Phol relies on stable climatic conditions for sugarcane crop growth, bio-power energy generation, and material production processes. Stable humidity and temperature are crucial for sugar drying and wood production.	Mitr Phol Group's sugar production relies on externally sourced water that requires cooling, while its wood substitute materials business benefits from dry, low-humidity conditions. However, these operations do not impact climate regulation.	Mitr Phol Group relies on stable ecosystems for temperature and humidity, which can degrade climate regulation services and disrupt resource availability and production efficiency. However, their operations do not impact on the overall availability of climate regulation.

Dependencies	Description of Dependencies	Change to State of Nature	Change in Availability of Ecosystem Services
Upstream			
Water Use (Surface and Ground water)	Water is used for the activity including groundwater and surface water.	The operations rely on water for processes such as manufacturing, agriculture, and industrial activities.	Water extraction or inefficient use can lead to the depletion of local water resources, affecting ecosystems and communities that depend on those water supplies.
Climate regulation	Global climate regulation occurs through nature's long-term storage of carbon dioxide in soils, plant biomass, and oceans. Regionally, ocean currents and winds influence the climate, while locally, vegetation can adjust temperatures, humidity, and wind speeds.	Upstream reliance on natural resources, such as water, soil, and stable weather conditions, makes them vulnerable to changes caused by climate change. GHG emissions from upstream activities, such as energy use, manufacturing, and transportation, disrupt climate regulation by contributing to global warming.	The upstream activities, particularly agricultural activities, depend on climate regulation but they do not affect the availability of climate regulation.
Water flow maintenance	Upstream activities can affect water flow maintenance through their operations such as manufacturing, agriculture, and raw material extraction often require large amounts of water, leading to depletion of freshwater sources.	Upstream can affect water flow maintenance and alter the state of nature through their resource-intensive activities. Operations such as manufacturing, agriculture, and raw material extraction often require large amounts of water, leading to depletion of freshwater sources.	Improper water management, such as excessive withdrawals or pollution from industrial runoff, can disrupt natural water cycles and reduce water availability for ecosystems and communities.
Downstream			
Water Use (Surface and Ground water)	Water consumption for this activity includes the volume of groundwater used, the volume of surface water used.	Downstream dependencies on water use refer to the reliance on water resources for consumption, daily activities, and product usage.	Downstream can influence the change in the availability of ecosystem services related to water use through their consumption habits and demand for water-intensive products.

2.3 Assess - Nature-Related Risks and Opportunities

2.3.1 Identifying, Assessing, and Prioritizing Nature-Related Risk

This step was using the **World Wildlife Fund's Biodiversity Risk Filer (WWF BRF)** tool to analyze different nature-related risk issues across own plants and its tier 1 suppliers and downstream customer covered value chain relevance. WWF BRF is a comprehensive tool that uses advanced methodologies such as biodiversity impact assessments, ecological footprint analysis, and scenario modeling to assess risks associated with biodiversity and ecosystem services, using spatial data as location-specific and industry-specific approach. Mitr Phol Group input the locations of the **priority sites** into the WWF BRF to generate risk scores for each location.

Time Horizons Classification

Risk assessment time horizons have been classified into short, medium and long as:

- **Short-term:** a period of 0 to 3 years (2024 - 2026) This period is typically associated with immediate impacts and operational adjustments.
- **Medium-term:** a period of 4-5 years (2027-2028). This period allows for the planning and implementation of strategies to address emerging challenges.
- **Long-term:** a period of 6 years or more (from 2029 and beyond). This period focuses on strategic planning, adaptation, and sustainable development efforts that align with future goals.

Result of Risk assessment

The Nature-relate risk was identified in the table below

		Physical Risk														Reputational Risk													
		Provisioning Services	Regulating & Supporting Services - Enabling					Regulating Services - Mitigating					Pressures on Biodiversity			Environmental Factors					Socioeconomic Factors				Additional Reputational Factors			
	Mitr Phol Group's Business	Water Availability	Soil Condition	Water Condition	Air Condition	Landslides	Fire Hazard	Plant/Forest/Aquatic Pests and Diseases	Herbicide Resistance	Extreme Heat	Tropical Cyclones	Land, Freshwater and Sea Use Change	Forest Canopy Loss	Invasives	Pollution	Protected/Conserved Areas	Key Biodiversity Areas	Other Important Delineated Areas	Ecosystem Condition	Range Rarity	Local Communities (LCs)	Resource Scarcity: Water - Air	Labor/ Human Rights	Financial Inequality	Media Scrutiny	Political Situation / Regulation	Sites of International Interest	Risk Preparation
Nature-related risks	Sugar Business																											
	Energy Business																											
	Wood Substitute Materials Business																											
	Sugarcane Farming Business																											
Financial risks	Sugar Business																											
	Energy Business																											
	Wood Substitute Materials Business																											
	Sugarcane Farming Business																											
Prioritization of Financial Risks	Own Operation	H	M	M	M	L	H	M	L	H	H	L	L	L	M	L	L	L	L	L	H	H	H	L	H	H	L	H
	Upstream	H	H	L	M	M	H	H	H	M	M	H	H	M	H	H	H	M	L	L	H	M	H	L	H	M	L	L
	Downstream	H	L	L	L	L	L	H	-	M	M	M	L	M	H	L	H	L	M	M	M	M	M	L	H	M	M	L

Remark: Risks level: ■ High-Risk Level ■ Medium-Risk Level ■ Low-Risk Level

Remark: The regulatory change was assessed and resulted as low level risk

Result of Risk assessment

The table below provides a concise summary of biodiversity risk assessment, highlighting high score on risk and the financial impact or either high score on risk or financial.

