



Content

006

Vice Chairman of the Board and Chairman of the Executive Committee's Message

008

About Mitr Phol Group

022

Stakeholder's Engagement

024

About This Report

032

Corporate Governance and Risk Management

048

Supply Chain Management

054

Customers and Consumers

060

Innovation

062

Human Resources Management

076

Human Rights

082

Occupational Health and Safety

086

Society and Communities

090

Water Management

094

Energy Management and Climate Change

100

Waste Management

102

Air Quality Management

106

Appendix







Growing Together, Forwarding to the Circular Economy

Mitr Phol Group commits to execute a business with social and environmental responsibilities to continuously create empowerment of economic and community. We also place great importance on Circular Economy Concept with the aim to effectively utilize the natural resources and emphasize the upcycling through the use of innovation and technology in order to a most efficient use of natural resources, along with balancing environment.

We believe that the development way with balancing economic, social and environment enables us to grow our business stably and sustainably.



Vice Chairman of the Board and Chairman of the Executive Committee's Message

Sustainable development is a topic that most organizations are placing a great importance on, as it is aligned with the Thai government's development strategy of the "BCG" economy (Bio Economy, Circular Economy, Green Economy). By adhering to these principles, it is hoped that economic and social development in conjunction with environmental protection will lead to a future of sustainable growth for the nation. Following this strategy will also help to bring about prosperity and security for farmers, who make up the majority of the Thai population.

In an effort toward transitioning to the BCG economic focus, at Mitr Phol Group, we have embraced the concept of "creating value for a sustainable life" in our business operations by incorporating innovation to increase productivity and add value to sugar cane. From end to end, we integrate sustainability into our operations, starting from promoting the "Mitr Phol ModernFarm" method to boost productivity of our raw materials, through to adding value to sugar byproducts by turning them into renewable and bio-based energy sources. This not only generates added value to an economic crop, but also minimizes waste.

Recognizing the importance of sustainable development, Mitr Phol Group has established a clear framework covering economic, social and environmental dimensions. Operating within the boundaries of good governance and promoting strong relationships with all stakeholders, our goals are aligned with and support the United Nations Sustainable Development Goals (UN SDGs). Mitr Phol Group's sustainable development frameworks are set as follows: to be a transparent and collaborative organization, to promote sustainable communities, and to support a thriving environment. These frameworks are driven by innovation and digital technology.

This year, keeping in mind the BCG economy principle, Mitr Phol Group developed new packaging for "Natural cane sugar" that uses all natural raw materials. The packaging is made from craft paper that is coated on the inside with special bio plastics made from plants. Completely bio-compostable, the packaging is an innovative step forward for the Thai sugar industry.



In addition to our continued commitment to creating quality products, Mitr Phol Group is working closely with our suppliers to enhance their quality of life. Through a collaboration with TMB Bank PCL, we have jointly introduced the E-Supply Chain Solution to solve pain points and improve payment systems for cane farmers. As part of the project, we have developed a digital wallet that links Mitr Phol Group, cane farmers, and TMB bank. The digital wallet helps to enhance the efficiency and precision of Mitr Phol Group's support to farmers to achieve sustainable growth.

From our performance throughout the past year, it is evident that we continue to drive our business toward sustainability via innovation and digital technology. Through this we can continue to improve management efficiency and generate added value throughout our supply chain for sugarcane, Thailand's key economic crop. Collaboration is also a key driving force, while good governance and responsibility toward all stakeholders underpin our operations. As always, we are proud to play our part in propelling sustainable development for the Thai economy, society and the environment.



Mr. Buntoeng Vongkusolkit

Vice Chairman of the Board
and Chairman of the Executive Committee
Mitr Phol Group





*About
Mitr Phol
Group*



Vision and Philosophy ⁽¹⁰²⁻¹⁶⁾

Vision

To be the world-class sugar and bio-based leader by combining our fully integrated agribusiness model with innovative technology and management talent to create value for better life for all.

Philosophy

Strive for
Leadership

Believe in the
Value of Human
Dignity

Stand Tall in
Fairness

Responsible
for Society



Culture ⁽¹⁰²⁻¹⁶⁾

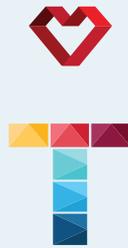
MITR beyond



Mastery



Innovation



Trustworthiness



Resilience



Further information



Strategic Directions ⁽¹⁰²⁻¹⁵⁾



Profitable Growth

Developing value-added products by promoting growth in the sugar industry, bio-based goods and food ingredients.



Competitiveness

Creating a sustainable model of competitiveness through enhancing efficiency, effective and continuous cost controls, collaboration with world-class partners, and working with suppliers to co-develop products.



Sustainability

Forging collaboration with stakeholders in the development of communities, society and environmental protection. Operating with sustainable resource management and good governance.



World Class Organization

Achieving excellence by utilizing digital technology, promoting a corporate culture of innovation, exchanging knowledge, working as one team, and building agility to enhance organizational efficiency.



Modern Farming and Farming Practices

Committing to the development and promotion of modern farming practices and management, namely irrigation, cane species development, precision farming, and cane delivery systems to help cane farmers increase productivity.



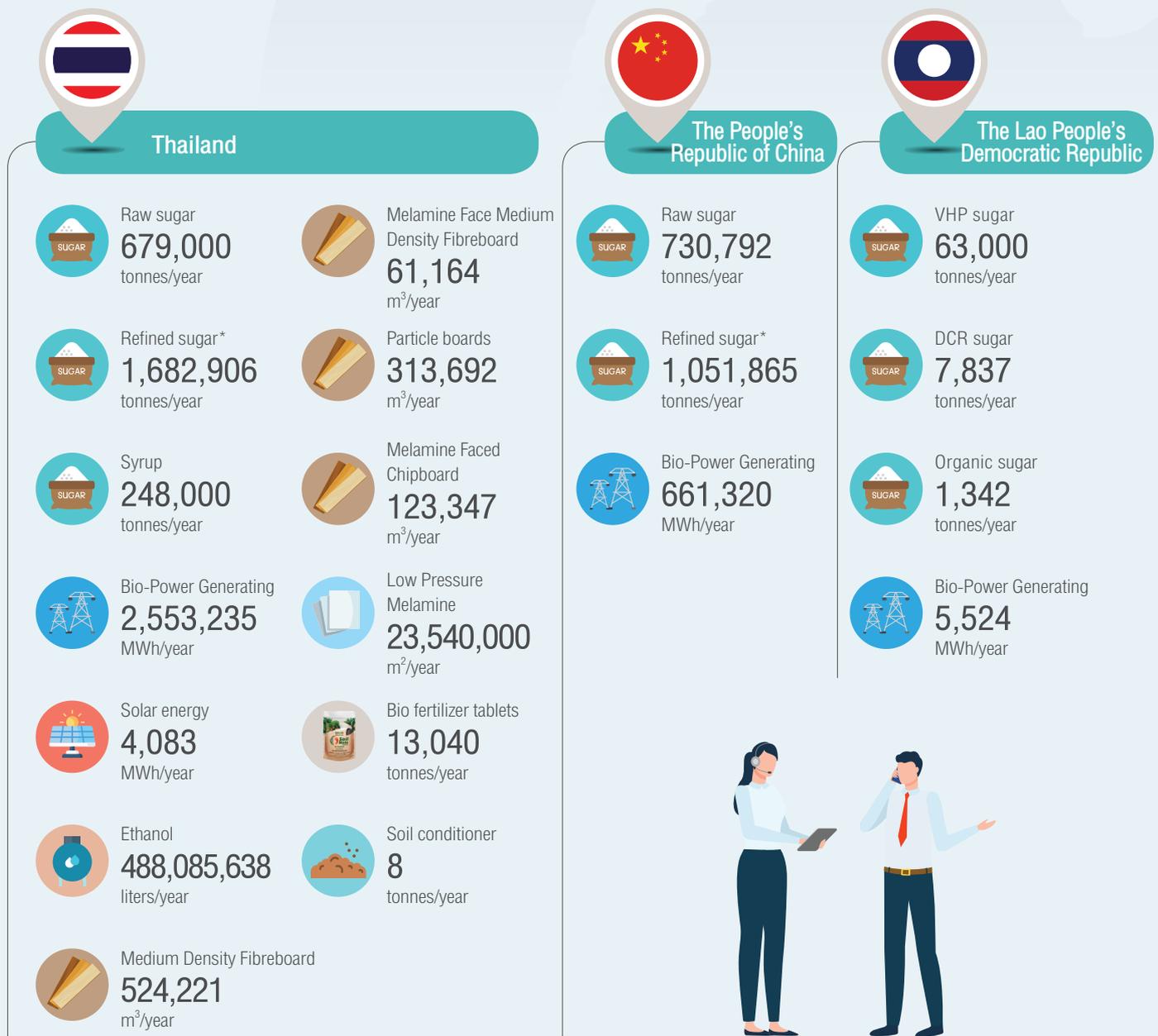
Best-in-Class Manufacturing

Utilizing best-in-class technology and innovation in manufacturing to deliver high-quality products, improve manufacturing processes and automation logistics throughout the value chain, and uplift safety and environmental protection standards.

About Mitr Phol Group ⁽¹⁰²⁻²⁾

Mitr Phol Group incorporates innovation and digital technology in our business operations to maximize productivity and add value to sugar cane. Under the "From Waste to Value" philosophy, we recognize the importance of seemingly invaluable materials and have expanded beyond the core sugar business into biopower, ethanol, wood substitutes, fertilizer, and biomass. Sustainable natural resources management is integrated into our business management, along with developing stakeholders within the value chain. Mitr Phol Group has continued to expand our business operations in Thailand and abroad. Currently, the company is the second largest sugar producer in the world and the biggest in Thailand. Our success reflects mutual growth and collaborative efforts to transition toward the circular economy.

Production Volume of Thai and Overseas Operations ⁽¹⁰²⁻⁷⁾



Remarks: * White sugar includes regular white sugar, refined white sugar, and extra refined white sugar.
 - VHP sugar refers to Very High Polarized raw sugar, a light brown raw sugar with a pol of more than 99.4%
 - DCR sugar refers to direct consumption raw sugar, a type of sugar that can be consumed without being Refined

Domestic Logistics and Warehouse Services ⁽¹⁰²⁻⁷⁾

Goods receipt and dispatch services

	United Standard Terminal	Aawthai Warehouse
Goods receipt capacity—bulk cargo (tonnes/hour)	350	350-400
Goods receipt capacity—bags (tonnes/hour)	125	150-200
Goods dispatch capacity—bulk cargo (tonnes/hour)	330	1,000
Goods dispatch capacity—bags (tonnes cranes/12 hours)	1,000	500
Container capacity (minutes/TEUs)	30-40	25



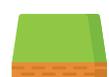
Port terminal services

	United Standard Terminal and Mitr Phol Warehouse	Aawthai Warehouse
Number of Terminals (ports)	1	1
Port width (meters)	133	350
Port depth (meters)	8.2	14
Deadweight tonnage (DWT)	25,000	60,000



Goods storage service

	United Standard Terminal	Mitr Phol Warehouse	Aawthai Warehouse
Number of Warehouses (warehouse)	13	5	15
Warehouse storage capacity (m ²)	45,384	17,769	112,466
Storage for liquids (tanks)	3	8	2
Storage capacity for liquids (metric tonnes)	21,618	23,904	24,000

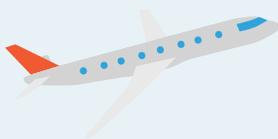


Free space

	United Standard Terminal and Mitr Phol Warehouse	Mitr Phol Warehouse
Free space (m ²)	41,416	17,463



Australia

Raw sugar
475,131
tonnes/year

Mitr Phol Group's Awards and Recognition for Sustainability ⁽¹⁰²⁻¹²⁾



Distinguished Awards

Mitr Phol Group received the 2019 Distinguished Award on Sustainable Development Excellence Award from the Thailand Management Association and the Sasin School of Management.



CSR-DIW Continuous Award 2019

The CSR-DIW Continuous Award from the Department of Industrial Works.



Sustainability Disclosure Award

Mitr Phol Group received the Sustainability Disclosure Award from the Thaipat Institute and the Securities and Exchange Commission.



SAM Sustainability Award 2020

Mitr Phol Sugar Corp.,Ltd. has been selected leading company in sustainability for food products and has received "Industry mover 2020" award by acquiring the highest increasing score compared to the previous year by SAM Corporate Sustainability Assessment which appears in SAM Sustainability Yearbook 2020.



NACC Integrity Award

Mitr Phol Sugar Corporation received the 2019 NACC Integrity Award from the Office of the National Anti-Corruption Commission.



Further information

Economic Performance

Mitr Phol Group's key business performance figures for 2019 are shown in the below table:

Economic Impact ⁽²⁰¹⁻¹⁾

Economic impact details	Million Baht
Direct economic value generated	
- Revenues	69,822
Direct economic value distributed	
- Operating costs	47,107
- Employee wages and benefits	5,926
- Payments to providers of capital	9,923
- Payments to government	125
- Community Investment	47
- Research and Development	232
Economic value retained	6,426

Mitr Phol Group's Tax Management ⁽²⁰⁷⁻⁴⁾

Mitr Phol Group believes that operating a business with good governance and transparency helps to bring about sustainable business growth and national progress. As such, the company ensures appropriate tax management, realizing that having such a policy is socially responsible and integral in promoting sustainable economic growth and national development. Wherever we operate our business, we are fully compliant with local tax laws and regulations, and are committed to being socially responsible and playing our part in bringing about progress. The company also provides channels for grievances and suggestions regarding tax issues. Full tax disclosures are included in the financial statements of sugar companies and our subsidiaries.

Mitr Phol Group has a tax planning and accounting department whose responsibilities include ensuring full compliance with government agencies and regulators. Tax advisors and regular training for relevant employees ensure tax competencies, skills, and knowledge so we can manage taxes with the highest level of efficiency.

Additionally, the company also has processes in place to manage tax risk and internal audits to mitigate any risk relating to taxes that could arise. Regular monitoring against KPIs ensures optimal efficiency. The Senior Executive Vice President Finance and Acting Chief Operations Officer Administrative group is responsible for overseeing Mitr Phol Group's tax strategy and policy together with external experts to ensure full legal compliance with tax-related laws and regulations.

Mitr Phol Group has good tax management practices and pays all relevant taxes, namely corporate income tax, withholding tax, specific business tax, stamp duties and other taxes including indirect taxes such as excise and value added taxes. Corporate income taxes are disclosed by country of operation and at actual rates. See the details below.

Corporate Income Taxes by Country of Operations ⁽²⁰⁷⁻⁴⁾

Unit: Million Baht

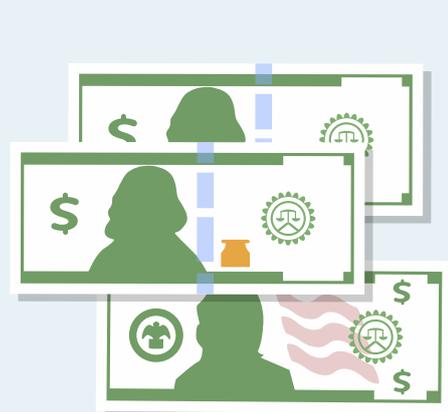
Country*	Revenue from sales and services		Operating profit before tax		Corporate income tax including deferred tax	
	2018**	2019**	2018**	2019**	2018**	2019**
Thai	63,344	59,603	4,821	8,493	-107	196
People's Republic of China	25,525	27,202	1,537	1,846	186	327
Lao People's Democratic Republic	785	910	-432	-565	-12	-11
Australia	5,394	4,143	-1,790	-1,645	-33	-33
Singapore	-	14	-	-3	-	-
United States	-	-	-1	-	-	-
Taiwan	-	-	-	-25	-	-
Others	-	-	-	-	-	-
Total	95,048	91,872	4,135	8,101	34	479

Remarks: * Country in which Mitr Phol Group there is a production unit in operation.

Referring to tax payment according to country in which Mitr Phol Group there is a production unit in operation.

** Data from year 2018-2019 was collected from January 1 to December 31 each year.

- Revenue from sales and services: The returns that the company receives from the sale of products or services as normal of the business including other rewards that is not caused by normal operations profit and loss statement.
- Operating profit before tax: Operating profit which does not include income tax and financial costs.
- Corporate income tax including deferred tax: Corporate income tax expenses and deferred income tax.
- The table above indicates that Revenue of Mitr Phol Group is the income derived from operations in Thailand, accounting for approximately 65% of the company's operations in Thailand. Most of them receive tax exemption benefits and double deduction from the Board of Investment.
- Tax exemption benefits under BOI are categorized in three main areas:
 1. Corporate income tax exemption (tax holiday) for a period of 8 years
 2. 50% reduction of corporate income tax for additional 5 years
 3. Double deduction of transportation, electricity and water costs from corporate taxable income for 10 years.
- The scope of this data includes Thailand and other countries with Mitr Phol operations, and therefore is different from the tax reporting within the 2019 financial statements, which only includes Thailand.



Effective Tax Rate

Financial Reporting	2018*	2019*	Calculated Average
Earning before Tax (EBT) (Million Baht)	952.07	4,955.92	
Reported Taxes (Million Baht)	32.65	478.68	
Reported Tax Rate (In%)	3.43	9.66	8.65
Cash Taxes Paid (Million Baht)	820.82	906.52	
Cash Tax Rate (In%)	86.21	18.29	23.91

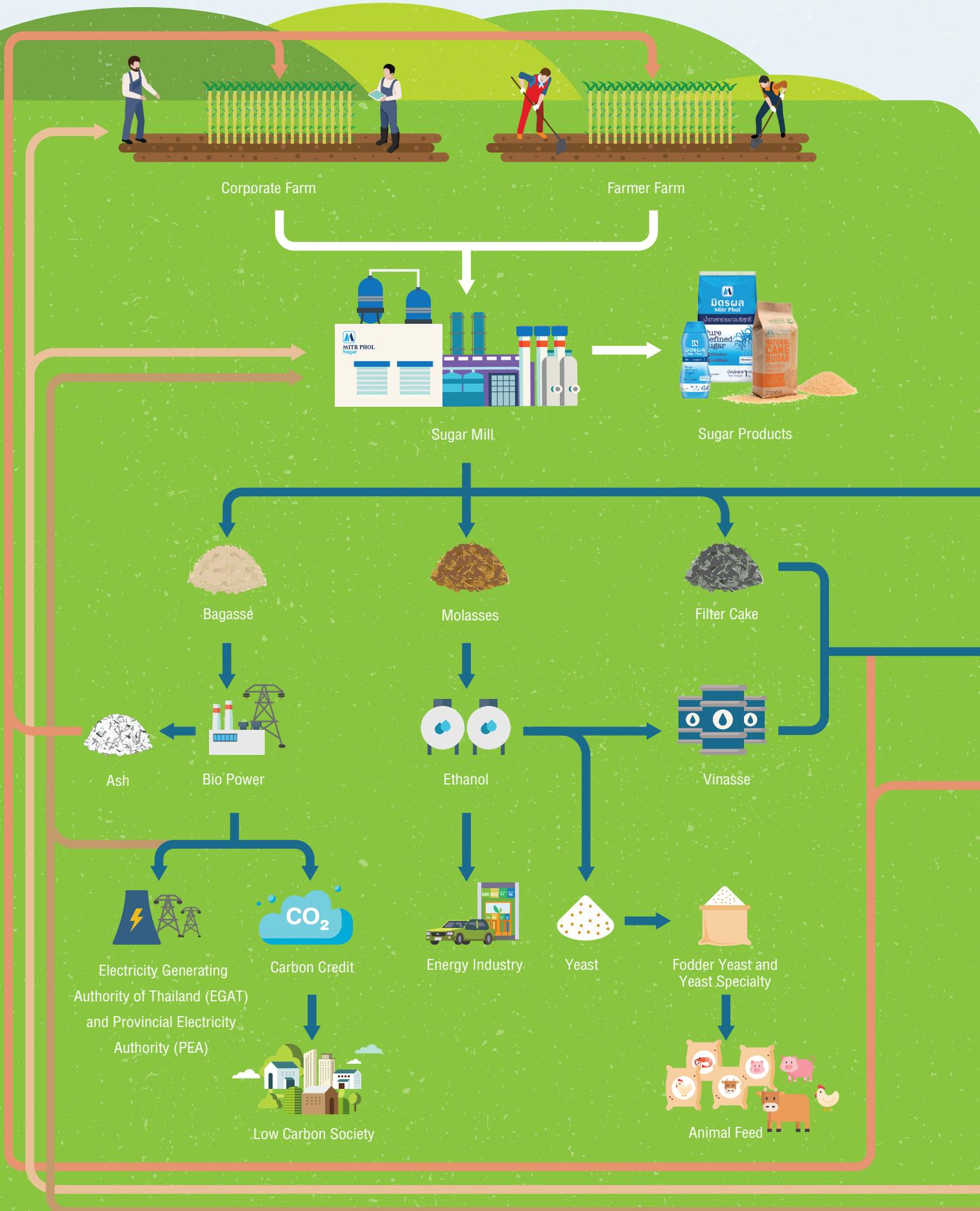
Remarks: ** Data from year 2018-2019 was collected from January 1 to December 31 each year.

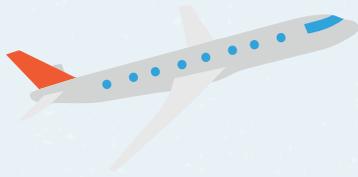
Applicable corporate income tax rates

- The corporate income tax rates used in remark 39 for the 2019 financial statements (remark 40 in 2018 financial statements) are lower than the average corporate income taxes in each country of investment, as some revenues are exempt from corporate income tax calculations. For example, in Thailand the actual tax rates are 20% lower than the corporate income tax rate because the company received a corporate income tax waiver due to its registration with the International Business Center (IBC). The actual tax rate will differ year to year. Due to the actual time period that the tax benefits and the actual period of operation are different businesses that operate in most countries are exempt from taxes such as the sugar business group, energy business group, wood substitution materials, etc.
- Some subsidiaries receive benefits as those who receiving investment by the Investment Promotion Act B.E. 2520, in various businesses such as energy business, wood substitute business which is exempted from corporate income tax for the net profit derived from the promoted operations according to the time and conditions specified in each investment promotion card and receive 50% corporate income tax deduction for the net profit derived from the promoted business for a period of 5 years from the expiration of the tax exemption period.
- Some types of expenses that can deduct more than one tax expense, such as training fees, technology research and development (R&D).



Mitr Phol Value Chain ⁽¹⁰²⁻⁹⁾



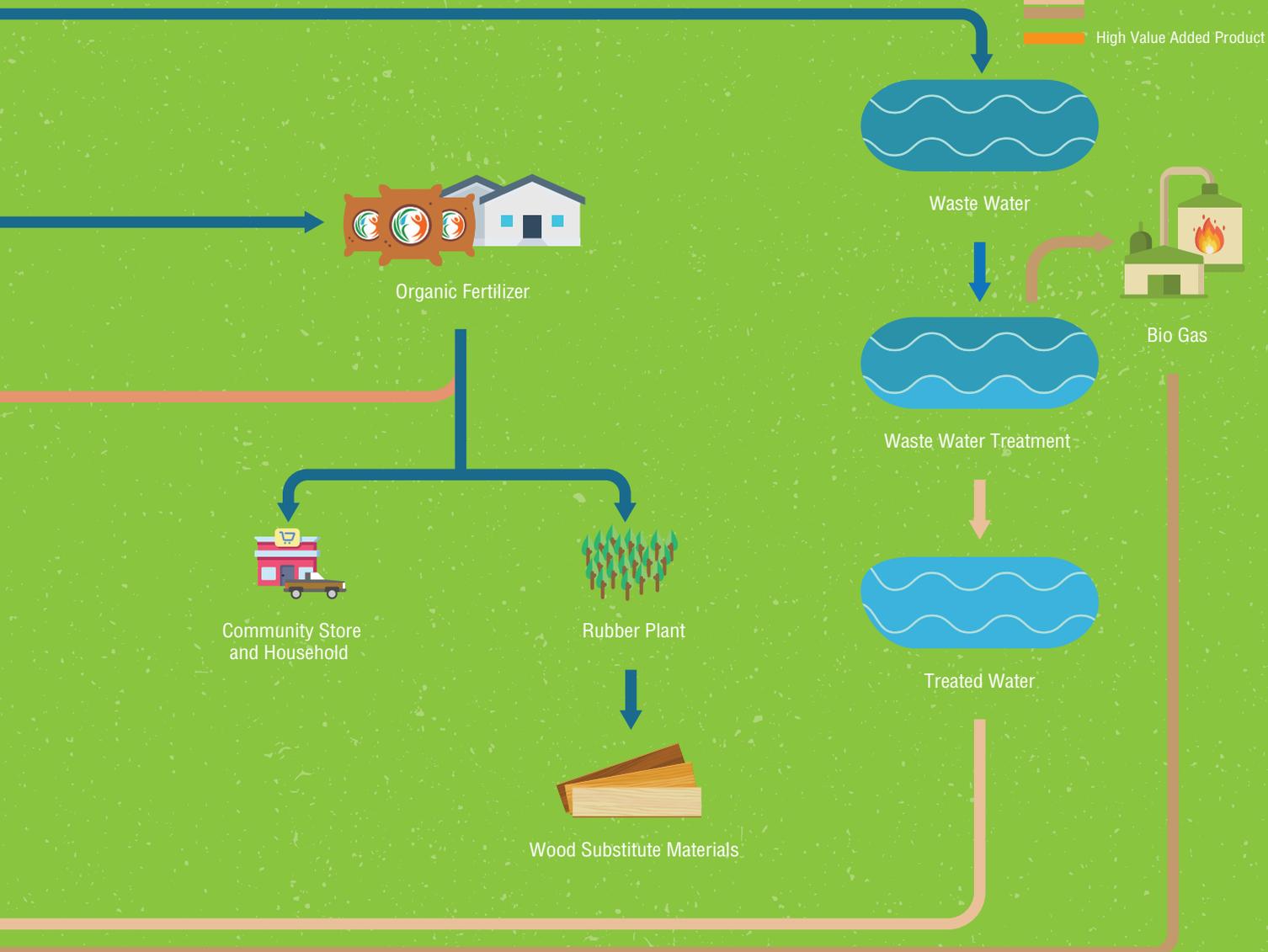


Mitr Phol Group
has strived to extend
the bio-based industry
for adding value



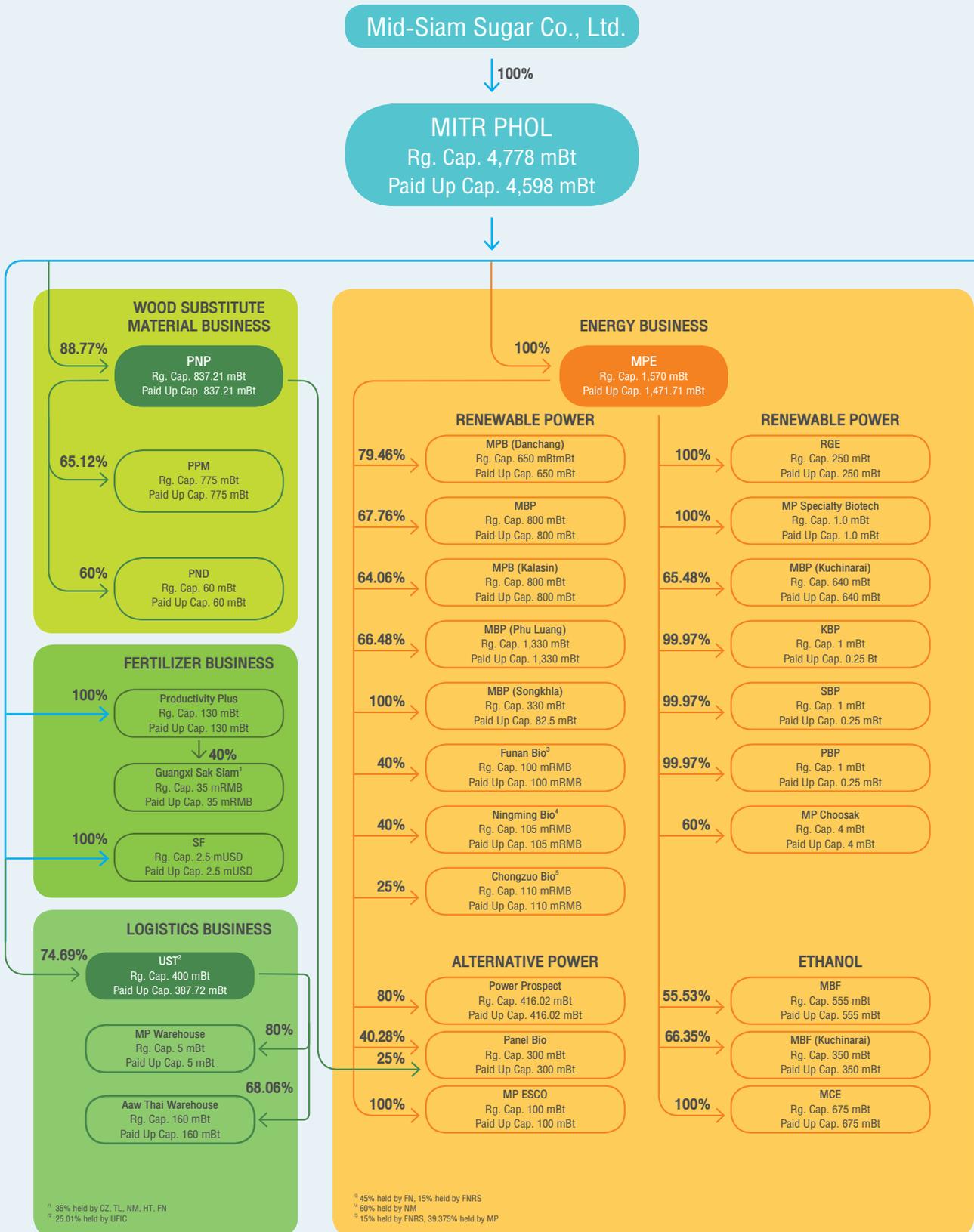
Remark;

- Products
- Co-products
- Utilizations
- High Value Added Product



Mitr Phol Group's Shareholding Structure ⁽¹⁰²⁻³⁾ (102-5)

As of October 31, 2019, Mitr Phol Sugar is registered as a company limited, with business registration number 0105518011759. The headquarters is located at 2 Ploenchit Center, 3rd Floor, Sukhumvit Road, Klongtoey, Bangkok 10110, Tel: +66 2794 1000, Fax: +66 2656 8494, Web: <http://www.mitrphol.com>.



¹ 35% held by CZ, TL, NM, HT, FN
² 25.01% held by UFIC

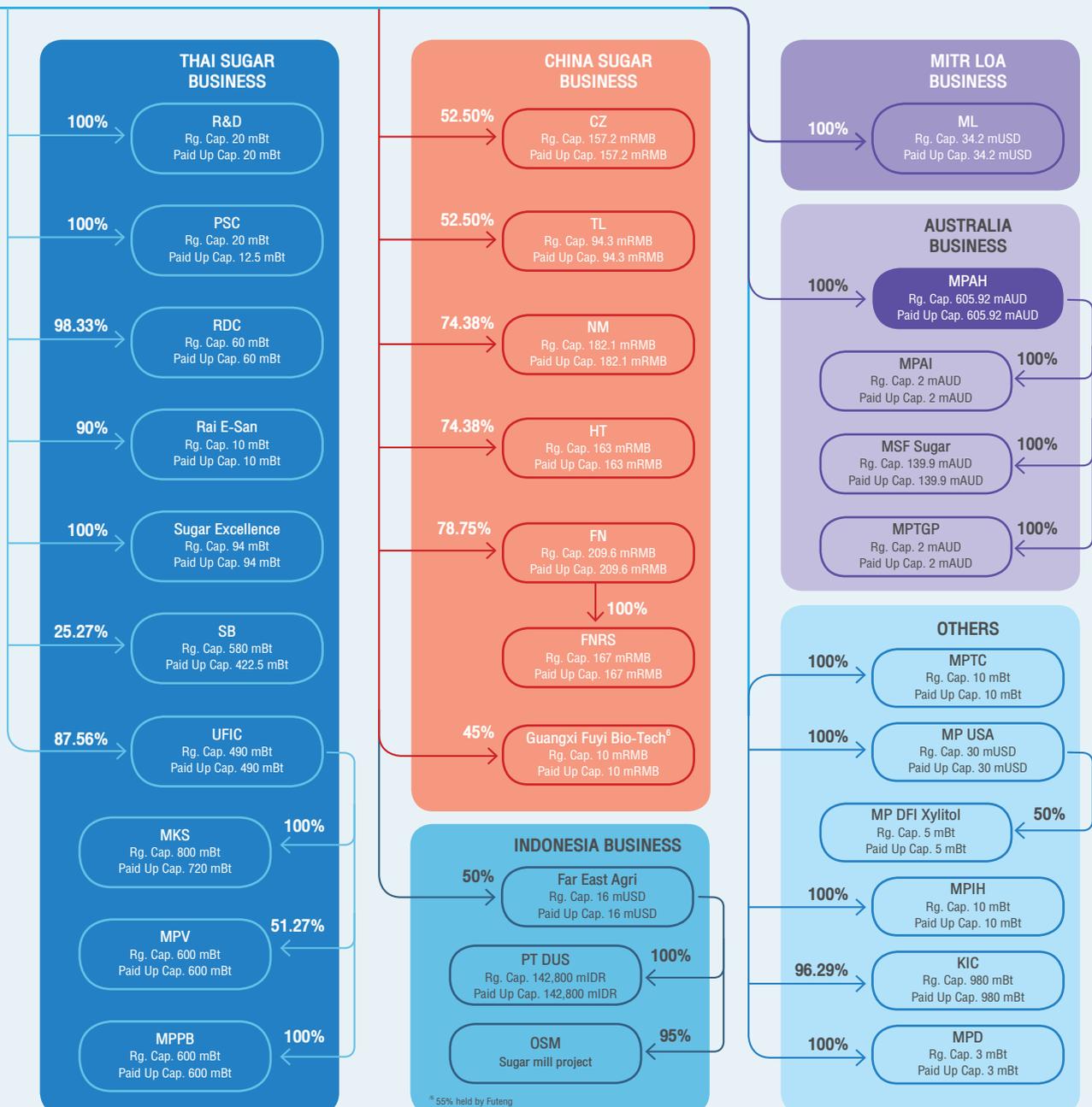
³ 45% held by FN, 15% held by FNRS

⁴ 80% held by NM

⁵ 15% held by FNRS, 39.375% held by MIP

Mitr Phol Group is no shareholders who are government, with Mitr Siam Co., Ltd. holds 47,779,994 shares out of 47,780,000 shares which is 99.99% of Mitr Phol Sugar Co., Ltd. Every share has the right to vote equally. Mitr Siam has major shareholders as following: total share of major shareholders is 20.65%:

- Mr. Isara Vongkusolkit Chairman of Mitr Phol Group
- Mr. Kamol Vongkusolkit Honorary Advisor of Mitr Phol Group
- Mr. Soonthorn Vongkusolkit Honorary Chairman of Mitr Phol Group





Mitr Phol Group places great importance on stakeholder groups. We ensure regular communication through appropriate channels to promote an understanding about important issues and listen to their feedback and suggestions, which are valuable for the company's decision making and strategic planning. By doing so, we believe that the company will achieve sustainable growth.

We review, and analyzes the impact to stakeholders throughout the value chain. The company's management takes part in the selection process of relevant stakeholders. Currently, there are major seven groups of stakeholders⁽¹⁰²⁻⁴⁰⁾, namely: shareholders, cane farmers, communities, customers and consumers, employees, the government and civil society sector, and suppliers.