- **OWN OPERATION**

Own Operation	Risk	Impact (I) & Dependency (D)	Business Impact and Financial Impact	Risk Score	Financial Risk Score	Time frame	Link with TCFD/HRDD
Physical Risk; Provisioning Services	Water Availability	D/I	Business • Water Shortage in production process and sugarcane cultivation • Sugarcane supplier may have impact on production decrease. Financial • Investment cost is increasing in operation cost and raw material	High	High	-	TCFD: Water Stress and / or water shortage
	Water Condition	D	Business • Flood an building. Financial • Investment cost is increasing in operation cost for clean the water and mitigation cost	High	Medium	Medium Acute	TCFD
	Tropical Cyclones	D	Business • Own Operation may affect employee health. Financial • Investment cost is increasing in operation cost for insurance.	Medium	High	Medium Acute	-
	Fire Hazard	D	Business • Own Operation – driven by extremely heat weather- it affects biomass fuel burning, and air quality. Financial • Investment cost is increasing in operation cost for fire protection	High	High	Medium Acute	-
	Extremely Heat	D	Business • Own Operation –energy consumption affects biomass fuel burning and employee health such as heat stroke. Financial • Investment cost is increasing in operation cost and fire protection	High	High	Medium Acute	TCFD
	Pollution	I	Business Pressure on Biodiversity system • Effect on employees Health	High	Medium	-	HRDD

- **Summary of Biodiversity -Related Risk Assessment of Own Operation**

Area and Sites	Number of Sites	Area (Hectares)
Overall area of own operation sites	73	11,274
Biodiversity Impact Assessment for Own Operational Sites*	73	11,274
Total Exposure of the site assessed	1	209.6
Total Area of Management Plans	1	209.6

*Note: A total of 73 sites has undergone biodiversity impact assessments conducted in accordance with the LEAP methodology

A biodiversity-related risk assessment was conducted across 73 operational sites, covering a total area of 11,274 hectares. After location prioritization, 39 sites—representing 9,947 hectares—were eligible for and underwent detailed biodiversity impact assessments as part of the evaluation process in accordance with LEAP methodology. One site, encompassing 209.6 hectares, was identified as having significant exposure and has been prioritized for biodiversity management planning. This site is now under active management to mitigate biodiversity-related risks and ensure sustainable operational practices.

- **Upstream and Downstream**
  For downstream and upstream risk assessment the resulting on the high score risk is reported in below table

Upstream	Risk	Impact (I) & Dependency (D)	Risk Score
Physical Risk; Provisioning Services	Water Availability	Dependency	High
	Limited Wild Flora & Fauna Availability	Dependency	High
	Soil Condition	Dependency	High
	Fire Hazard	Dependency	High
	Plant/Forest/ Aquatic Pests and Diseases	Dependency	High
	Herbicide Resistance	Dependency	High
	Land, Freshwater and Sea Use Change	Impact	High
	Forest Canopy Loss	Impact	High
	Pollution		High
	Indigenous Peoples (IPs); Local Communities (LCs) Lands and Territories	Impact	High
	Labor/Human Rights	Impact	High
	Media Scrutiny	Dependency	High

Downstream	Risk	Impact (I) & Dependency (D)	Risk Score
Physical Risk	Pollution	Impact	High
Transition Risk	Key Biodiversity Areas	Impact	High
	Range Rarity	Impact	High
	Media Scrutiny	Dependency	High

Remark: The financial risk and time horizon was not identified for the upstream and the downstream.

Time Horizon

- **Short-term:** a time frame of 0 to 3 years (2024 - 2026) This period is typically associated with immediate impacts and operational adjustments.
- **Medium-term:** a time frame of 4-5 years (2027-2028). This period allows for the planning and implementation of strategies to address emerging challenges.
- **Long-term:** a time frame of 6 years or more (from 2029 and beyond). This period focuses on strategic planning, adaptation, and sustainable development efforts that align with future goals.