Further information



*About
This Report*

Mitr Phol Group publishes the sustainability report on an annual basis to disclose to stakeholders the company's performances in all three dimensions of sustainability, namely economic, social, and environmental. The company published a sustainability report every year since 2013, this report has been prepared in accordance with the GRI Standards: Core option.⁽¹⁰²⁻⁵⁴⁾

Scope of This Report ^{(102-49) (102-50) (102-52)}

This report covers the performance and operations of Mitr Phol Group's companies and subsidiaries in Thailand between November 1, 2018 and October 31, 2019. The report divides Mitr Phol companies and subsidiaries into seven distinct groups: farming business (two companies), sugar business (eight companies), renewable energy business (fifteen companies), wood substitute materials business (four companies), fertilizer (one company) logistics and warehouse business (three companies), and other business (five companies). The scope of this report covers performances in the economic, social, and environmental dimensions of sustainability at 100%, 99.95% and 100% of Mitr Phol Group's revenues in Thailand, respectively.

List of Companies within the Scope of This Report ^{(102-46) (102-49)}

Business/company ⁽¹⁰²⁻⁴⁵⁾	Economic performance	Environmental performance				Social performance	
		Energy	Water	Waste	Air	Safety	Human Resources
Farming business							
Rai Dan Chang Co., Ltd.	•	•	•	•	•	•	•
Rai E-Sam Co., Ltd.	•	•	•	•	•	•	•
Sugar business							
Mitr Phol Sugar Corp., Ltd.	•	•	•	•	•	•	•
Singburi Sugar Co., Ltd.	•	•	•	•	•	•	•
United Farmer and Industry Co., Ltd.	•	•	•	•	•	•	•
United Farmer and Industry Co., Ltd. (Mitr Phu Viang branch)	•	•	•	•	•	•	•
United Farmer and Industry Co., Ltd. (Mitr Phu Luang branch)	•	•	•	•	•	•	•
Mitr Kalasin Sugar Co., Ltd.	•	•	•	•	•	•	•
Pacific Sugar Corp., Ltd.	•	•	•	•	•	NA	•
Mitr Siam Sugar Co., Ltd.	•	NR	NR	NR	NR	NR	NR
Renewable Energy business							
Electricity business							
Mitr Phol Bio-Power (Dan Chang) Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Bio-Power Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Bio-Power (Phu Viang) Co., Ltd.	•	•	•	•	•	•	•

Business/company ⁽¹⁰²⁻⁴⁵⁾	Economic performance	Environmental performance				Social performance	
		Energy	Water	Waste	Air	Safety	Human Resources
Mitr Phol Bio-Power (Kalasin) Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Bio-Power (Phu Luang) Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Bio-Power (Kuchinarai) Co., Ltd.	•	•	•	•	•	•	•
Ethanol business							
Mitr Phol BioFuel Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol BioFuel (Chaiyaphum) Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol BioFuel (Kalasin) Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol BioFuel (Kuchinarai) Co., Ltd.	•	•	•	•	•	•	•
Bio Chemical business							
Rachasima Green Energy Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Specialty Biotech Co., Ltd.	•	•	•	•	•	•	•
Maesod Clean Energy Co., Ltd.	•	•	•	•	•	•	•
Alternative business							
Mitr Phol Energy Services Co., Ltd.	•	•	•	•	•	NA	•
Power Prospect Co., Ltd.	•	•	•	•	•	•	•
Wood substitute materials business							
Panel Plus Co., Ltd.	•	•	•	•	•	•	•
Panel Decor Co., Ltd.	•	•	•	•	•	•	•
Panel Plus MDF Co., Ltd.	•	•	•	•	•	•	•
Panel Plus Bio-Power Co., Ltd.	•	•	•	•	•	•	•
Fertilizer business							
Productivity Plus Co., Ltd.	•	•	•	•	•	•	•
Logistics and warehouse business							
United Standard Terminal Public Co., Ltd.	•	•	•	•	•	•	•
Mitr Phol Warehouse Co., Ltd.	•	•	•	•	•	•	•
Aawthai Warehouse Co., Ltd.	•	•	•	•	•	•	•
Other businesses							
Mitr Phol Sugarcane Research Center Co., Ltd.	•	•	•	•	•	NA	•
Mitr Phol Development Co., Ltd.	•	•	•	•	•	NR	•
Mitr Phol Treasury Center Co., Ltd.	•	NR	NR	NR	NR	NR	•
MP-DFI Xylitol Co., Ltd.	•	NR	NR	NR	NR	NR	•
Khonkaen Innovation Center Co., Ltd.	•	NA	NA	NA	NA	NA	•

Remarks: NA (Not Available) - Information is not available.

NR (Not Relevant) - Information is not relevant.

Identifying Materiality and Scope of Report

Mitr Phol Group has selected sustainability topics that are relevant to the group's business operations by studying global sustainability concerns in economic, social and environmental dimensions. The following criteria was used to select the topics:

- Importance of the topics to the global food and beverages industry.
- Mitr Phol Group's strategic plans, which are reviewed on an annual basis.
- Stakeholders' expectations of Mitr Phol Group
- Relevancy to topics covered in Mitr Phol Group's previous sustainability report in 2018.
- Sustainability topics relevant to sustainability assessment criteria of international organizations.

By the process of selecting important issues and boundaries of impact with 4 steps together with details of operations as follows:

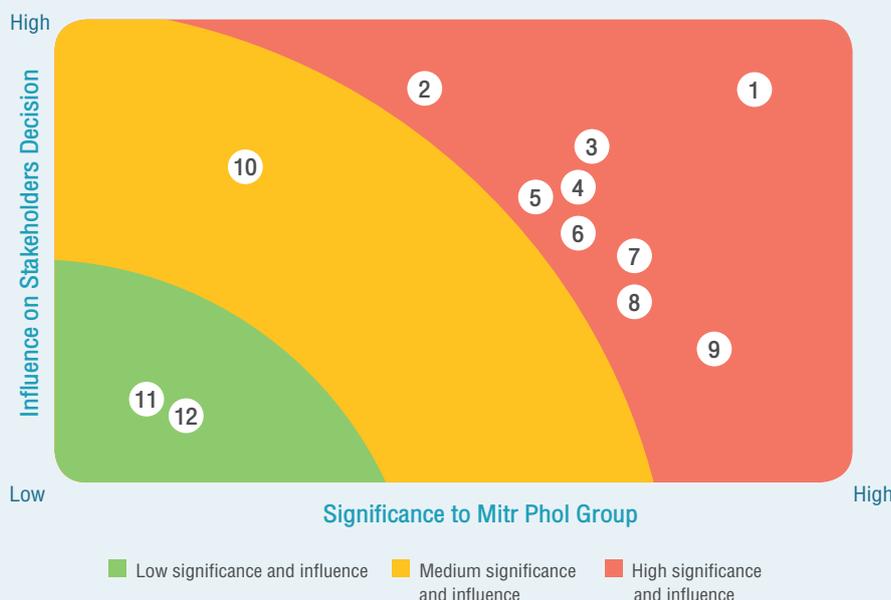
Step One: Identification

The Sustainable Development department gathered key sustainability topics by analyzing information including global trends, sustainability topics relevant to sustainability assessment criteria of international organizations, material topics from 2018, and relevancy with material topics reported by eight global food and beverages companies. The team selected relevant information in order to identify Mitr Phol Group's material topics.

Step Two: Prioritization

The sustainability topics identified in step one were then prioritized using the materiality test to evaluate two perspectives: the level of influence to stakeholders' assessment and decision making, and the level of importance to Mitr Phol Group's economic, social, and environmental impact. This process is achieved in collaboration with the company's sustainability consultants.

Results of the Materiality Test ⁽¹⁰²⁻⁴⁷⁾



1. Climate Change and Water Resources Management
2. Human Rights
3. Occupational Health, Safety, and Environmental Management.
4. Sustainable Value Chain Management.
5. Employee Welfare and Development.
6. Corporate Governance and Risk Management
7. Innovation Management
8. Contributions to Society
9. Packaging
10. Health and Nutrition
11. Stakeholder Engagement
12. Customer Relationship Management

Step Three: Scoping Materiality

Mitr Phol Group developed a scope of 12 key topics to be covered in this report by working closely with relevant departments and stakeholder groups to determine topics that were significant to them.

Topic ⁽¹⁰²⁻⁴⁷⁾	Material aspects	Scope of impact ⁽¹⁰²⁻⁴⁶⁾												
		Internally						Externally						
		Farming business	Sugar business	Renewable Energy business	Wood substitute materials business	Fertilizer business	Logistics and warehouse business	Other businesses	Shareholders	Cane farmers	Communities	Customers and consumers	Government/civil society organizations	Suppliers
Stakeholder's engagement	Stakeholder's Engagement	•	•	•	•	•	•	•	•	•	•	•	•	•
Corporate Governance and Risk Management	Corporate Governance and Risk Management	•	•	•	•	•	•	•	•	•	•	•	•	•
Sustainable Supply Chain Management	Sustainable Supply Chain Management	•	•	•	•	•	•	•	NR	•	•	•	•	•
Customers and Consumers	Health and Nutrition	•	•	NR	•	NR	NR	•	NR	NR	NR	•	•	NR
	Customer Relationship Management	•	•	•	•	•	•	NR	NR	NR	NR	•	NR	NR
Innovation	Innovation Management	•	•	•	•	•	•	•	•	•	•	•	•	•
Human Resources Management	Employee Welfare and Development	•	•	•	•	•	•	•	NR	NR	NR	NR	NR	NR
Human Rights	Human Rights	•	•	•	•	•	•	•	•	•	•	•	•	•
Occupational Safety and Occupational Health	Occupational Health, Safety, and Environment	•	•	•	•	•	•	•	NR	•	•	•	•	•
Society and Communities	Contributions to society	•	•	•	•	•	•	•	•	•	•	•	•	•
Energy Management and Climate Change	Occupational Health, Safety, and Environment	•	•	•	•	•	•	•	•	•	•	•	•	•
	Climate Change and Water Resources Management	•	•	•	•	•	•	•	NR	•	•	•	•	•
Water management	Occupational Health, Safety, and Environment	•	•	•	•	•	•	•	•	•	•	•	•	•
	Climate Change and Water Resources Management	•	•	•	•	•	•	•	NR	•	•	•	•	•
Waste management	Occupational Health, Safety, and Environment	•	•	•	•	•	•	•	•	•	•	•	•	•
	Packaging	•	NR	NR	•	•	NR	NR	•	NR	NR	•	•	•
Air quality management	Occupational Health, Safety, and Environment	•	•	•	•	•	•	•	•	•	•	•	•	•

Remark: NR (Not Relevant) – Information is not relevant.

Step Four: Reviewing

The Sustainable Development Department, Corporate Sustainability Division reviews the topics before proposing them to Mitr Phol Group's sustainability committee to review and approve the company's material topics.

Information Enquiry ⁽¹⁰²⁻⁵³⁾

If you require more information or would like to make a suggestion, please contact: Sustainable Department, Corporate Sustainability Division Mitr Phol Sugar Corp., Ltd. 2 Pleonchit Center, 3rd Floor, Sukhumvit Road., Klongtoey, Bangkok 10110, Tel: +66 2794 1651.

Sponsorships and Membership in Organizations ⁽¹⁰²⁻¹³⁾

Mitr Phol Group provides sponsorships to and is a member of multiple organizations.

Part 1: Topics/Issues Allocated the Highest Financial Support from Mitr Phol Group

2019

The development of cane, sugar, and biopower industries in Thailand

The company's role	Supporter
	<p>The company participated in and provided support to several organizations responsible for the development of the cane, sugar, and biopower industries in Thailand. The financial support helps to ensure a more systemic and efficient operation and strengthen collaboration between the public and private sectors in Thailand in order to increase the domestic industries' competitiveness in the global arena.</p> <p>In addition, the company also played a part in the governance of the cane and sugar industries by ensuring the stability of domestic supply and prices of sugar in order to incentivize local cane farmers to continue to grow cane, thereby resulting in an adequate supply of sugar to meet domestic demand. Mitr Phol Group also collaborated with other members to reduce our collective environmental impact by promoting fresh cane cutting, discouraging cane burning, and eradicating forced labor.</p>

National research and development

The company's role	Supporter
	<p>Both the cane and sugar industries are key drivers of Thailand's economy and are incorporated into the country's economic policies and strategic development plans. As such, Mitr Phol Group places great importance on providing continuous support to research institutes responsible for promoting and supporting policy research relevant to national development and long-term plans that will drive Thailand's social and economic progress. The company analyzes research data to help shape business strategy to promote sustainable growth.</p>

Part 2: Other Financial Support Provided to Top Three Recipients

2019

Organization	Thai Sugar Millers Corporation Limited (TSMC)
Type	Trade association
Objectives	<p>TSMC works as a representative of the domestic cane and sugar industries to propose policies to the government. TSMC was established as a central organization with the following objectives: enhancing work efficiency, developing systems for fast and effective communications, driving systemic collaboration across the cane and sugar industries, making plans and establishing shared targets, coordinating between factories and other relevant departments to solve industry problems, increasing competitiveness on the global level, ensuring fairness for all sides in benefit-sharing schemes, and supporting the growth of the Thai economy.</p> <p>Mitr Phol Group became a TSMC member and gained its representation in the Office of the Cane and Sugar Board appointed by law. Through the Board, Mitr Phol Group plays a role in the governance of the domestic cane and sugar industries to ensure stability and balance of supply and demand for sugar in Thailand. By doing so, we help to ensure cane farmers receive appropriate returns on investment, thereby providing incentives for them to continue to grow cane. Consumers also benefit from having an adequate supply of sugar without shortages in the market. Mitr Phol Group also works with the network to reduce environmental impact by promoting fresh cane cutting, discouraging cane burning, and prohibiting illegal labor.</p>
Amount (THB)	6,469,580

2019	
Organization	Thailand Development Research Institute (TDRI)
Type	Nonprofit Organization/Foundation
Objectives	Mitr Phol Group became a member of the Thailand Development Research Institute mandated to conduct policy research to drive national development. Mitr Phol Group plays an active role in suggesting and taking part in providing ideas to support and apply research and analysis in formulating long-term policies that contribute to the economic and social development in Thailand. Through the membership, Mitr Phol Group gains access to a vast amount of useful and insightful information used for analysis and the planning of relevant business units.
Amount (THB)	500,000
Organization	Thai Sugar and Bio-Energy Producers Association (TSEA)
Type	Trade association
Objectives	Mitr Phol Group became a member of TSEA to take part in improving production efficiency for sugar and bioenergy in Thailand to enhance their competitiveness on the global level. In addition, the association acts as the central organization in facilitating the exchange of information and represents the industry in working with the government sector to promote sustainable growth for the sugar and bioenergy industries in Thailand.
Amount (THB)	1,136,800

In addition, Mitr Phol Group is a founding member of the Global Compact Network Thailand (GCNT). The Global Compact Network Thailand is a significant project under the United Nations, promoting companies around the world to plan policies in line with the Ten Principles in their operations to ensure sustainable development. The Ten Principles of the United Nations Global Compact cover four key areas: human rights, labor, environment, and anti-corruption. The GCNT was established in late 2018 to help facilitate efforts toward achieving the United Nations Sustainable Development Goals in Thailand.

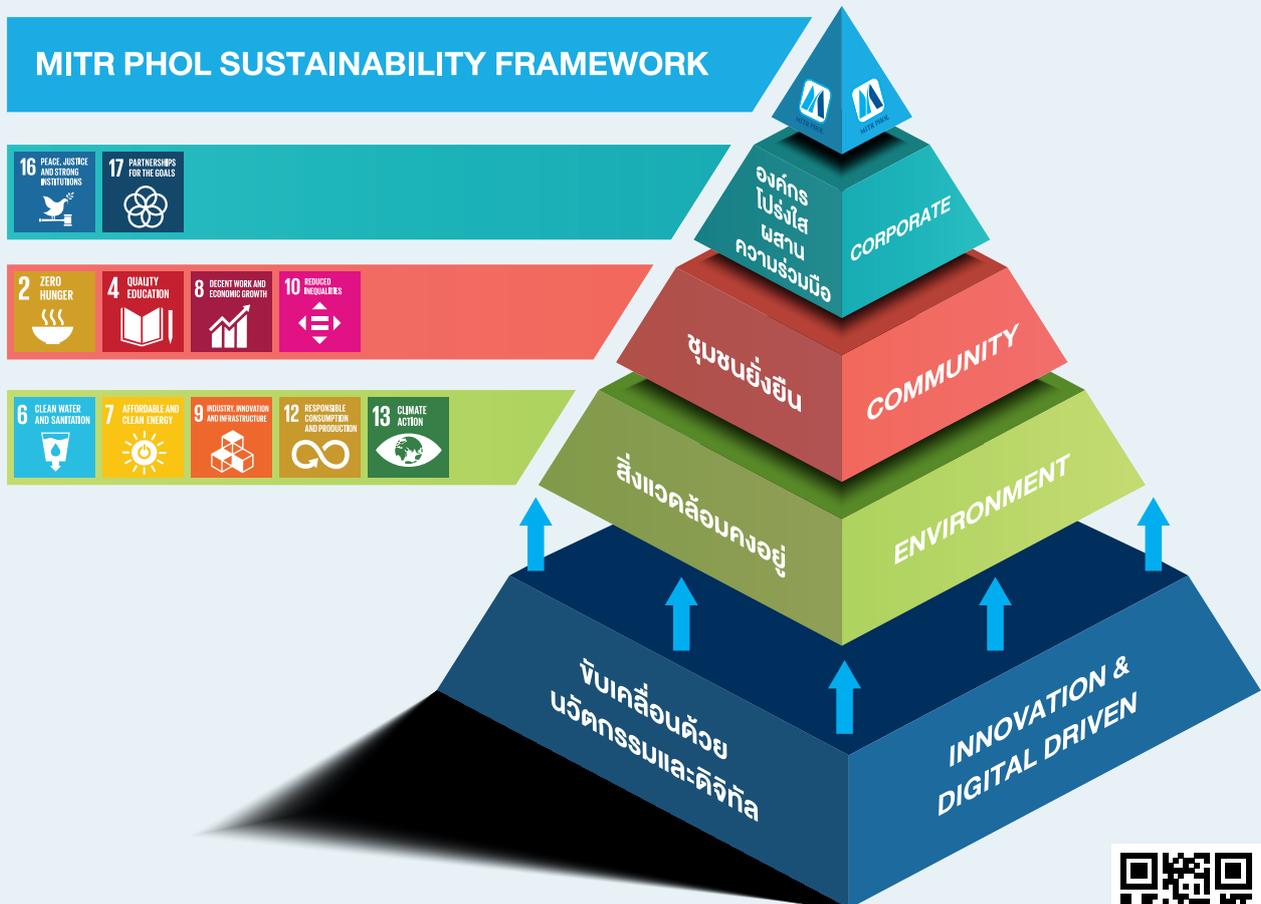
Mitr Phol Group has shown its commitment to the United Nations Global Compact through the following initiatives:

UNGC scope and principles	Actions
<p>Scope Applying the 10 principles to business operations.</p>	<ul style="list-style-type: none"> • Mitr Phol Group's strategies • Mitr Phol Group's sustainability policy • Sustainable supply chain management
<ol style="list-style-type: none"> 1. Businesses should support and respect the protection of internationally proclaimed human rights. 2. Businesses should make sure that they are not complicit in human rights abuses 	<ul style="list-style-type: none"> • Human rights policy
<ol style="list-style-type: none"> 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. 4. The elimination of all forms of forced and compulsory labor. 5. The effective abolition of child labor. 6. The elimination of discrimination in respect to employment and occupation. 	<ul style="list-style-type: none"> • Personnel management policy • Human resources management • Occupational health and safety • Human Rights • Human rights policy • No discrimination in respect to employment, using an efficient and fair recruitment system
<ol style="list-style-type: none"> 7. Businesses should support taking a precautionary approach to environmental challenges. 8. Businesses should undertake initiatives to promote greater environmental responsibility. 9. Businesses should encourage the development and diffusion of environmentally-friendly technologies. 	<ul style="list-style-type: none"> • Environmental management policy • Environmental profit & loss accounting
<ol style="list-style-type: none"> 10. Businesses should work against corruption in all its forms, including extortion and bribery. 	<ul style="list-style-type: none"> • Good governance and anti-corruption policy



Mitr Phol Group and other leading organizations in Thailand jointly unveiled the Global Compact Network Thailand (GCNT) to collaborate on driving economic, social and environmental sustainability. The United Nations Global Compact has more than 13,000 members across 160 countries.

Mitr Phol Group also supports 11 out of 17 United Nations Sustainable Development Goals (UN SDGs) through the Mitr Phol Sustainability Framework, which covers the economic, social, and environment dimensions, ensuring better efficiency in driving sustainable development.



Further information



*Corporate
Governance
and Risk
Management*

Over the past 60 years, Mitr Phol Group has operated its business with integrity and advanced to become a world leader in its industry. We adhere to fairness as a foundation that delivers sustainable business growth. The Group emphasizes good corporate governance in accordance with Mitr Phol's philosophy and corporate culture, which remains to be the operation guidelines for all stakeholders.

Mitr Phol Group's policy and guidelines comply with good governance operations. The Board of Directors, executives, and employees are required to acknowledge and abide by these principles. Therefore, it is definite that Mitr Phol Group adheres to good governance with efficient management, transparency, and accountability. Moreover, the Group takes into consideration its investors and stakeholders while continuing to strengthen trust and firmly contributing to sustainable business growth.



See the Corporate Governance Policy

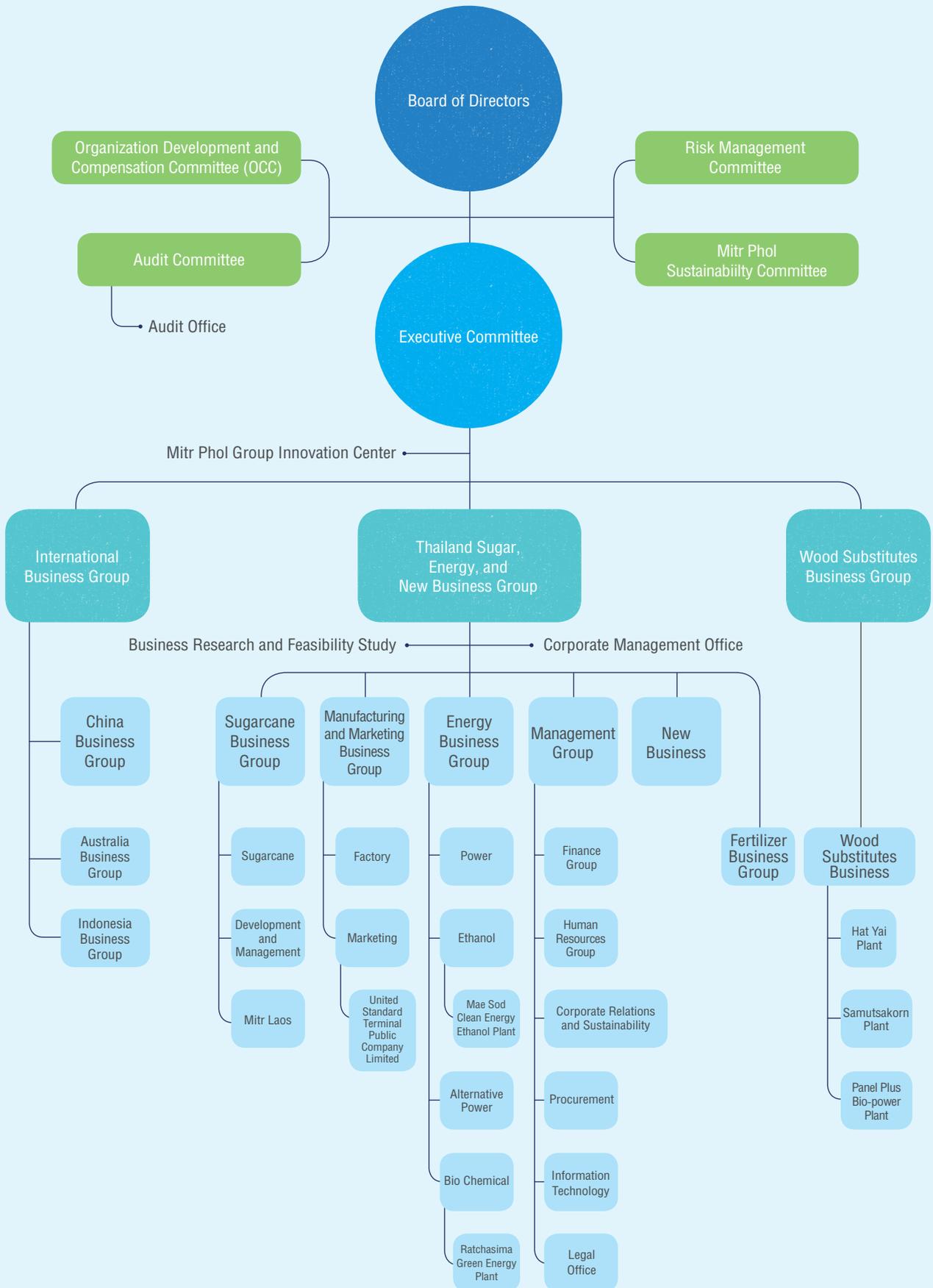
Mitr Phol Group's Corporate Management Structure ⁽¹⁰²⁻²⁶⁾

Mitr Phol Group's Board of Directors and Executive Board have clearly defined roles. The Board of Directors consists of 13 members who are responsible for establishing the Group's vision, mission, strategies, policies, guidelines, and internal management systems. The Board's roles also involve monitoring to overseeing executives' operations to ensure continuous business

growth. Mitr Phol Group holds board meetings at least six times annually to report business operations and seek approval on important issues. Also, general meetings of shareholders are held on an annual basis to report the Group's performance and future operation plans.



Mitr Phol Group's Organization Structure ⁽¹⁰²⁻¹⁸⁾



Selection of the Board of Directors

Realizing the important role of the Board of Directors plays in Mitr Phol Group's business and its sustainable development, the Group's policy dictates that there must be no fewer than nine board members. Each year, one-third of the members must vacate their positions (according to the company's regulations). Each director can hold a similar position in no more than four other companies and must attend the at least 90% of the board meetings. At least seven days prior to each meeting, the company secretary will circulate an invitation notice that states the complete agenda to all board members. The detailed minutes approved by all board members are kept for auditing purposes. In the previous year, the meeting attendance rate was 90.16%.

Governance Performances

At Mitr Phol Group, we adhere to a corporate philosophy that is in line with good governance. The Group places great importance on efficient operations, transparency, and accountability, as well as the fair treatment of all stakeholders. These principles are driven by employees who adhere to good conduct in accordance with the Mitr Phol Code of Conduct and corporate culture. This in turn contributes to stable and sustainable business development.

Moreover, for a sense of unified communication and mutual understanding, the Group has established written versions of policies and guidelines relating to good governance, such as Good Governance and Anti-Corruption policies. At the same time, the Group encourages all board directors, executives, and employees to acknowledge and understand Mitr Phol Group's Good Governance policies and extend the communication to external stakeholders via various channels, such as internal training sessions, printed materials, and the company website.

See the Anti-Corruption Policy



Mitr Phol Code of Conduct ⁽¹⁰²⁻¹⁶⁾

The Mitr Phol Code of Conduct incorporates guidelines of good conduct consisting of principles and standards for the board directors, executives, and employees to uphold and appropriately carry out. Some examples include the Anti-Corruption guidelines, conflicts of interest, political expression, and stakeholder accountability. The Mitr Phol Code of Conduct is continually reviewed by the board directors to ensure it is relevant under current operating environments and expectations of society. In terms of communicating and creating awareness about the Code of Conduct, Mitr Phol Group continually carries out a range of activities via different channels, such as with the Mitr Sampan journal, signage boards on sites, e-mails, intranet pages, and training sessions. Additionally, it is considered a duty for board directors, executives, employees, and suppliers acknowledge in writing a pledge to abide by the related guidelines. The board directors, executives, and employees are required review the content every year.

In 2019, Mitr Phol Group asked all of its suppliers to countersign the Mitr Phol Suppliers Code of Conduct as a reminder and to promote further awareness for the vendors and their operators. Guidelines regarding receiving and giving gifts during the festive holidays were also communicated as a reminder for Mitr Phol employees and to represent the Group's commitment. The activity extends further by allowing every department to report the gift-receiving status. Gift exchanging in Thai business is inevitable because the practice is an integral part of the country's culture, thus employees are provided the opportunity to show their transparency in the matter.

Mitr Phol Sugar Corporation was awarded the "Consolation Award for Transparency" at the 2019 NACC Integrity Awards, a project organized by the Office of the National Anti-Corruption Commission. This is the first year that Mitr Phol Group joined the project, in an effort to show its commitment to conduct business with transparency. This served as a great opportunity to evaluate Mitr Phol Group's



Mitr Phol Group's executives receive the "Consolation Award for Transparency" at the 2019 NACC Integrity Awards.

operations alongside international standards. It will help the Group to strengthen its operations and encourage other entities in Thailand to also operate with good governance, practice professional ethics, and contribute to social responsibility.

In the area of communications and for the purpose of creating a unified understanding for executives and employees at Mitr Phol Group, we have continuously organized the "Mitr Phol culture and good governance" program. This helps communicate and creates awareness about good governance, policies, and

guidelines, and also acts as a channel for complaints and for monitoring units to prevent corruption. Also, it aims to welcome comments and experience sharing from executives, employees, and suppliers via the "Black Box" program. The program goes through cycles of assessment and adjustment to ensure the policies fit modern situations. The program aims for participants to benefit and has a goal of communication to 100% of the employees. Since 2017, executives and employees who attended the program account for 31% of the targeted employees, extending across all business groups the company.



See the Mitr Phol Code of Conduct



The Number of People who Received Communication and Training on the Code of Conduct, Policies, and Guidelines about Mitr Phol Group Governance ⁽²⁰⁵⁻²⁾

	Number of people who received communication		Number of people who acknowledged		Number of people who received training	
	Persons	Percentage	Persons	Percentage	Persons	Percentage
Employees* by level						
Company board	13	100	13	100	13	100
Top-level management	20	100	20	100	20	100
Mid-level management	251	100	251	100	65	25.90
Line managers	796	100	796	100	400	50.25
Officers	3,093	100	3,093	100	1,404	45.39
Operational staff	2,310	100	2,310	100	107	4.63
Total	6,483	100	6,483	100	2,009	30.99
Employees* by region						
Bangkok	868	100	868	100	183	21.08
Other Provinces	5,615	100	5,615	100	1,826	32.52
Employees* by company						
Mitr Phol Sugar Corporation	1,817	100	1,817	100	446	24.55
Subsidiaries and affiliates	4,666	100	4,666	100	1,563	33.50
Suppliers**						
Suppliers**	914	100	798	87.31	323	35.34

Remarks: * Employees refer to full-time employees as of July 31, 2019.

** Supplier refer to current suppliers construction contracting type with purchase value of more than 1 million baht. Data as of October 31,2019

Anti-Fraud and Corruption Practices

Fraud and corruption are critical problems that plague Thailand and the world, and thus we must all work in collaboration with one another to eliminate it. Mitr Phol Group takes it as a core responsibility to be part of Thailand's private sector that declares its intention to fight against corruption both at the organizational and individual level. Mitr Phol Group's philosophy adheres to operating businesses with fairness and honesty. The corporate culture crafts Mitr Phol's employees to operate with sincerity and credibility. Therefore, to further clarify and put into effect the communication for both internal and external stakeholders, Mitr Phol Group established the Anti-Fraud and Corruption policy, and the Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) policy. These guidelines are communicated to all stakeholders via various channels such as websites and booklets.



See the Anti-Corruption Policy



See the Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) Policy

The Group has rolled out different activities aiming to create awareness of the threats of fraud both within the organization and across the supply chain. Examples include annual training sessions about the principles and prevention measures of Anti-Fraud and Corruption for employees and suppliers, together with the business's Code of Conduct. The content is continuously adjusted to fit present-day situations, such as the change in legal requirements and distinct characteristics in business operations. Moreover, Mitr Phol Group under the Mitr Phol Sugar Corporation Ltd. took part in the Collective Action Coalition Against Corruption or CAC program, an initiative established with government support. This was to declare our commitment and confidence regarding Anti-corruption mechanisms that are on par with leading organizations in the country.

This year, Mitr Phol Group together with networks in the Chamber of Commerce of Thailand once again attended the Anti-Corruption gathering. This event is held twice a year by the Anti-Corruption Organization of Thailand and the National Anti-Corruption Commission to declare our collective commitment in the fight against corruption.



Mitr Phol Group participated in the 2019 Thailand Anti-Corruption day in the "Unite to Willingly Fight Corruption" on September 6, 2019 at BITEC Bangna.



Mitr Phol Group participated in the 2019 International Anti-Corruption Day (Thailand) in the "Zero Tolerance Thailand" concept on December 9, 2019 at the Impact Convention Centre and Exhibition Hall, Muang Thong Thani.

Grievance Mechanism

Mitr Phol Group incorporates all related parties to monitor, report, or issue complaints regarding inappropriate operations and misconduct of its employees. Also, the Group ensures that the assessment process is efficient in that it enhances fairness and equality for all stakeholders. It is crucial that the Group support transparency in its operations and that acquired information is used to improve processes or procedures that further promote transparency. Mitr Phol Group has established a grievance mechanism that includes reporting procedures such as identifying the actions taken once complaints are detected, whistleblowing channels, and protecting the rights of the complaining party, suspected violators, and related parties. The mechanism also involves investigation details and evidence as well as protective and confidentiality measures.