2.3.2 Identifying, Assessing, and Prioritizing Nature-Related Risks Opportunities (Assess)

Business performance opportunities

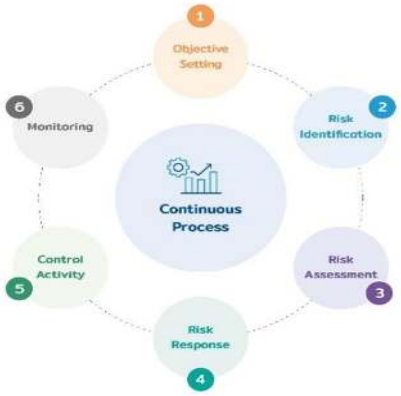
Category	Nature-related opportunity	Business activities related / Actions
Business Performance Opportunities		
Resource efficiency	Transition to processes/ circularity mechanisms that reduce risks related to business dependencies on nature, including within the value chain. • Generally Reduced Resource Extraction • Increased resource efficiency	Mitr Phol Group's business model focuses on reducing resource extraction and minimizing nature-related dependency. For example, we utilize by-products from the sugar mills as raw materials for the energy business. This approach integrates operations across the sugar, and biomass industries, adding value to sugarcane throughout all production processes and driving business expansion.
	Technological innovations that increase resource efficiency and/ or reduce risks related to nature dependencies	Mitr Phol ModernFarm" is initiated with the aim of creating sustainability for sugarcane farmers and the broader cane and sugar industry in Thailand through the following operations. Example: • Soil quality conservation • Reduce water consumption on-farm irrigation system • Green Harvesting of sugarcane
		Mitr Phol Group has implemented a variety of wastewater treatment systems tailored to the quality of the wastewater and the plant location. Presently, the aerated section of the oxidation pond at Mitr Phol Dan Chang Complex in Suphanburi Province was upgraded to an activated sludge system (AS). Wastewater from all Complex's business operations was treated by the AS system. Additionally, the company has also installed an AS wastewater treatment system in a sugar factory in Amnat Charoen Province and Chaiyaphum Province to recycle and reuse wastewater from production process. Moreover, in the next few years, Mitr Phol Group plan to invest AS in remaining sugar mills.
	Actions that create positive changes to the supply of natural resources that are inputs to production • Renewable energy sources contribute to the reduction of agriculture waste	Mitr Phol Group research and development to initiate renewable energy and clean energy innovations, including biomass and others, towards secure, sustainable, and eco-friendly growth.
		Wood substitute materials business uses parts of rubber trees, trunks, branches and roots to create benefits or increase their value. The trunks and branches are used to produce wood substitute materials, while roots are used to produce renewable electricity for production within the factory.
Products/ services	New business model/activities with positive impacts on nature/reduced negative impacts on nature • Resource-efficient products and services • Efficient and circular production systems and value chains • Products and services that utilize/create nature-based solution	Mitr Phol Group's research and innovation center has innovated a technology called "Controlled Release Fertilizer (CRF)". CRF granules will gradually release nitrogen according to the plant's needs, ensuring that sugarcane receives consistent nutrients throughout the 270-day (9-month) growing period. Able to reduce the need for excessive chemical fertilizer, minimizes nitrogen leaching, and reduces GHG emissions.
		Mitr Phol Group have increase opportunities in new businesses by the company operating as a consultant under the name "TEED" (THAI ENVITONMENTAL & ENERGY DEVELOPMENT CO., LTD.) acting as both a consultant and operator of wastewater management and treatment and biogas production systems
		PlaneX is made from tapioca starch and bioplastic derived from sugarcane. CaneX offered compostable food packaging products, including utensils made from tapioca starch and bagasse straws.
	Development of financial solutions for nature positive outcomes (e.g. nature-related insurance risk products)	The Carbon Tax regulation may affect Mitr Phol Group's loan availability, including its energy business.

Category	Nature-related opportunity	Business activities related / Actions
Markets	Access to new and emerging markets	Mitr Phol Group innovations such as bioplastics, biodegradable products, and other bio-based materials offer access to markets seeking alternatives to single-use plastics.
		RECs and Carbon Credit from renewable energy business
	Market valuation increases due to positive nature-related performance/ reduction in nature negative outcomes	Mitr Phol Group has experienced an increase in demand for renewable energy market.
Reputational capital	Actions that create positive changes in sentiment towards the organization/ brand due to impacts on environmental assets and ecosystem services that have impacts on society and local economic capabilities. • General • Due to social impact • Due to environmental impact	Mitr Phol Group's energy business has leverage sugarcane residues (e.g., leaves and top) as feedstock for biomass energy, creating a closed-loop system that reduces waste and supports renewable energy. Water storage pond was constructed within Mitr Phol Group's farm to conserve water for use during the drought season. During drought season the ponds are shared with local communities as water resources and ecosystem services, such as fish.
Sustainability Performance Opportunities		
Sustainable use of natural resources	Transition to processes/ circularity mechanisms with reduced negative impacts on nature, increased positive impacts on nature, including within value chains • Reduced impact on drivers • Increased positive impacts	Same as 'Products/ Services'
	Increase reuse and recycling of natural resources	
	Adoption of nature-based solutions within service and product lines	• Constructing or restoring wetlands in sugar business to naturally treat wastewater and improve water retention.
	Technological innovations that reduce impacts on nature/increase positive impacts	Mitr Phol Group adopted technology innovation solutions to comply with laws like the Climate Change Act and Clean Air Act not only fulfills regulatory requirements but also actively drives technological innovations that align with reducing environmental impacts. These advancements: • Decrease negative impacts by reducing emissions and pollution. • Increase positive impacts by fostering resource efficiency and enabling circular processes. • Showcase a company's leadership in sustainability and commitment to nature-positive growth. • Such an approach positions the company as a forward-thinking, environmentally responsible business ready for a sustainable future. <u>Example</u> • Bio-Plastic innovations • Application of artificial intelligence/machine learning (AI/ML) for sugarcane farm management in the Farm Focus Project: This project aims to increase sugarcane production efficiency to 20 tons per rai by developing 4 AI/ML models and a digital channel for managing sugarcane farms. • Same as 'Products/ Services'
	Collaborative engagement with stakeholders at local, national and international levels	Mitr Phol Group have collaborated Biodiversity Conservation with upstream.
Ecosystem protection, restoration and regeneration	Direct restoration, conservation or protection of ecosystems or habitats • Restoration • Conservation Protection	Mitr Phol Group have initiated reforestation project which aims to plant 1 million tree with in 10 years during period 2022-2032.
	Indirect restoration, conservation or protection of ecosystems or habitats • Financing • Reduction of harmful impact drivers/ pressures • Advocacy	Mitr Phol Group has obtained a sustainability-linked loan to further its commitment to creating shared value with society and environmental development.