See the Whistleblowing

The Number of Complaints of Breaches/Corruption at Mitr Phol Group ⁽²⁰⁵⁻³⁾⁽²⁰⁶⁻¹⁾

Complaints (incidents)	2016	2017	2018	2019
All plausible complaints	8	9	9	4
Breaches of Mitr Phol Code of Conduct (bribery and corruption)	0	0	0	0
Breaches of Mitr Phol Code of Conduct (other topics)	8	9	9	4

Investigation status	2016	2017	2018	2019
Completed	8	9	9	2
In progress	0	0	0	2

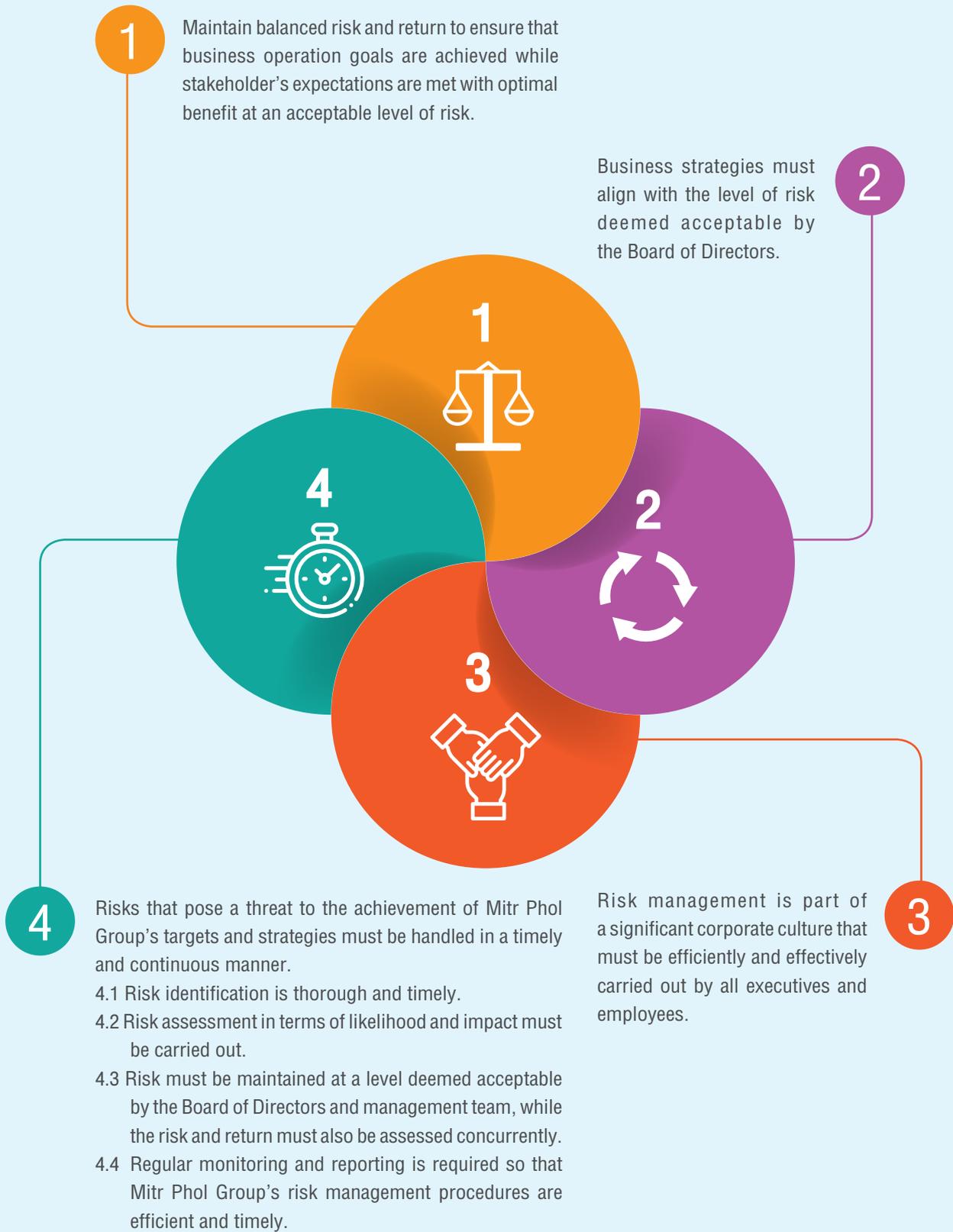
Mitr Phol Group's Risk Management ⁽¹⁰²⁻¹¹⁾⁽¹⁰²⁻¹⁵⁾⁽¹⁰²⁻³⁰⁾⁽¹⁰²⁻³¹⁾

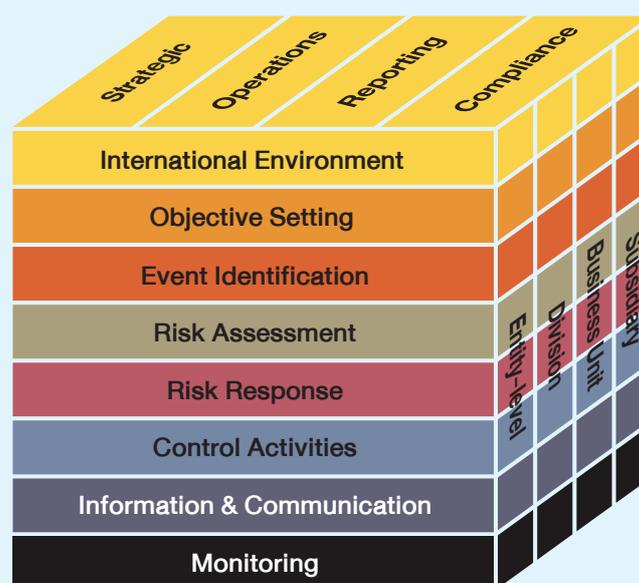
Mitr Phol Group's operations are based on the foundation of good governance and it is our duty to generate benefit and contribute to sustainable growth for all stakeholders. This involves building credibility in business operations for all related stakeholders. The Group's risk management policies are a crucial key that support the aforementioned objectives, as risk management is an essential element in every business operating process that connects all levels. In support of this, the Board of Directors established the Risk Management Committee, which determines and reviews risk management policies on an annual basis. This is done in accordance with the ever changing business operation landscape, by monitoring processes in line with the risk management plan that assesses the risk from different scenarios relating to the company's strategies and goals. Moreover, it is integrated with the risk management policies approved by the Board of Directors. The Risk Management Committee has appointed a risk management team to adopt the policies and comments, then collaborate with business groups to implement the actions throughout the company. Also, the team reviews, monitors, and reports significant risks to the Risk Management Committee and the Board of Directors. A risk

management manager is appointed to this department who reports directly to the Governance Risk and Compliance department, which operates independently from the core business group.

The internationally-recognized COSO Enterprise Risk Management — Integrated Framework is implemented throughout the company. The risk management scope includes four core aspects: strategies, operations, finance, and legal and related regulations implementations. Every year, Mitr Phol Group performs evaluations and delivers a risk profile so that risks are managed within the acceptable scope, with core guidelines as follows.







COSO Enterprise Risk Management - Integrated Framework

In 2019, Mitr Phol Group's key risks were as follows:

1. Strategic Risks

• Risks posed by climate change

In 2019, Thailand encountered droughts and dry spells across the country. In August to September 2019, many provinces were also affected by typhoon Podul, which caused windstorms and flash floods. These incidents damaged crops and greatly affected the agricultural industry throughout the country. Resulting from the drought and flash floods, the 2019/2020 yields of sugarcane – Mitr Phol Group's main raw material – were damaged both in terms of volume and quality. The effects of the drought extend beyond the sugarcane yields, as the water management system related to the production process was also disturbed.

Mitr Phol Group reviews the risk factors and trends on a yearly basis to closely monitor the change. The information is used to define and adjust the management plan to fit current situations, which helps alleviate negative consequences. Key solutions and preventive measures that begin from the plantation to the mill are as follow:

- 1) Support for farmers.
 - Promote knowledge and understanding about water resource management in cane farming, so farmers are self-reliant.
 - Communicate information for cane farmer's awareness to help prepare them to tackle drought throughout the planting and harvesting season.
 - Promote knowledge leading to the development of new occupations aside from cane farming. This helps to create income so that farmers can become self-sufficient.
- 2) Collaborate with the government sector, communities, and farmers to develop small and large water sources. This provides cane farmers with water for farming and consumption, both in the short- and long-term.
- 3) Adopt innovation to support cane farming management, and enhance cane planting, harvesting, and transport for farmers. In this project, machines are used at the Mitr Phol Modern Farm to deliver good quality yields while also dealing with the problem of the manual labor shortages.

- 4) Perform experiments and use scientific knowledge to select cane species that are appropriate for the topography and climate of each region. Mitr Phol Group's research center continues to develop and improve the varieties of cane species. The aim is to promote sugar cane that can withstand drought while providing good-quality crops and high productivity.

Furthermore, Mitr Phol Group utilizes contract farming to mitigate risks of cane volume fluctuations, and regularly communicates with farmers from the beginning of the farming season through to harvesting to ensure solutions are found and appropriate support for farmers is provided.

Regarding business continuity, the Group has plans for mitigating the effects of volume fluctuations for the upstream raw materials by contracting additional volumes from other external sources. Moreover, the assessment of the water demand in the production line is carried out for efficient water management. Every factory stores an adequate water supply and employs practices for the efficient use of water in the production process in accordance with the reduce, reuse, and recycle concept. To ensure business continuity, contingency plans are also available in the event of extreme drought beyond previously what was forecasted.

• Risks from international investments and operations

Mitr Phol Group has had foreign investment policies for over 20 years covering operations in China, Laos, and Australia. Recently, the Group has expanded the investment portfolio to Indonesia for the refined sugar business to build on the Group's existing businesses and increase its competitive edge in the global arena. While international investment is a key part of our business strategy, we also take into account risk factors from various perspectives. This includes economic and political policies, laws and regulations, tax systems, currency exchange fluctuations, and the local population. With thorough studies and analysis aiming at investments in areas of expertise, the Group relocates knowledgeable, experienced, and skillful executives from Thailand to oversee businesses in every country in which we have investments. Regular executive

meetings are held to closely and continuously monitor operations. We also consider international investments themselves as a risk management strategy, as they are a way of distributing the sources of income to reduce economic fluctuation threats caused by global situations.

• Risks from digital disruption

At present, technology has greatly influenced business operations and consumer behavior. As such, organizations must internally adapt to utilize technology in response to customer and consumer demand. Efficient management promotes the organization's potential and enhances competitiveness, thus bringing about growth. However, at the same time, cybercrimes remain a significant issue that must be closely monitored, as cyberattacks can cause tremendous damage to the company.

Mitr Phol Group closely follows innovation in an attempt to understand, assess, and analyze the relationships, opportunities, and effects that may derive from these new technologies. This begins when the Group determines its strategies so that the appropriate technology can be applied throughout the business chain. This extends to improving work processes, raw materials sourcing and management, production, storage, and delivery, as well as distribution channels and convenient, safe payment methods. Moreover, new product development and communication channels that fit different groups of stakeholders are also incorporated under this umbrella.

In terms of the structures, operations are cautiously carried out with secure data storage systems. Tests and monitoring systems that track external attacks are always available, thus ensuring safety. Moreover, communication is provided to executives and employees regarding the danger of cyber attacks. This way, they are cautious and can immediately report any abnormalities to the necessary parties. Mitr Phol Group has a department dedicated to digital matters that helps to integrate digital strategies with tangible implementations. This has led to new operations and increased efficiency that is convenient, agile, cost-saving, environment-friendly, and secure. Also, it provides better access for new customers and businesses. Examples include SAP HANA, which

efficiently and securely manages data, a one-stop cane management system, sales channels via the e-Commerce platform, and automated robots in the sugar packaging process.

2. Risks from Operations

• Risks concerning product safety

Product safety is a top priority. This requires the utmost care in the production process from the sourcing of raw material to product delivery to the customer. The products must comply with international standards, and be of good quality, hygienic, and free from contaminants that may harm customers and consumers. The products must also meet customers' diverse demands, including sugar for daily consumption, pharmaceutical manufacturing, and infant food. Substandard products may pose a threat to consumers' health, leading to dissatisfaction, complaints, product withdrawals, lawsuits, or a negative reputation on social media. Such incidents can impact and diminish the brand's credibility, and could lead to boycotts and a loss of revenue or market share.

Mitr Phol Group has distinct policies to encourage farmers to minimize chemical usage, especially ones that are harmful to health, such as Paraquat dichloride, Chlorpyrifos and Glyphosate. All suppliers are well-informed that the Group does not purchase genetically modified canes.

A dedicated team is in charge of ensuring quality standards. They examine, analyze, and plan quality development arrangements that meet international standards and are accepted by customers. Mitr Phol Group has received several international certificates in areas including raw material management, production, and delivery. These include the Bonsucro Production Standard, (Forest Stewardship Council™ Forest Management or FSC™ FM (FSC™ License code: FSC™-C125420)), (Forest Stewardship Council™ Chain of Custody or FSC™ CoC (FSC™ License code: FSC™-C119407)), TISI, ISO, GMP, HACCP, FSSC, and HALAL. Additionally, in the wood substitutes business group, high-quality products are developed in compliance with the formaldehyde emission standard. This signifies the commitment to always keep in mind our consumers. In the production process, technology is utilized to help

develop, improve, and enhance the product to maintain quality and safety. An example is an automated sugar and syrup packaging process that helps decrease the risk of contamination. Also, dedicated channels are provided for customers and consumers to report back to the company if product abnormalities are detected. In all, such practices promote customer and consumer trust for the product and the brand, and help to elevate competitiveness in the international arena.

• Environmental risks

Environmental management is among Mitr Phol Group's core policies. We are determined to develop and improve operations to minimize emissions and waste. This extends to continuous investments in environmental management systems that not only comply with related law, rules, regulations, and commitments, but also incorporates care for employees, communities, and stakeholders. This can be observed in processes ranging from cane farming, juicing, production, storage, and transportation—all of which may be affected by emissions and waste.

Mitr Phol Group has issued preventive, monitoring, and auditing measures in systems that may affect the environment. This regular practice is performed internally within the Group and involves central and regional government entities as well as external independent agencies. Their work is to inform and explain to farmers about efficient water management and support fresh cane harvests. We employ ISO 14001 standards for environmental management and ISO 50001 standards to reduce energy usage. Through these standards, the Group has improved machine efficiency and installed management systems, tools, and environmental equipment. Measures include reducing bagasse dust dispersion with rows of pine trees and nets as wind barriers, spraying water, and effective land management practices. Also, a tri-partite committee comprised of representatives from factories, government agencies, and local communities are in place for the sharing of comments, advice, and implications for a sustainable environmental management system. Furthermore, Mitr Phol Group promotes community relations to communicate the precise operations of the company. This involves proactive local surveys that can be used for further development.

3. Financial Risks

• Risks from commodity price fluctuations

Prices of commodities such as sugar, oil, and coal contribute to Mitr Phol Group's revenue and costs. For example, operating results may not align with forecasts due to oil prices, which impact ethanol sales volume, while domestic and international logistics costs and coal prices may affect the electricity selling price.

In 2019, sugar prices faced fluctuations and low-price trends. Mitr Phol Group closely monitored the situation while analyzing trends and effects by holding monthly executive meetings. Topics involved monitoring and taking into consideration changes in strategies and action plans, as well as seeking policies that best fit the situation. Moreover, a dedicated task force was created to oversee and manage risks posed by fluctuating sugar prices. We took into consideration policies concerning selling proportions and price management as well as guidelines to protect from risks caused by fluctuating world sugar prices. This was implemented via forward contracts in an attempt to mitigate and manage the effects posed by sugar price fluctuations.

Actions such as cost management, increased efficiency, and improvements in the production process as well as storage and logistics management are always applied with constant consideration to integrate innovation into the process.

• Risks from currency exchange rates

In 2019, the world economy was affected by the trade war between the United States and China. Fluctuating currency exchange rates as well as the surging Thai Baht appreciation were some of the many significant impacts felt by the trade war. Because a large part of Mitr Phol Group's revenue depends on exports of the sugar and wood substitutes business group as well as overseas operations, the currency fluctuation directly affected Mitr Phol Group's operations.

Mitr Phol Group took into consideration and closely monitored the situation to analyze trends and current events via a dedicated financial risk management department and committee. This team established the framework for financial and currency exchange management while ensuring that operations match the current situations. Meetings are scheduled on a monthly basis to stay abreast of swift changes. Not only do they monitor factors involving the trade war, they also track and analyze economic and political policy movements as well as other aspects that may disturb the currency exchange and interest rates. Close monitoring is core to appropriate management amid changing scenarios and the decision to adopt financial tools that fit the current circumstances. Examples of the actions taken include forward contracts, option contracts, natural hedging in which expenses are incurred in the same currency, and loans in currencies of the countries where we have investments.

• Risks from non-performing loans from cane farmers

Mitr Phol Group has a policy to provide funding to farmers via contract farming. This is considered a risk management strategy to secure sources of raw materials. The Group also supports important farming items such as cane species, fertilizers, machinery, and other agricultural tools. Additionally, farmers are offered access to low-interest loans for their irrigation systems, to purchase machinery and equipment, and to acquire cash flow during the farming season. When farmers deliver mature, suitable quality canes to the factory, they will receive the initial payment while the factory deducts the loan repayment according to their contract. Nevertheless, risks may stem from farmers failing to supply cane or meet the repayment requirements on time. This may be due to reasons such as natural disasters, diseases, lack of quality cane species, or farmers choosing to sell their canes elsewhere. This matter always requires close monitoring and management.

In an attempt to manage such risks, Mitr Phol Group appointed a farmer credit committee that analyzes loan approvals, sets credit limits, categorizes farmers, and monitors debt collection policies. Technology is used to collect data on farmers in terms of historical productivity rates, loan information, collateral, repayments, cane delivery, and receipt of revenue. The data helps to identify farmers to ensure that the loan limits are acceptable and manageable. Moreover, support in the form of education is also provided to aid local farming communities wherein mutual assistance can flourish. For instance, farmers with tractors can offer to work on a fellow farmer's land at a reasonable wage, thus ensuring that the farmers' incomes are sufficient.

4. Legal and Regulatory Compliance Risks

Compliance with the laws, rules, and regulations relating to business operations are core to the Group's duties. Failing to do so may be partially caused by a lack of communication or precise understanding, and this may affect operations and company reputation. Mitr Phol Group has established a task force that monitors operations and coordinates, supports, and updates relevant parties about related laws and regulations. The team communicates new regulations to representatives in each business group for their acknowledgment and as implementation guidelines. They also monitor overall compliance performance reports. As the Group's business operations span several industries, the Mitr Phol Group Compliance Guideline was established. As part of this initiative, representatives from each business unit are appointed the task of compiling and completing relatable items in a compliance checklist. This helps to ensure full compliance and to prevent unintentional breaches of the laws, rules and regulations, as clear-cut official roles and responsibilities are well-defined for each business unit.

Emerging Risks

1. Risks Relating to the Restructuring of the Thai Sugar Industry

September 2019 marked the expiration for the order of the National Council for Peace and Order (NCPO) No. 1/2561 Re: Amendments of Laws to Facilitate the Overall Cane and Sugar Industry Structure or "floating of sugar prices", thus repealing the quota system for the sugar industry. The Cabinet approved the draft order by the Cane and Sugar Board Re: Revenue Forecasts, Determining and Payment for Cane and Sugar Production, and Compensation Proportions between Farmers and Factories. The approval included the draft Regulation by the Cane and Sugar Board regarding the revocation of the Cane and Sugar Regulation Re: Payment Collection from Refined Sugar Sales within the Kingdom of Thailand for the Cane and Sugar Fund B.E.2561 (2018). These changes will affect the calculation of revenue allocation from refined sugar sales between farmers and factories. The new formula will be implemented in the 2019/2020 production season. The new calculation will see a switch from the actual volume of refined sugar sold in the Kingdom of Thailand in the previous season to using the initial volume wherein proportions are distributed according to each factory's sugar production that is predefined by the Sugar Board. In terms of pricing, it will change from using the London Sugar No. 5 plus Thailand's sugar premium to using the average selling price in the Kingdom of Thailand announced by the Office of Cane and Sugar Board at the beginning of the production season.

Mitr Phol Group has assigned a dedicated entity that participates as part of the private sector that collaborates with the Thai Sugar Millers Corporation, the Office of Cane and Sugar Board, and representatives from sugarcane planters' associations. The team plays a role in suggesting and driving plans with the government. Moreover, Mitr Phol Group has closely monitored the situation and prepared internal operation plans in an attempt to enhance competitiveness. Examples of the plans include new product development that adds value across the business's value chain, and integrating technology and efficient management to improve operations starting from sugarcane farms through to customer deliveries.

2. Risks from PM 2.5

In the beginning of November 2019, Thailand experienced PM 2.5 air pollution. This is hazardous to human health as PM 2.5 particles can directly enter the respiratory system, alveoli in lungs, and the bloodstream, thus, contributing to the risk of chronic diseases. Sugarcane burning and factory operations were among the main culprits of the PM 2.5 air pollution.

On June 11, 2019, the Thai Cabinet approved the burned sugarcane measures and issued the Cane and Sugar Board Regulation Re: Cutting and Delivering Cane to Factories, Inspecting Cane Quality, and Accepting Cane from Cane Farmers or Head of the Cane Farmer Group law. The law states that sugar factories can only accept burned cane at 30% of the total volume per day for the 2019/2020 production season. This level is then to be reduced to 0-5% per day by the 2021/2022 production season. Therefore, Thailand should be free of burned sugarcane within three years. Mitr Phol Group's policy has consistently highlighted the significance of reducing air pollution. Hence, the Group's policies correspond with the law as the Group regularly encourages farmers to deliver fresh sugarcane while also providing them with various tools to make it easier to do so. Examples include supporting the use of sugarcane harvesters and collaborating with the public sector for low-interest loans. This helps sugarcane crops to maintain their sweetness from quick cutting and delivery. Also, this will alleviate the lack of labor in the farms, which is among the most important reasons why farmers burn fields. Other attempts include motivating farmers to stop the practice by purchasing fresh cane at a higher price when compared to burned cane, and providing assistance in monitoring fire accidents on the farm. Mitr Phol Group strives to use innovation to help farmers reduce the habit of burning canes and proceeds to deliver 100% fresh canes to the factory. In the 2019/20 crushing season, Mitr Phol Group piloted a program of purchasing 117,698.75 tonnes of sugarcane leaves and 627.28 tonnes of rice straws for biomass power accounting to 118.33 million baht. Not only does this promote the reduction of burning in the agricultural sector, but also creates additional income for the farmers.

In terms of production, Mitr Phol Group strives to improve raw material storage, production lines, and delivery processes in order to reduce dust dispersion. Actions taken include planting rows of pine trees to filter dust, spraying water, and installing misting devices to prevent dust in bagasse piles from dispersing. Also, water is sprayed in operating areas and commuting routes, as raw material delivery may cause dust dispersion. Moreover, dust filters and air purifier innovations such as the wet scrubber cyclones along with static electricity dust filters are among the Group's commitments. Also, Mitr Phol Group closely measures the air quality from the smokestacks and assesses the amount of dust in surrounding communities. This is to ensure that the air quality in the communities meets legal standards. Finally, there are whistleblowing channels for stakeholders such as outlets in areas surrounding the factory. Once information is reported, the Group will assign a dedicated employee who specializes in the field of environment to assess the situation and seek further solutions.

Business Continuity Management

Mitr Phol Group is well aware that business operations may encounter various threats such as natural disasters or manmade disruptions including fires, political unrest, terrorism, or epidemics. Such threats may unavoidably affect our assets and business operations, as well as the safety and wellbeing of our employees and stakeholders. Therefore, the flexibility to be able to continue business as usual in the face of an unforeseen situation is crucial. If a company is not able to restore operations to the normal condition within a specific time, stakeholders may also experience the effects. In the preparation to handle and decrease threats that may occur, companies are required to assess and manage risk as well as establish the appropriate management and strategic plans. Mitr Phol Group employs the Business Continuity Management System (BCMS) with reference to the ISO 22301:2012 at the headquarters and all seven factory sites. This move aims for customers, suppliers, and stakeholders related to business operations to feel confident that Mitr Phol Group will continue business as usual despite the circumstances. Moreover, constant sharing of knowledge and understanding among executives and employees regarding business continuity management is important, as it helps related personnel capable of applying the information to assess situations and appropriately connect business continuity management with business operations.

Business Continuity Management Training

Regular annual training prepares Mitr Phol Group to handle unpredicted situations that may pose a threat to the company at any time. Assessing risks from the threats, assessing activities, categorizing the levels of severity, and identifying the resources needed to continue business operations are equally important procedures. Companies must prepare resources that will support business operations as well as facilitate communication in times of crisis. Our first business continuity management training began in 2014 at the headquarters office, before expanding to sugar mills, the energy business group, and the wood substitutes group in the following years. Each training session is revisited to improve the business continuity management plan to match the company's structure and the operating environment.



Business Continuity Management training at a factory



Business Continuity Management training at the headquarters



Remarks: ¹ Mitr Phol Danchang Park refer to Mitr Phol Sugar Mill (Dan Chang), Dan Chang bio-power plant and Dan Chang ethanol plant

² Mitr Phol Phukhiao Park refer to Mitr Phu Khiao Sugar Mill, Phu Khiao bio-power plant and Phu Khiao ethanol plant

³ Mitr Phol Kalasin Park refer to Mitr Kalasin Sugar Mill, Kalasin bio-power plant and Kalasin ethanol plant



Supply chain management is of great importance for Mitr Phol Group's business operations, as it ensures the sourcing of raw materials, production, and delivery of quality products to customers in a timely manner and with maximum satisfaction. Supply chain management ranges from the selection of vendors and improving production processes, warehousing, transportation, risk management and governance throughout the supply chain. These measures ensure a positive organizational performance and sustainable growth.

Sustainable Supplier Management

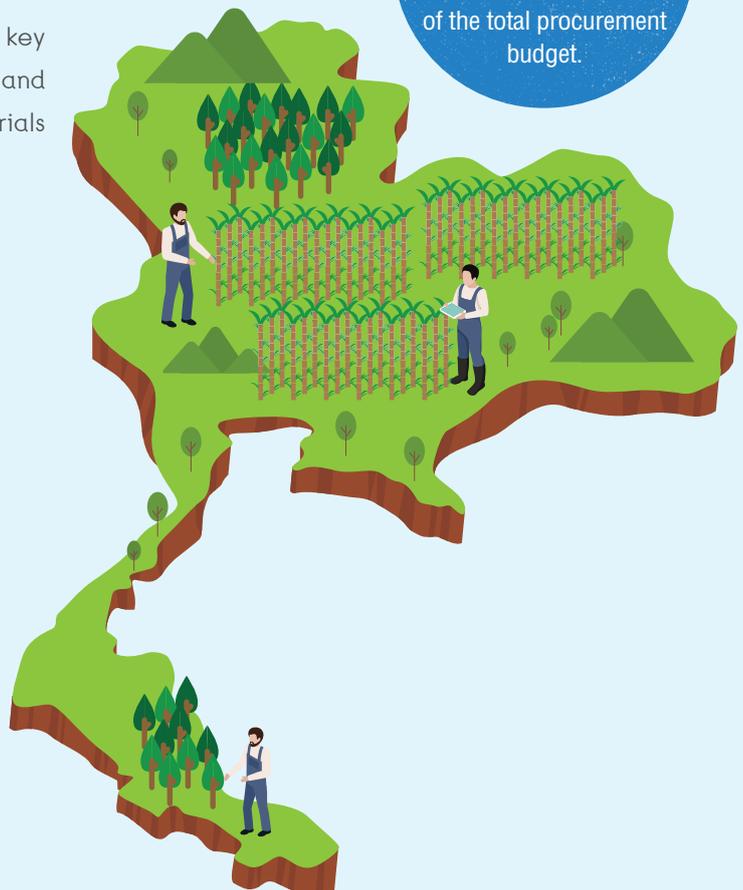
Mitr Phol Group has announced our sustainable procurement policy and the Mitr Phol Code of Ethics covering the code of business conduct, human rights, labor rights, safety and occupational health, and the environment. We have communicated these policies to our suppliers and continue to ensure they are in strict compliance. International standards are also used in our operations, such as ISO 20400:2017 for sustainable procurement, the BONSUCRO standard for sustainable sugar and cane, and the Forest Stewardship Council standards for rubber farmer management.

Mitr Phol Group classifies suppliers into two key categories: central suppliers providing products and services, and suppliers who provide raw materials such as cane farmer.

Local Procurement⁽²⁰⁴⁻¹⁾

To promote the domestic economy, Mitr Phol Group stresses the importance of providing support to local suppliers. We procure sugar cane from cane farmers for our sugar business, wood raw materials from rubber farmers for our wood substitute business, and several other products and services such as packaging, maintenance, and machinery cleaning for the entire Mitr Phol Group. In 2019, local procurement accounted for 97.80% of the procurement budget.

In 2019,
local procurement
accounted for
97.80%
of the total procurement
budget.



See the Sustainable Procurement Policy



See the Mitr Phol Supplier Code of Conduct



Further information



ISO 20400:2017 Standards for Sustainable Procurement

The ISO 20400:2017 sustainable procurement standard is the first international standard in procurement, with an aim to enable organizations to efficiently develop and implement policies and practices in sustainable procurement. The standard dictates clear guidelines on sustainable procurement such as risk management, transparency, human rights, and ethical practices.

This year, Mitr Phol Sugar Corporation received ISO 20400:2017 certification from the Management System Certification Institute (MASCI), making it the first company in the sugar and energy industries to receive the certification. The achievement is a testament to the company's efficient procurement systems and commitment to promoting sustainable development throughout the supply chain.



Mitr Phol Sugar Corporate received ISO 20400:2017 certification from the Management System Certification Institute (MASCI)

Evaluating Suppliers' Performances ⁽³⁰⁸⁻¹⁾⁽⁴⁰⁸⁻¹⁾⁽⁴¹⁴⁻¹⁾

To mitigate risk, Mitr Phol Group enforces a supplier risk management system using the supply positioning model. It includes stringent due diligence processes of all suppliers prior to registering as a new supplier. Several criteria are used for the process of evaluating a new supplier, including production controls, product quality and safety standards, as well as sustainability.

The company categorizes suppliers into different tiers according to the purchase volume and importance of their products in order to ensure the most efficient supplier management plan and strategy. Critical Tier 1 suppliers are as follows:

The Below Criteria are Used for the Consideration of Critical Tier 1 Suppliers:

The supplier provides special products that specifically adhere to Mitr Phol Group's standards such as chemicals used in production processes and packaging.

The supplier is highly specialized and operates specific manufacturing technology per Mitr Phol Group's requirements.

The supplier has a sales value above Mitr Phol Group's threshold.



2019 Critical Tier 1 Suppliers Evaluation

Critical Tier 1 suppliers make up **3.52%** of total suppliers.



Mitr Phol Group evaluates several aspects of a supplier's performance, including environmental protection, social responsibility, and good governance. Audits of suppliers' sites or questionnaires are performed on an annual basis. Suppliers are informed of their results. We work closely with high-risk suppliers to minimize risks.

From our 2019 evaluation of suppliers' performances (a three-year cycle 2017-2019), out of all Critical Tier 1 suppliers evaluated, 47.97% and Critical Tier 1 Supplier evaluated 85.99% was found to have a high risk in sustainability. The risk was found in product quality. The company has worked closely with the supplier on solutions and preventive measures to minimize the risk. No risks in the areas of child labor or forced labor were found in the evaluation. Mitr Phol Group did not cease working with the high-risk supplier.

Enhancing Suppliers' Capabilities in the Delivery of Raw Materials

Aside from ensuring effective supply chain management, Mitr Phol Group also places great importance on enhancing suppliers' delivery capabilities. Efforts include developing cane farmers and wood materials suppliers to ensure that they operate according to sustainable resources management practices and can deliver a steady supply of quality products to Mitr Phol Group. By enhancing the capabilities of our suppliers, both Mitr Phol Group and the suppliers can grow together sustainably.

Development of Cane Farmers

Mitr Phol Group applies the "Mitr Phol ModernFarm" program to develop cane farmers by introducing modern farming practices and technology to help increase productivity. The program is made up of four main approaches:



Growing legumes to protect soil surface.



Controlling tractors and machinery's wheel tracks.



Minimizing plowing.



Fresh cane cutting and using leaves as ground cover.

The Mitr Phol ModernFarm program helps farmers reduce the usage of chemical for weed controlling, increase productivity, and improve cane quality. Mitr Phol Group also promotes fresh cane cutting instead of field burning, soil and water conservation, and precision farming, all of which help farmers increase yields, decrease costs and manual labor, and adhere to environmentally friendly farming practices.



Promoting fresh cane cutting Phu Khiao, Chaiyaphum

"Mitr Phol Group has vast knowledge about modern cane farming, from soil preparation, irrigation, fertilizers, pest control, quality harvest, and using advanced technology and farming equipment. The company also works hard to educate cane farmers about modern farming practices, helping to strengthen farming communities."



Mr. Karan Supakitvilekarn
Director General of the Royal Initiative
Discovery Institute (Pid thong Lang Phra)

In addition, Mitr Phol Group has partnered with TMB Bank Public Company Limited to provide support to farmers as part of the jointly-developed Supply Chain Solution program. By offering special loan interest rates, the program helps farmers reduce operation costs and improve cash flow with which they can purchase farm inputs. Several thousand cane farmers are currently enrolled in the program. Mitr Phol Group also runs another project to encourage successors of cane farmers to continue the family farming business. Farmers' successors who show a keen interest in a farming career are enlisted to join the program to learn about modern agricultural practices under the "Mitr Phol ModernFarm" methods.



Successors of cane farmers share experiences from joining the program.



Cane farmers the program

Development of Wood Raw Materials Suppliers

The wood substitute business sources raw materials from wood slabs, saw dust, and retired rubber trees from plantations that have received Forest Stewardship Council Standard™ (FSC™ license code FSC™-C119407), (FSC™ license code FSC™-C12520). Mitr Phol Group develops rubber farmers to ensure a steady supply of raw materials, safe delivery, and environmental protection in their farming practices. The circular economy concept is applied in our business operations alongside supplier development to ensure mutual sustainable growth.

In our endeavor to develop rubber farmers, we promote agroforestry to help farmers earn more income beyond their rubber plantations, such as planting forest seedlings, growing vegetables and fruit, and beekeeping. Training is also provided to member farmers about effective rubber plantation management, to help them reduce cost and increase yields. They also learn about rubber tapping according to the Good Agricultural Practice (GAP) standards, using soil analysis to determine fertilizer usage, cultivating Trichoderma, and selecting rubber species. The company also provides training for local communities regarding forest management and utilization to help preserve the environment for generations to come.



Promoting additional income for rubber farmers through beekeeping on rubber plantations.



Customers and consumers are critical stakeholders in any business operation. An organization can grow sustainably only when it can serve the needs of its customers and consumers. As such, Mitr Phol Group is committed to developing quality products and services, giving attention to every detail, and putting product hygiene and safety at the forefront. We utilize the most cutting-edge management systems and international standards throughout our supply chain, from the receiving of materials through to production. Our stringent product traceability systems, after-care services, and quality checks guarantee trust and confidence from customers and consumers, as we strive to promote superior customer relationships and satisfaction.

Product Quality Control

Mitr Phol Group places the utmost importance on the safety and hygiene of our products to ensure consumer confidence. Our attention to detail begins at the sourcing of materials by discouraging the usage of harmful chemicals on cane plantations Paraquat Dichloride, Chlopyrifos and Glyphosate. This ensures there is no chemical residue in our products. This practice not only ensures safety for our consumers, but for our cane farmers as well.

See the Guidelines
for Agricultural Raw Materials Sourcing



In addition, we have a non-GMOs policy for the raw materials of our sugar, ensuring that no Mitr Phol products contain genetically modified ingredients. Our policy is published on our website so consumers can learn additional information and have confidence in our products.

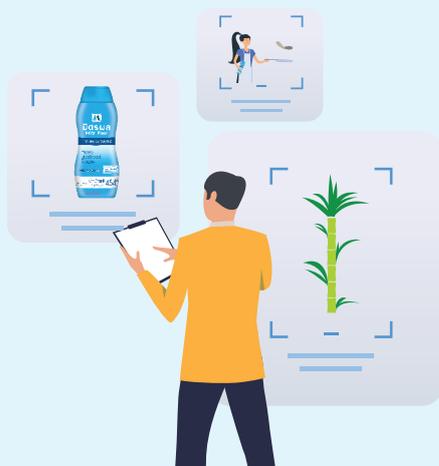
See the Genetically
Modified Organisms (GMOs) Policy



In addition to our production processes, Mitr Phol Group also promotes sustainable consumption as well as health and nutrition by raising awareness about appropriate sugar consumption, the benefits, different types of sugar, and health and wellness tips. Through products, we have developed the Tasty Healthy and Mitr Phol Calorie ranges to provide a healthier alternative for health-conscious consumers. The products contain sucralose and have a sweet taste close to that of sugar, but only provide 20% of the calories. They can be used for hot and cold menus, offering a healthier choice for consumers. In addition to these products, we have also developed safe sugar alternatives for the food industry and general consumers. This year, there were no reported cases of non-compliance with safety and impact on consumers' health resulting from our products and services.⁽⁴¹⁶⁻²⁾

Health and safety are our top priorities. Throughout the value chain, we continually make improvements to our food quality and safety management systems. Our Food Quality and Safety Policy is reviewed at least on an annual basis.