3. Risk and Impact Management

3.1 Integration into Risk Management Systems and Decision-Making

The material of impacts and dependencies, and identified risks and opportunities, which are the results from the Evaluate and Assess phases, are discussed to prepare the management approach for each issue specifically. Mitr Phol Group embeds nature-related risks into its existing enterprise risk management (ERM) process[3/] by translating them into financial risks and integrating them into decision-making processes and further ensures that these risks are integrated into multi-disciplinary, company-wide risk management processes.



Mitr Phol Group has developed its ERM process according to the **COSO Enterprise Risk Management (ERM) Integrated Framework** to ensure that the ERM process is transparent and aligns with international practices. The issues that potentially have significant impact and require additional mitigation measures to reduce the risk scores to an acceptable level. Those are included in the ERM process, and function owners and business unit risk agents are assigned to prepare the mitigation measures and periodically monitor, report, and reassess these issues on an annual basis.

This approach enhances visibility and ensures that risks are prioritized based on materiality and strategic significance. Key steps include:

- **Risk Identification and assessment**
  Nature-related risk is identified and assessed using tools such as ENCORE and WWF Risk Filter in evaluating and assess phases. Results from those phases are identified through stakeholder consultations, and collaboration with Safety, Health and Environment Department.
- **Risk Response:** Nature-related risks into financial terms, which informs budgeting, investment planning, and resource allocation.
- **Risk Monitoring and Reporting**: Assigning function owners and business unit's risk agents to develop and periodically monitor risk mitigation plans, ensuring annual reassessment.

3.2 Process for managing nature-related dependencies, impacts, risks and opportunities (Prepare)

To manage nature-related risks effectively, Mitr Phol Group implements a range of mitigation strategies and processes, including:

- **Environmental Management Systems (ISO 14001)**: Implementing third-party verified systems to control environmental impacts, such as water consumption, air emissions, and waste generation.
- **Conduct Climate Strategy:** Develop and implement a comprehensive strategy to address climate-related challenges, integrating mitigation and adaptation measures into the company's operations and value chain to reduce greenhouse gas emissions and enhance resilience.
- **Resource Optimization**: Adopting efficient practices to reduce resource dependencies and operational disruptions, including water conservation programs, emission reduction initiatives, and energy efficiency projects.
- **Investments in Risk Mitigation Projects**: Allocating resources to biodiversity restoration, reforestation, and nature-positive projects.
- **The mitigation hierarchy and Management Measures:** Mitr Phol Group adopts and implements the **mitigation hierarchy** as outlined by TNFD, AR3T. By implementing the mitigation hierarchy, Mitr Phol Group actively engages in regenerating ecosystems degraded by business activities.
- **Stakeholder Engagement**: Collaborating with key stakeholders, specifically government agencies and communities, to ensure compliance with environmental regulations and alignment with sustainability goals.

- **Quantitative short- and long-term targets** are set to track the performance of environmental management systems, using key environmental performance indicators such as water consumption, wastewater management, GHG emissions, air emissions, and waste generation.
- **Integration Across the Value Chain** for upstream and downstream activities
  - Develop regular engagement strategies to communicate commitments, such as:
    - No Net Loss (NNL) of biodiversity values
    - Net Positive Impact targets where applicable
    - No Deforestation Commitment throughout the value chain
    - Supplier Code of Conduct
  - **Comply with FSC and the EU Deforestation Regulation (EUDR)** requirements into supply chain management in Wood Substitute Material Business. involves several key steps to ensure compliance and support a deforestation-free and biodiversity project in supply chain.
  - Conducts capacity-building programs designed to enhance the knowledge and skills of upstream on sustainability topics and practices, with a specific focus on nature-related issues.
  - Conducts upstream assessments, integrating I&D and risk results to gain insights into the nature-related impacts, dependencies, and risks across the value chain.
  - Mitr Phol adheres to The **International Sustain Standard**, ensuring sustainable sugarcane production through legal land use, efficient water management, biodiversity conservation, and strict labor and safety practices. The standard limits chemical use, prohibits banned substances, and promotes traceability across operations, strengthening environmental stewardship and social responsibility.
  - Conduct Human Rights Due Diligence (HRDD), the environmental issues were identified in consultation with local communities.

Monitoring and reporting: Establish robust systems to regularly track and report on key environmental indicators, ensuring transparency and alignment with regulatory requirements and sustainability commitment.

4 Metric and Target

4.1 Target and commitment

Mitr Phol Group integrates natured-related conservation into its sustainable business practices, aligning with global standard such as the UN SDGs to combat deforestation and restore ecosystems and followed UN Guiding Principles on Business and Human Rights.

Business	Standard/Framework/Policies	Details
Group and Value chain	Biodiversity	– Biodiversity Management: Assessing and managing impacts through the sustainable development policy. – No Net Loss (NNL): Striving for Net Positive Impact (NPI) on biodiversity in new projects. – No Net Deforestation: Ensuring net-zero deforestation through compensatory measures.
	UNGPs and Human Rights Policy	– **Non-Discrimination and Equal Opportunity**: Promoting diversity, equal and fair treatment for all individuals, regardless of race, gender, religion, or other characteristics – **Safe and Healthy Work Environment:** Providing a workplace that prioritizes worker's safety, health, and well-being. – **Freedom of Association:** Respecting employees' rights to form and join trade unions or other associations. – **Prohibition of Forced and Child Labor:** Ensuring no involvement in forced labor, human trafficking, or child labor within its operations or supply chain. – **Community Engagement:** Respecting the rights of indigenous people, local communities and fostering positive relationships through sustainable practices. – **Grievance Mechanisms**: Establishing transparent channels for reporting and addressing human rights concerns
	ISO 14001, ISO 45001 and ISO 50001	– ISO 14001 helps organizations reduce environmental impact, improve environmental management, and comply with environmental regulations Environmental Management Systems, – ISO 45001 is a standard for Occupational Health and Safety Management Systems (OHSMS), focusing on health and safety in workplace. – ISO 50001 standard **provides a practical way to improve energy use**, through the development of an energy management system (EnMS)
Sugarcane and Farm	Bonsucro	**Bonsucro**[1] offers a credible, metric certification process to demonstrate commitment to environmental and social sustainability in sugarcane which is the most globally recognised framework for sustainable sugarcane production
Wood Substitute Material	**Forest Stewardship Council™**	**Forest Stewardship Council ™** (FSC™) certification ensures that products come from responsibly managed forests that provide environmental, social, and economic benefits. It sets standards for sustainable forestry practices, including protecting biodiversity, respecting the rights of Indigenous peoples, and ensuring fair labor conditions. Products with the FSC™ label are verified to meet these standards, helping consumers make environmentally and socially responsible choices.

[1] The Bonsucro certification covers areas such as: Reducing environmental impact (e.g., water use, greenhouse gas emissions). Improving labor conditions and social welfare. Ensuring economic viability for sugarcane producers.

4.2 Performance Against Targets

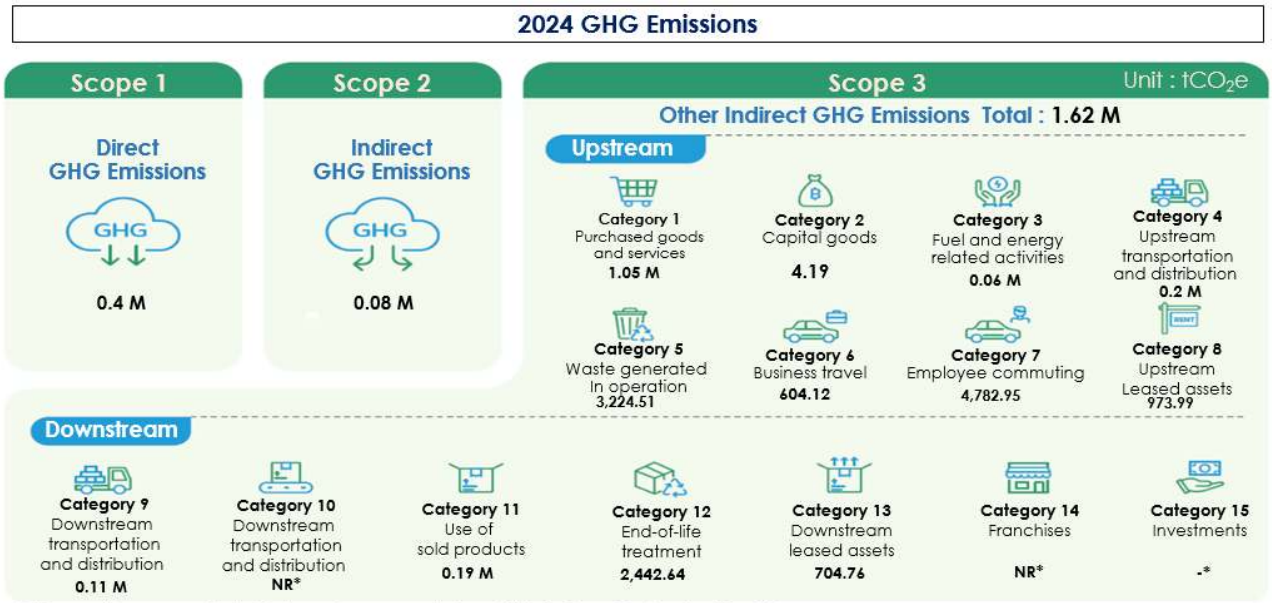
4.2.1 highlights the Group's 2023 progress against biodiversity targets.