See the Quality and Food Safety Policy



Customer and Consumer Care

Mitr Phol Group places great importance on promoting and maintaining good customer and consumer relationships to ensure the highest level of satisfaction. Our marketing and engagement activities include making customer visits, participating in trade events, holding workshops, conducting regular customer satisfaction surveys, and continuing to develop new products and services. We believe that these activities help to strengthen relationships between Mitr Phol Group and our customers and consumers, paving the way for mutual sustainable growth.

In 2019, we expanded our consumer touch points through the "Mitr Phol Café" at a popular shopping mall, bringing the Mitr Phol brand even closer to consumers' lifestyles. The café offers new experiences to consumers, who can discover fresh tastes and perspectives through Mitr Phol's extensive range of flavored syrups. It also provides opportunities for other café operators and those in the food and beverages industry to explore new ways to use Mitr Phol products.

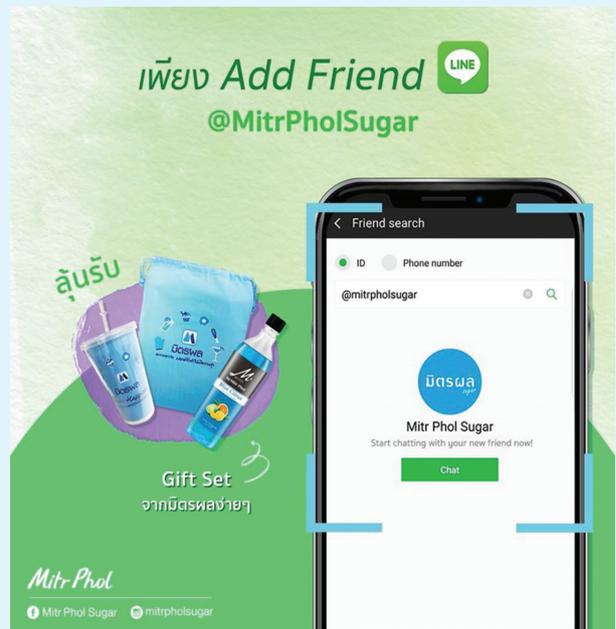
Apart from expanding our marketing channels through the "Mitr Phol Café", we also made our existing communication channels more convenient and accessible both for customers and consumers. Via the Line official account @MitrPholSugar, fans receive the latest updates about our products and are able to place orders instantly on the platform. Digital disruption and technological advancements have made it crucial for companies to be able to serve their customers' demands more quickly and efficiently. The same channel is also used for product enquiries and recommendations. In 2019, Mitr Phol Group received no complaints regarding non-compliance with the Trade Competition Law or marketing communications law.⁽⁴¹⁷⁻³⁾



Mitr Phol Café



Mitr Phol Café exciting drinks



Line official account @MitrPholSugar

Customer and Consumer Satisfaction Survey Results

Mitr Phol Group conducts customer and consumer satisfaction surveys annually to improve our products and services. To measure satisfaction of our products and services, each business unit uses various methods including phone interviews, survey forms via email, fax or the Line@ official account. Satisfaction scores by business unit are as follows:



Sugar Business

 % of satisfied customers	Year 2016*	Year 2017**	Year 2018**	Year 2019**	Target 2019  64.50 ¹
	64.51	66.14	71.04	77.24	

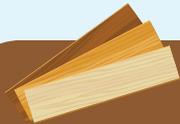
 % of total customer surveyed	Year 2016*	Year 2017**	Year 2018**	Year 2019**
	100	100	100	100



Remarks: * 2016 data refer to data collected between January 1–December 31, 2016.

** 2017–2019 data refer to data collected between November 1 the previous year to October 31 of that year.

¹ 2019 goal of the sugar business was set against the average NPS score of Retail Industry, Manufacturing and Consumer Brand Industry.



Wood Substitute Material Business

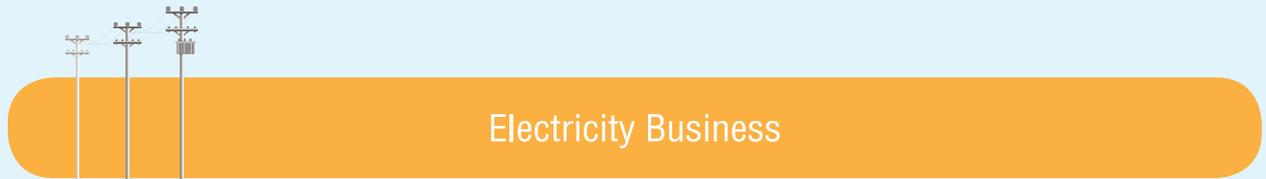
 % of satisfied customers	Year 2016*	Year 2017**	Year 2018**	Year 2019**	Target 2019  80
	81	80	80	81	

 % of total customer surveyed	Year 2016*	Year 2017**	Year 2018**	Year 2019**
	83	100	100	100

Remarks: * 2016 data refer to data collected between January 1–December 31, 2016.

** 2017–2019 data refer to data collected between November 1 the previous year to October 31 of that year.





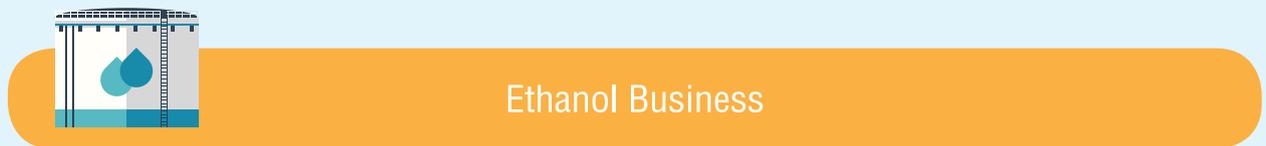
Electricity Business

	% of satisfied customers	Year 2016*	Year 2017**	Year 2018**	Year 2019**	Target 2019
		98.33	99	99	96.91	 95

	% of total customer surveyed	Year 2016*	Year 2017**	Year 2018**	Year 2019**
		100	100	100	100



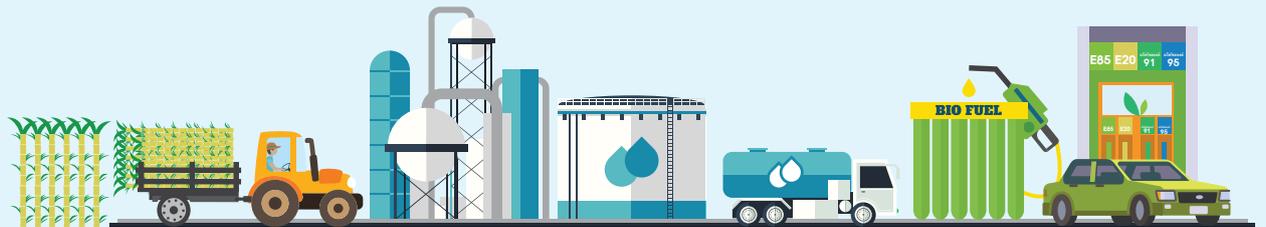
Remarks: * 2016 data refer to data collected between January 1-December 31, 2016.
** 2017-2019 data refer to data collected between November 1 the previous year to October 31 of that year.



Ethanol Business

	% of satisfied customers	Year 2016*	Year 2017**	Year 2018**	Year 2019**	Target 2019
		100	100	100	100	 100

	% of total customer surveyed	Year 2016*	Year 2017**	Year 2018**	Year 2019**
		100	100	100	100



Remarks: * 2016 data refer to data collected between January 1-December 31, 2016.
** 2017-2019 data refer to data collected between November 1 the previous year to October 31 of that year.



Logistics and Warehouse Business

★ % of satisfied customers	Year 2016*	Year 2017**	Year 2018**	Year 2019**	Target 2019
		100	100	100	100

❤️ % of total customer surveyed	Year 2016*	Year 2017**	Year 2018**	Year 2019**
		100	100	100



Remarks: * 2016 data refer to data collected between January 1-December 31, 2016.

** 2017-2019 data refer to data collected between November 1 the previous year to October 31 of that year.

- For the fertilizer business and other businesses, no customer satisfaction surveys were conducted.

“ Mitr Phol Group will continue to offer great experiences for our customers and strengthen our relationships to enable the Mitr Phol brand and the group’s businesses to inspire trust and confidence among our customers and consumers, and assure our business partners of mutual sustainable growth. ”





Innovation



"Creating value for a sustainable life" requires innovation as a key driving force. Mitr Phol Group promotes the use of research and innovation across our businesses to bring about sustainability and raise the bar for the cane, sugar, and bio industries. By adding value to cane and optimizing byproducts from sugar production, our philosophy is aligned with the Thai government's BCG (Bio, Circular, Green) Economy model. Innovation is used across our organization to drive business growth and the development of our employees' potential, as follows:



Further information





3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

8 DECENT WORK AND ECONOMIC GROWTH

10 REDUCED INEQUALITIES

Mitr Phol Group recognizes that employees play an integral role in enhancing the organization's competitiveness. As a result, human resources management strategies have been put in place to uplift standards in employee management. The strategies focus on increasing productivity, promoting employee engagement, and enhancing their capabilities up to international levels, including uplift human resources standard and management.

Mitr Phol Group has also incorporated a policy on diversity into our strategies to ensure that all employees are treated fairly and without discrimination based on gender, race, nationality or disability. All employees must be accepted for their values and culture. The recruitment, hiring, and appointment processes of all employees must be done with fairness and equality. All employees have equal access to learning and development opportunities to allow them to work efficiently and to promote sustainable business growth.



See the Diversity Policy

Employee Data ⁽¹⁰²⁻⁷⁾⁽¹⁰²⁻⁸⁾

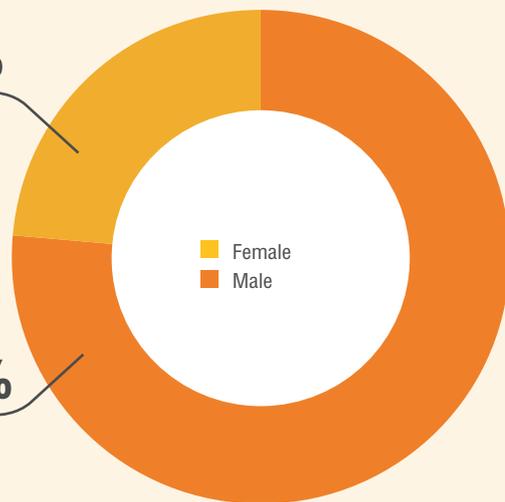
As of the End of 2019,
Mitr Phol Group Employed a Total



employed a total of
7,941 employees

24.59%

75.41%





Mitr Phol Group helps to generate income in local communities through employment opportunities in our factories across several regions, not only promoting jobs and a better quality of life, but also healthy community relations. Remuneration is on par with national wages. In addition, in realizing the social disparity among persons with disabilities, Mitr Phol Group provides employment opportunities via a special program in our

factories and other workplaces close to their homes that helps them become more self-reliant. The company also encourages disabled people to form groups and associations to extend employment opportunities to other persons with disabilities in surrounding communities. Employment helps to reduce social disparities and promotes a harmonious co-existence.

Mitr Phol Group Employs Persons with Disabilities



Mitr Phol Group employs **87** persons with disabilities



33 of whom work in the company



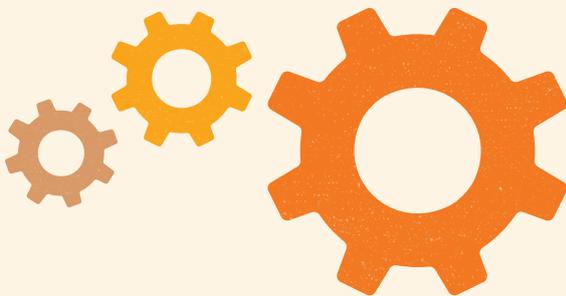
while **54** work within the communities



Five associations for persons with disabilities have been established, with a total of **661** members

Employee and Organizational Development ⁽⁴⁰⁴⁻²⁾

Today's fast-paced changes present great challenges for organizations. The more agile the workforce, the better the organization's chances of achieving sustainable growth. Leadership and innovation are also crucial for an organization's development. Mitr Phol Group continues to focus on employee development in all aspects.



Mitr Phol Group's Employee Development

To equip Mitr Phol Group's leaders for the age of digital transformation, the Mitr Phol Development Institute has created a special curriculum by upgrading the Signature Development Program to the Mitr Phol Transformational Leadership Program 2019. The program uses a blended learning method from world-leading educational institutions, combining In-Line Learning (classroom-based), On-Line Learning, Bee-Line Learning (sharing experiences and knowledge by experts in their fields), and Front-Line Learning (a vast database of information and documents made available to learners). Participants also benefit from project-based learning.

MITR PHOL TRANSFORMATIONAL LEADERSHIP PROGRAM (MTLP)





Mitr Phol Transformational Leadership Program

The curriculum elevates "Idea Projects" to hands-on experiences that have an impact on the business. Using the design-thinking approach, learners can share knowledge and experiences from the company's senior management and experts from several fields to help build their leadership skills and networking

opportunities. The employee development program has clear measurements in terms of knowledge and skills promotion, practicality, goal achievement, and business value. The program offers three distinct learning paths for the specific needs of each individual employee.

Mitr Phol Transformational Leadership Program 1 (MTLP 1)



1. Operation-level employees who are capable of carrying out tasks and creating works by themselves for the success of their team under the supervision of their line manager.



1. Promoting the ability to understand customer needs, develop prototypes, solve problems, and utilize creative ideas effectively and quickly.
2. Promoting an understanding in self-motivation to realize one's capabilities, fulfill missing skills, and create goals.
3. Promoting conflict management skills
4. Promoting an understanding of Mitr Phol Group's strategy and business operation from the beginning to the expansion, and creating added value to the business, to help the employee carry out his/her duties in line with the needs of the business.

and an ability to handle pressure within the team to be equipped for any change.

Mitr Phol Transformational Leadership Program 2 (MTLP 2)



1. Supervisor and manager level employees responsible for a team who are involved in planning, goal-setting, delegating, supervising, and developing their team.
2. Supervisor-level employees who have transitioned from a production-based role to a supervisor role with team members to supervise. Employees who will benefit from new perspectives and leadership skills.



1. Developing skills in strategic thinking for business operations, analytical thinking of customers' needs, developing prototypes and testing, creating business models, and implementing them to enhance efficiency.
2. Developing middle-management leadership skills and applying those skills to lead a team so everyone can do their jobs efficiently and achieve goals.
3. Developing communication, interpersonal and motivational skills.
4. Enhancing capabilities to help create value for Mitr Phol Group's businesses and carrying out work that is aligned with the company's needs and direction.

Mitr Phol Transformational Leadership Program 3 (MTLP 3)



1. Mitr Phol Group's management in managerial roles or an equivalent that is responsible for strategic planning, goal-setting, supervising and developing their team.
2. Management level employees who want to develop knowledge about overall business management including strategies, direction, and case studies.



1. Developing knowledge and skills in strategic thinking, business management, analyzing customers' needs, developing prototypes and tests to create business case studies, organizational and resource management to enhance Mitr Phol Group's competitiveness.
2. Enhancing high-level leadership skills and the ability to apply these skills to managing the team to achieve business targets efficiently.
3. Developing communication, interpersonal and motivational skills.
4. Enhancing capabilities to help create value for Mitr Phol Group's business and carry out work that is aligned with the company's needs and direction.

Aside from the blended learning approach, Mitr Phol Group also provides Functional Competency Development programs for employees using the 70:20:10 ratio. We believe that true development comes from having hands-on experience that promotes learning and reinforces positive behavioral change that impacts the way an employee works.



Mitr Phol Group’s Performance in Employee Development

Based on Mitr Phol Group's direction to enhance employee learning using the 70:20:10 approach to upgrade employee development programs for the era of digital transformation, Mitr Phol Group's performance in 2019 was as follows:

1. Development through experiential learning (70%) Key programs for employee development include:

Constructionism Empowerment – Mitr Phol Learning Camp promoting Project Based Learning (PBL).



there were a total of
47
projects



estimated business
return value of
11.5
million baht



offered to
6 graduating
groups



participants
176 persons



a total of
39 projects



estimated business
return value of
372 million baht
over two years



Mitr Phol Transformational Leadership Program 1 (MTLP 1)



1. Ability to interpret the needs of customers in an in-depth manner, create and fix prototypes quickly, implement ideas systemically.
2. Ability to self-motivate, understand personal capabilities, develop missing skills, and create goals.
3. Ability to better manage conflicts and pressures within the team.
4. Be equipped and agile for any type of change.
5. To have an understanding of Mitr Phol Group's strategy and business operation from the beginning to the expansion, and creating added value to the business, to help the employee carry out his/her duties in line with the needs of the business.



Participants

3 groups **90** persons **2.96%**



Number of projects presented

20 projects



Estimated value of business returns

from projects **92** million baht

Mitr Phol Transformational Leadership Program 2 (MTLP 2)



1. Possess skills in strategic thinking for business operations, analytical thinking of customers' needs, developing prototypes and testing, creating business models, and implementing them to enhance efficiency.
2. Enhance middle-management leadership skills and apply those skills to lead a team so everyone can do their jobs efficiently and achieve goals.
3. Understand customer needs, make decisions with accountability, and be solution-oriented.
4. Utilize knowledge from MTLP2 in projects that support Mitr Phol Group's policies and business strategies.



Participants

2 groups **62** persons **8.03%**



Number of projects presented

14 projects



Estimated value of business returns

from projects **241** million baht

Mitr Phol Transformational Leadership Program 3 (MTLP 3)



1. Possess skills in strategic thinking for business operations, analytical thinking of customer needs, develop prototypes and testing, create business models, and implement them to enhance efficiency.
2. Possess high-level leadership skills and the ability to apply these skills in managing the team to achieve business targets efficiently.
3. Develop communication, interpersonal and motivational skills.
4. Utilize knowledge from MTLP3 in projects that support Mitr Phol Group's policies and business strategies.



Participants

1 group **24** persons **13.04%**



Number of projects presented

5 projects



Estimated value of business returns from projects

39 million baht

2. Development through coaching (20%)

Training is provided for line managers and supervisors to develop their coaching skills, with key highlights as follows:



Development for high-level and mid-level management through Executive One-on-One Coaching.