Target	2024 Performance
Achieve No Net Loss (NNL) of biodiversity within the Company's operational scope by 2030	Achieved No Net Loss (NNL) of biodiversity within the Company's operational scope
Obtain ratio of green space inside the factory area more than 5% of total factory area	14% of the factory area

4.2.2 Key performance target

Issues	Impact	Dependency	MITR PHOL GROUP's Targets	2024 Performance
Water	Water Use	• Water flow maintenance • Water quality • Surface water	• Develop the irrigation infrastructure in the promoted sugarcane plantations to accumulate an irrigated area of 180,096 hectare by 2024.	• Accumulated irrigated area of 180,790 hectare
Climate-related issue	GHG Emission	Climate regulation	• Reduce scope 1 and 2 emissions by 42% from the baseline year (2022) by 2030. • Reduce scope 3 emissions by 25% from the baseline year (2022) by 2030.	• Scope 1 and 2 emissions reduced by 46.25%. • Scope 3 emissions increased by 13.73%
Waste	Solid Waste	Bioremediation	• The ratio of total food loss and food waste to the total amount of sugar sold equals 0.20. • 95% of total packaging is made from recyclable and compostable materials	• The ratio of total food loss and food waste to the total amount of sugar sold equals 0.18. • 95% of total packaging is made from recyclable and compostable materials

GHG Emission



* NR means there are no other indirect greenhouse gas emission activities for Scope 3 categories 10 and 14.
- means category 15 cannot be calculated due to insufficient data.

5. Nature-related actions

5.1 Application of the Mitigation Hierarchy

Mitr Phol has applied the AR3T Action Framework of the Science-Based Targets for Nature (SBTN) network, in alignment with TNFD recommendations, to prevent, avoid, reduce, and restore biodiversity impacts resulting from its operations.

1) Avoid potential future impacts on biodiversity.

Design and manage factory areas, particularly biodiversity-sensitive zones, to ensure they remain unaffected. This includes establishing governance and operational controls to preserve biodiversity and ecosystem richness.

2) Reduce current impacts on biodiversity.

Improve existing practices to reduce environmental impacts, such as upgrading wastewater treatment systems and applying the "From Waste to Value Creation" concept. This includes converting sugarcane bagasse into renewable energy, transforming molasses into ethanol, processing vinasse—a byproduct of ethanol production—and filter cake, a byproduct of the sugar industry, into biofertilizer, as well as utilizing yeast to produce protein-rich supplements for livestock and pets.

3) Restore

Conduct ecosystem restoration to return degraded areas to their natural state, for example, designing water storage ponds that help replenish groundwater sources. These systems use natural filtration through soil and rock layers to improve water quality and increase soil moisture. Restoration efforts also include reforestation on degraded land, with the goal of planting 1 million trees over 10 years (2022–2032), in collaboration with various networks and agencies. In addition, the Company supports biodiversity conservation initiatives within community forest areas.

4) Regeneration and Transform the Foundational System

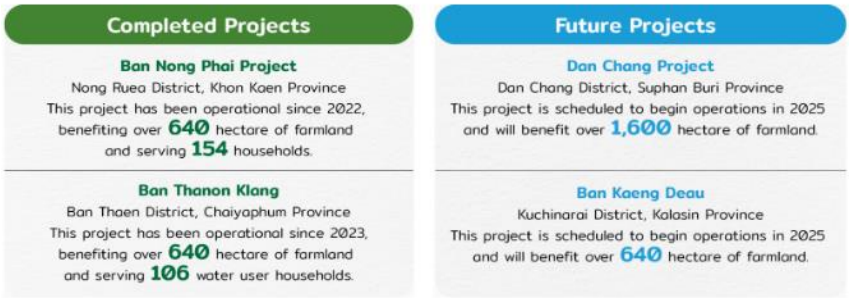
Promote sustainable farming through the "Mitr Phol ModernFarm" initiative, which regenerates sugarcane cultivation. This includes soil conservation through crop rotation with legumes during fallow periods and the use of green cane trash to blanket and protect the soil. The Company emphasizes efficient water management and encourages the adoption of modern agricultural machinery and technology. These practices help reduce the use of raw materials and labor, lower production costs per rai, and support environmental sustainability.

5.2 Upstream Initiate

5.2.1 Sugarcane farming

5.2.1.1 OASIS Project

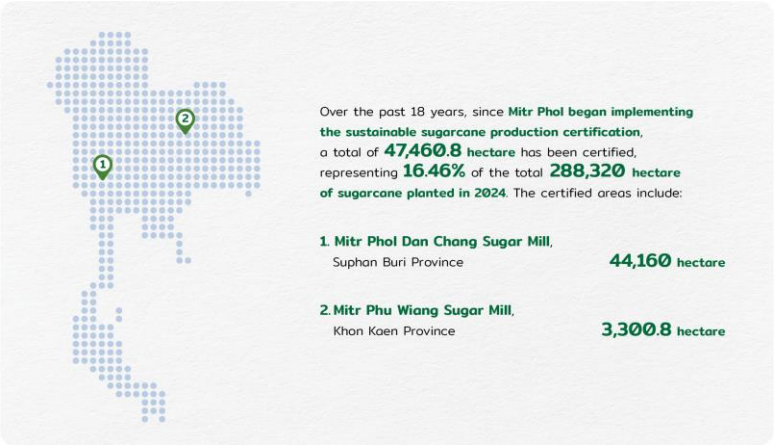
The OASIS Project is a large reservoir initiative located in a flood-prone area, integrated with MITR PHOL ModernFarm management practices to optimize water utilization through advanced technologies like IoT. Key features include automated drip irrigation systems, fertilizer application via drip irrigation, soil moisture monitoring and solar power for water pumps. These solutions aim to prevent excessive water consumption while enhancing productivity in non-rainfed agricultural areas.



5.2.1.2 Sustainable Sugarcane and Sugar Production in Accordance with International Standards

Mitr Phol is committed to the continuous improvement of its sugar production processes and supports farmers in meeting the international Bonsucro standard for sustainable sugarcane and sugar production. This certification ensures full traceability of raw materials throughout the entire production process. Since 2016, Mitr Phol has been the first sugar producer in Thailand and the second in Asia to be certified against the Bonsucro standard. The Company is dedicated to sustainability, fair labor practices, and environmental responsibility throughout the supply chain, in line with the core principles of the Bonsucro standard, which apply to every stage of sugarcane and sugar production. These principles include

In 2024, Mitr Phol also planned to expand its certification efforts to include the VIVE Program—a voluntary sustainability initiative focused on continuous improvement across the supply chain of agricultural products and commodities. The program sets clear targets and tracks progress to help companies enhance their practices in alignment with environmental, social, and governance (ESG) frameworks.



5.2.2 Wood substitute Business

Forest Stewardship Council™ (FSC™)

Wood Substitute Material 's Value Chain and FSC™ Certification
Panel Plus integrates FSC certification into its value chain, ensuring sustainable sourcing, eco-friendly production, responsible distribution, and customer empowerment. This approach promotes environmental conservation, social responsibility, and economic sustainability.

5.3 Local Community Engagement

The company has implemented a multifaceted **Community Engagement Strategy** that spans the entire lifecycle of its operations. This strategy reflects the company's commitment to fostering strong relationships with local communities while addressing economic, environmental and social concerns. Key components of this **Engagement Strategy** include: Mitr Phol collaborates with communities, local organizations, the government sector, and partners to build strong and sustainable collaborations.

Community development projects	Strategic Corporate Social Responsibility (CSR) activities	Building a Collaborative Network
Initiatives designed to uplift the local population through improved access to household income, education, employment opportunities, and infrastructure.	Focused on mitigating potential impacts from business operations and ensuring long-term community benefits.	Collaborating with communities, local organizations, the government sector, and partners to build strong and sustainable collaborations.

External Stakeholders Engagement

To effectively manage risks and opportunities, Mitr Phol Group engages with external stakeholders, particularly key upstream and downstream. This collaboration ensures that biodiversity has been considered across the entire value chain and consistently monitored and managed at an appropriate level. By collaborating closely with these partners, Mitr Phol Group align nature-related conservation efforts, share best practices, and implement joint initiatives that enhance ecosystem health and sustainability. This initiative-taking engagement helps to secure the integrity of Mitr Phol Group's value chain while contributing to broader environmental stewardship goals.

Enhancing Stakeholder Collaboration

Building on its engagement strategy, Mitr Phol Group emphasizes a collaborative approach with stakeholders to address nature-related challenges and improve community well-being.

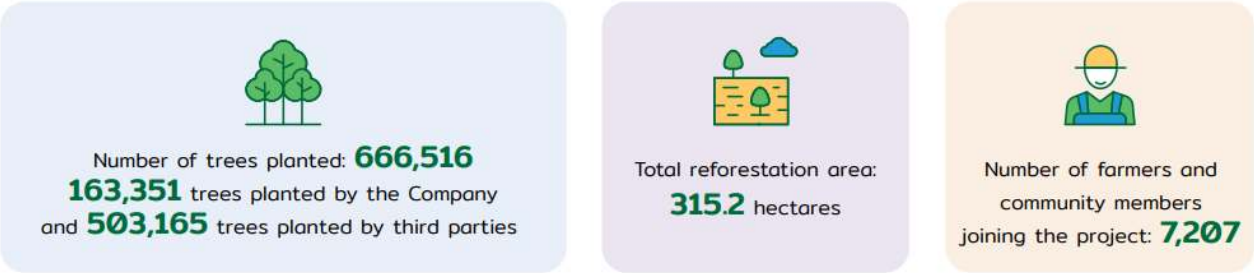
Strengthening Partnerships	Capacity Building	Feedback Mechanisms
Collaborating with local authorities, non-governmental organizations (NGOs), and academic institutions to design and implement impactful community programs.	Providing education and resources to empower communities, including: Education and Training programs on sustainable farming practices. Workshops on environmental conservation and biodiversity.	Establish robust systems to collect, analyze, and respond to community feedback. These mechanisms ensure continuous improvement in engagement practices and accountability.

5.4 Examples of Mitr Phol Group's Nature-Related Initiatives

Mitr Phol Group collaborates with various stakeholders across its value chain to address nature-related issues and promote sustainable practices. These initiatives aim to mitigate environmental impacts, conserve resources, and improve community well-being by using Mitr Phol Group's innovative products and technologies including.

1) One Million Tree Planting Project

Mitr Phol is initiated to conserving and restoring nature through its tree planting project, which aims to expand green spaces and enhance carbon absorption for local communities. The project targets the planting of one million trees over a 10-year period (2022–2035), with a total investment of 50 million baht. Activities include tree planting within the Company's own areas as well as promoting tree planting on community land in collaboration with farmers and residents through various programs. As of 2024, the project has achieved the following:



2) Mitr Volunteer Forest Planting Project at Phu Long

The Mitr Volunteer Forest Planting Project at Phu Long has been held annually since 2020. The project aims to raise awareness of forest conservation, promote environmental protection, and restore watershed forests, while also helping to prevent wildfires. It focuses on planting native tree species such as hopea ferrea, sappanwood, bungor, black rosewood, Siamese rosewood, teak, yang, and jambolan to rehabilitate forest areas damaged by fire. Over the past five years, a total of 25,000 trees has been planted across 16 hectares

Tree planting activity in Phu Long Forest in 2024, held at Wat Pa Mahawan,

Tha Mafai Wan Sub-district, Phu Khiao District, Chaiyaphum Province

***3)* Community Forest Project in Collaboration with the Mae Fah Luang Foundation**

Since 2023, Mitr Phol has partnered with the Mae Fah Luang Foundation to implement community forest projects covering 160 hectares in Amnat Charoen Province. This three-year initiative, with a budget of 2.7 million baht, aims to support local communities in sustainably managing and conserving forest areas, particularly as carbon sinks. Activities include strengthening community capacity in forest stewardship, establishing community forest
management funds to support forest protection measures, such as creating wildfire prevention lines, and developing guidelines for the sustainable use of community forests.

Target Area

160 hectares
Amnat Charoen Province

No recorded forest fire incidents in the area

Performance

2023

- Conducted forest surveys and trained communities in preparation for T-VER registration

2024

- Trained communities in forest fund management and registered the T-VER project

2025 Plan

- Collect and analyze forest data

Expected Outcome

- Restore **160** hectares of community forest
- Increase carbon sequestration, estimated at approximately **5.625** tons per hectare per year

4) Biodiversity Conservation Projects in Collaboration with Upstream

Panel Plus Co., Ltd., a subsidiary of Mitr Phol Group has undertaken biodiversity conservation projects in community forest areas. The initiative spans a protected area of **842.24 hectares** with monitoring conducted every five years for community forests. These projects aim to protect ecosystems, enhance biodiversity, and support sustainable community forest management. Significant locations include Thung Hua Mueang Community Forest and Ban Ton Sai Community Forest.

▲ Volunteer activity to build a check dam in Wang Nam Phung Watershed Forest

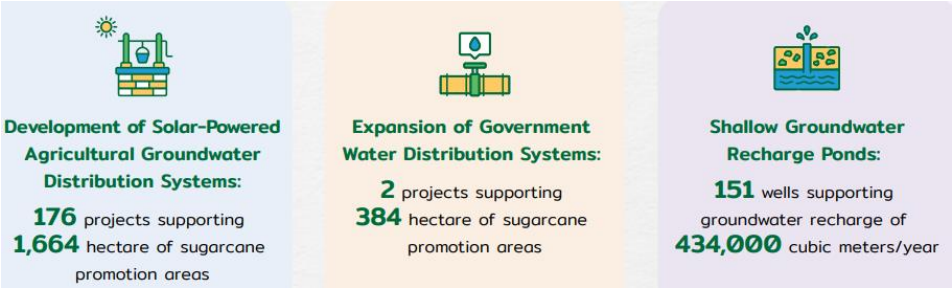
5) Development of Water Management for sugar cane farm

5.1 collaboration with Government Agencies

Mitr Phol has requested support for irrigation projects from the Royal Irrigation Department, the Land Development Department, the Department of Water Resources, the Department of Groundwater Resources, and the Ministry of Energy, covering over 3,200 hectare each year. The Company collects local farmers' needs, organizes meetings, establishes water user groups, and submits project requests via local administrative organizations. These requests are then reviewed by the Provincial Water Resources Subcommittee and included in the National Irrigation Development Plan. In 2024, Mitr Phol requested support for the following projects:

5.2 Grassroots economy promotion projects

Mitr Phol has responded to the policies of the Office of Policy and Criteria Promotion Commission through collaboration with local organizations to develop projects aimed at enhancing competitiveness and improving the quality of life for grassroots communities so that they become stronger and more self-reliant. In 2024, Mitr Phol sought support for the following projects:



These comprehensive approaches not only optimize water usage but also deliver significant nature-related benefits, such as supporting the hydrological cycle, improving soil moisture retention, and supporting biodiversity. By integrating advanced irrigation technologies with community-centered water management, Mitr Phol Group ensures sustainable agricultural practices while contributing to ecosystem resilience and community well-being.

Contract

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