Skills development and coaching for team members through the Mitr Phol Coaching Certification Program for mid-level management and supervisors.



Hosting the Leader Builds Leaders event to provide coaching techniques that leaders can use to motivate and inspire their team members to become effective leaders.

3. Development through classroom learning/training (10%)

Ten percent of the employee's skills development comes from classroom learning or training designed to suit the diverse backgrounds of employees. New technology is utilized to promote learning, with details as follows:



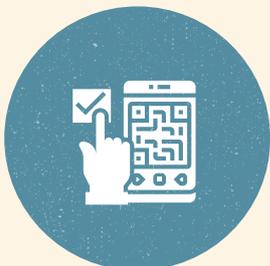
The Blended Learning method combines theoretical and experiential methods. Through the Case-Based Learning Coaching by Executive program, learners benefit from real experiences shared by others, field trips, and self-motivated exercises.



Focusing on developing the leadership skills of management through a coaching program, being a project advisor, and sharing sessions with high-level management.



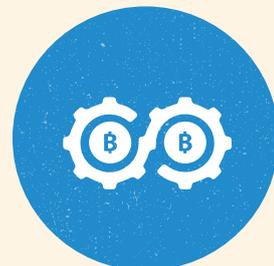
Developing leadership skills using the Mindfulness in Organizations approach to promote happiness within teams and the organization.



Applying digital technology in skills development programs for employees, such as introducing Learning Passports for new employees through the Mitr Phol Competency Lane, and using QR codes in the Mitr Phol Together project to provide training, documentation, surveys, evaluations, and reports.



Providing progress measurements for the overall organization as well as individuals through tools such as the Individual Learning Reports on the Yammer internal platform.



Efficient budget management for development programs and training.



By introducing such enhancements, our skills development programs are more varied and interesting. We have received great feedback from participants including high-level management who took part in the final presentations.

In 2019, Mitr Phol Group stressed the importance of providing development opportunities for employees of all levels. The number of hours dedicated to employee training can be found below.

Number of Hours for Mitr Phol Group’s Employees Training ⁽⁴⁰⁴⁻¹⁾



Average training hours for Mitr Phol Group*

20.63
hours/person/year



Gender Male*

19.58
hours/person/year



Gender Female*

23.77
hours/person/year



High-level management*

34.55
hours/person/year



Mid-level management*

35.70
hours/person/year



Supervisor*

28.83
hours/person/year



Officer*

23.02
hours/person/year



Operational staff*

12.64
hours/person/year

Remarks: * Referring to data collected from November 1, 2018 to October 31, 2019.

Performance Evaluation

Mitr Phol Group conducts performance evaluations for employees of all levels from operational staff to high-level management, using the Performance Management System (PMS). The system evaluates an employee's productivity, capabilities, and career advancement. PMS focuses on ensuring that employees achieve their goals by linking the organization's targets to those of the functional departments and on to the individual employees. The system also promotes constant skills development, coaching, and advice for employees to ensure their targets are being met.

Mitr Phol Group's Performance Evaluation Covers Two Dimensions:

Dimension 1

KPIs Key Performance Indicator



Evaluating performance based on the targets set.

Each individual employee's targets come from:

- 1 Organizational targets
- 2 Departmental targets
- 3 Individual targets

Dimension 2

Competency



Evaluating knowledge, capabilities, and behavioral traits related to the employee's role and responsibilities.

Relevant knowledge, capabilities, and behaviors are as follows:

- 1 Mitr Phol Culture
- 2 Capabilities according to the responsibility
- 3 Characteristic of a desire leader
- 4 B.E.S.T Model

The annual KPIs of the Chief Executive Officer are set for long-term evaluation. They are aligned with the company's plans and budgets over a three-year period and are adjusted on an annual basis (rolling KPIs) to ensure suitability.

In 2019, the CEO's performance was evaluated based on the Economic Value Added (EVA) and Earnings Before Taxes (EBT).

For the sugar business in Thailand, the energy business, and the wood substitute materials business, in addition

to using the Economic Value Added, the Return on Asset (ROA) and Return on Invested Capital (ROIC) were also used.

Meanwhile, for the fertilizer business, the sugar business in the ASEAN region, the sugar business in Australia, and the sugar business in China, Earnings Before Taxes (EBT) were used as a KPI. The evaluation of the overall success takes into account whether businesses were able to deliver on their plans in line with growth ambitions as well as social and environmental responsibility.

Employee Welfare

Employee Benefits ⁽⁴⁰¹⁻²⁾

Mitr Phol Group strives to promote a better quality of life for all employees so they can maintain a healthy and happy work-life balance. The company has established the Welfare Committee, whose members are elected and represent employees by conveying their overall needs to the company. The committee is also responsible for gathering suggestions, monitoring, and managing the company's employee welfare program, which provides benefits and privileges in addition to the legally-required standards. Benefits are provided to all employees without discrimination. These benefits include



Life insurance



Accident insurance



Medical expenses



Dental expenses



Discounts for hospital treatments



Discounts for restaurants



Personal protective equipment for work safety



Loans



Provident funds



Children's scholarships

For employees approaching retirement age, the company provides knowledge and training in personal finance and planning for a happy and fulfilling life after leaving work. The company provides severance for retirement as required by law, as well as medical expenses for two years from the date of retirement.

To promote well-being, several programs and activities are held for employees. In 2019, we held the Wellness Day activity, inviting external experts to provide tips and advice to help employees achieve well-being and happiness both in their personal and professional lives. Other special after-work activities were also provided to help employees unwind and stay fit, such as zumba dance and piloxing dance (a hybrid of pilates and boxing).



Wellness Day activity painting cloth bags



Happy employees unwind after work by exercising together

In our factories, the focus is on promoting workplace happiness through the 8H factors: Happy Body – well being, Happy Brain – life long learning and life professional, Happy Family – take care family, Happy Heart – kindness to the others, Happy Money – smart use of money, Happy Relaxing – emotional management, Happy Society – take care organization & social, and Happy Soul – moral & gratitude. The concept aims to promote both psychological and physical well being. Activities include growing vegetables to generate extra income, alms giving on birthdays, and activities for families and children. Mitr Phol Group regularly reviews employee activities and benefits to ensure employee welfare and that their needs are being met.



Giving birthday gifts to employees



Alms giving on birthdays

Employee Engagement

We believe that if employees are satisfied with their work and benefits, receive appropriate recognition, and have a healthy work-life balance, this leads to an overall satisfaction with the company and enhances engagement, which in turns promotes productivity and efficiency. Every year, we conduct an employee satisfaction survey and use this data to analyze factors that affect employee engagement in order to make improvements. Employee engagement survey results are as follows:

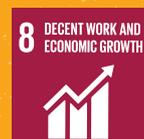
Employee engagement	Year			
	2016*	2017**	2018**	2019**
Mitr Phol Group employees who feel engaged with the company	68%	74%	77%	71%
Percentage of male employees who feel engaged with the company	73%	77%	79%	73%
Percentage of female employees who feel engaged with the company	55%	75%	72%	64%
Employees who took part in the employee engagement survey	93%	97%	97%	99%
Percentage of male employees who took part in the employee engagement survey	93%	99%	91%	75%
Percentage of female employees who took part in the employee engagement survey	92%	95%	89%	25%

Remarks: * Referring to data collected from January 1–December 31, 2016 of that year.

** Referring to data collected from November 1 of the previous year to October 31 of that year.



From the above results, in 2019 the company missed the target of employee engagement, scoring 71% against the 78% target. The results have been analyzed and focus groups have been formed to find out the root causes and to evaluate any additional suggestions from employees that would help promote higher engagement. Employee engagement plays an important part in worker happiness and retention. Moreover, the more engaged employees become, the more productive they tend to be, which has a direct impact on the organization's success.



Mitr Phol Group places great importance on human rights and has incorporated its human rights policy as part of the Mitr Phol Code of Conduct and the Mitr Phol Supplier Code of Conduct. We believe that respecting human rights is the foundation of operating a business ethically and helps to promote sustainable growth. Mitr Phol Group has established a clear policy to reinforce our commitment to upholding human rights throughout our value chain, in line with the Universal Declaration of Human Rights (UDHR), the United Nations Guiding Principles on Business and Human Rights (UNGPs), the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, and the United Nations Global Compact (UNGC), of which Mitr Phol has been a member since 2017.



See the Human Rights Policy

Human Rights Due Diligence

For the framework of its human rights management policy, the Company has implemented the Human Rights Due Diligence (HRDD), as per the United Nations Guiding Principles on Business and Human Rights (UNGPs). All business activities in Thailand and in all locations where the Company runs an operation are covered, in order to prevent human rights violations toward employees, suppliers farmers, contractors, customers, and business partners. The human rights management processes are as follows.



Human Rights Due Diligence



Further information

Key human rights risks in the value chain and their corresponding mitigation measures

Key Risk	Examples of current mitigation measures
<p>1. Labour</p> <p>1) Safety and occupational health of employee</p> <p>2) Clear conditions for hiring workers in supply chain</p> <p>3) Bringing children onto operating sites</p>	<p>1.1 Safety policies and operational standards of tools and operations and equipment.</p> <p>1.2 Life-saving rules for each business unit's risks and organization-wide risk assessments.</p> <p>1.3 Training about work safety and working in risk-averse areas provided for employees, farmers, and contractors.</p> <p>1.4 Personal safety equipment provided for employees and contractors.</p> <p>2.1 Operation manuals for contract workers and resources.</p> <p>2.2 Signing the employee and supplier Code of Conduct.</p> <p>3.1 Visitor management systems at all plants of the sugar, energy, and wood substitute businesses.</p> <p>3.2 Nurseries taken care by sugar business.</p>
<p>2. Communities and society</p> <p>1) Safety and livelihood of local communities</p> <p>2) Water management for business operations</p> <p>3) Waste and pollution management</p>	<p>1.1 Community site inspection processes.</p> <p>1.2 Clear grievance mechanisms and tri-partite collaboration with local communities, government offices, and good governance networks.</p> <p>1.3 Has a "Sustainable Community Development" division directly responsible for ensuring the well-being of communities and working together toward development.</p> <p>2.1 Has a wastewater treatment system as required by law and conducts Environmental Impact Assessments (EIA).</p> <p>2.2 Zero discharge program to reuse treated waste water for Mitr Phol Group's farming.</p> <p>3.1 Environmental monitoring and control through KPIs.</p> <p>3.2 Regular environmental pollution checks.</p> <p>3.3 Sustainable Procurement Policy.</p> <p>3.4 Policy for authorized suppliers to remove registered materials from operating sites to be disposed of according to legal requirements by the Department of Industrial Works.</p>
<p>3. Consumers</p> <p>Health and safety of consumers of sugar products</p>	<p>1. Ensuring quality and safety standards according to internationally accepted food safety standards, including the ISO 9001: 2015 Quality Management System, ISO 22000 Food Safety Management System, and Good Manufacturing Practice (GMP) certification throughout the manufacturing and distribution processes.</p> <p>2. Using technology in the packaging process to minimize human contact.</p> <p>3. Consumer satisfaction surveys.</p> <p>4. Customer and consumer complaints procedures in place, with a dedicated department responsible for handling them.</p>

This year, Mitr Phol Group took part in the Human Rights Awards project initiated by the Rights and Liberties Protection Department of the Ministry of Justice, to promote and support human rights in Thailand. Participating in the program is an important milestone for Mitr Phol Group's work in promoting human rights.

In addition, Mitr Phol Group places great importance on children's rights in line with the company's philosophy of "Grow Together". Since 2016, children's rights have been incorporated into the company's business operations practices, in line with the Children's Rights and Business Principles (CRBP). Since then, the following initiatives have been carried out to promote children's rights.⁽⁴⁰⁸⁻¹⁾

1. Anti-Child Labor

In addition to promoting children's rights across our business operations, Mitr Phol Group also encourages all suppliers in Thailand and abroad to be aware of children's rights by promoting understanding among cane farmers against using child labor as well as all forms of forced and illegal labor. Through effective communication and collaboration throughout the value chain, we work with the Cane Farmers Association, co-operatives, and large contractors to ensure a shared understanding about child labor and illegal labor, how to prevent both in the Mitr Phol value chain, as well as how to resolve potential violations of children's rights should they occur. The awareness program and collaboration also ensure compliance with the correct practices.

In addition, long-term plans have been put in place to prevent the use of child labor and illegal labor within the cane and sugar industries by developing skilled labor to enhance productivity, in tandem with using cutting-edge cane farming technology and equipment to boost yields.



Mitr Phol Group is against the use of child labor.

2. Promoting Breast Feeding

Mitr Phol Group promotes breast feeding by allocating appropriate spaces for breast-feeding employees to pump and store breast milk while at work.



Promoting breast feeding by allocating a dedicated corner in the infirmary for breast feeding employees.

3. Safe Zone for Children

Mitr Phol Group cares about the safety of the children of cane farmers and contractors. To prevent accidents or incidents involving children who accompany adults onto our premises, Mitr Phol Group has dedicated a safe zone to protect children from high-risk areas such as access roads in front of the factory and other dangerous areas.



A reception room and hall in front of a sugar factory have been allocated as a safe zone for children.

4. Development Opportunities for Children of Employees

Mitr Phol Group places great importance on children's development through education. As such, children of Mitr Phol Group employees in elementary schools through to universities are eligible for an annual scholarship based on academic excellence. The number of children eligible to receive the scholarships amounts to 10% of the number of employees. There are five tiers of scholarships, as follows:

- Scholarships for children studying in grades 1-6.
- Scholarships for children studying in grades 7-12.
- Scholarships for vocational diplomas.
- Scholarships for college diplomas.
- Scholarships for university students.



Scholarships for students below university level based on academic merit for children of employees.

Additionally, the company also promotes learning and English language skill development for employee children. The two-day English camp encourages learning through activities and allows children to utilize their school breaks to learn English language skills.



Scholarships for university-level children of employees.

5. Activities to Develop Competencies of Children and Youth

Mitr Phol Group realizes the importance of competency development among Thai children and youth. As such, the company has worked in collaboration with both the public and private sectors in various projects such as Connex ED, Partnership School, and several other Dual Vocational Education to provide access to education and competency development opportunities for Thai children, with an aim to promote a sustainable future for Thailand. Mitr Phol Group also hosts other activities across all of our factories such as the Art Camp project and the Football Clinic.



Mitr Phol Group plays an active role in competency development for Thai children and promotes access to quality education.



Further information about
Connex ED



Further information about
Partnership Schools



Further information about
Dual Vocational Education



Further information about
the Art Camp project



Further information about
the Football Clinic project



6. Environmental Protection to Promote a Healthy Environment for Children

Environmental protection is a key agenda for Mitr Phol Group. As such, we ensure effective environmental management and caring for the environment to minimize impact to local communities and promote a safe and healthy environment in which children can thrive.

Further information about water management



Further information about Energy management
and climate change



Further information about waste management

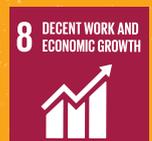


Further information about air quality management





*Occupational
Health and
Safety*



Mitr Phol Group prioritizes Security, Safety, Occupational Health and Environment (SSHE) in our business operations. With the safety of our employees, contractors, and relevant stakeholders in mind, our goal is zero accidents to prevent losses to these stakeholders as well as the business. We strive to continuously improve upon and uplift the standards and capacities for Security, Safety, Occupational Health and Environment, in order to become a world-class organization. High-level management is committed to building a corporate culture of Security, Safety, Occupational Health and Environment that is upheld by everyone in the organization.

With the commitment to sustainable development, we have established the Security, Safety, Occupational Health and Environment (SSHE) policy that is applied internally and externally. A central Safety, Occupational Health and Environment department at the headquarters as well as local departments at each factory have been established to ensure compliance and efficiency across the business. Clear targets have been set, with action plans in place for all business units and affiliated companies across Mitr Phol Group, in line with international SSHE standards including ISO 14001:2015 and OHSAS 18001:2007. This is regularly communicated to all stakeholder groups, from management and employees to contractors and other relevant persons.⁽⁴⁰³⁻¹⁾

See the Security, Safety,
Occupational Health and Environment Policy



Safety, Occupational Health, and Environment Performances

Mitr Phol Group continually monitors our performance in terms of Security, Safety, Occupational Health and Environment, and management reviews related matters and risks as part of monthly meetings. Hazard identification, risk assessments, and incident reviews are performed to identify risks and opportunities to cover all operational processes, activities, locations, machinery and equipment, as well as activities carried out by key contractors. The reviews include both normal and abnormal situations, as well as emergencies. Risk mitigation plans are in place to ensure risks are kept at acceptable levels for all key risks and risks that result from change. The SHE department in each factory is responsible for carrying out the plan and regularly monitoring its effectiveness, occupational safety performance, and statistics.⁽⁴⁰³⁻²⁾ If an employee or

supervisor finds that any activity or duty contains risk or may cause danger, injuries, or death, they have the right to refuse to carry out the activity and/or immediately call for a stop without it being considered malpractice. Should this happen, all relevant persons must be notified immediately to resolve the situation and make improvements to Mitr Phol Group's Security, Safety, Occupational Health and Environment practices. In case of an incident or accident, proper investigation processes must be carried out to find out the cause, the incident reported to the person in charge at the location and the central SHE department. Further investigations will be carried out, with action plans and evaluations to ensure it doesn't happen again, with the aim to keep accidents to zero.

Mitr Phol Group provides medical doctors and nurses from hospitals accredited by the Thai Public Health Ministry to be stationed at an infirmary at each location, as required by law. The doctors and nurses provide consultations, treatments, and services to employees and contractors during office hours. The Safety Clinic also provides care to employees and contractors who sustain injuries while on duty, or whose health is impacted by the work they perform. The Safety Clinic provides health promotion, disease prevention, consultation and occupational disease surveillance. Activities promote services provided by the Safety Clinic.⁽⁴⁰³⁻³⁾

Mitr Phol Group is fully compliant with the law. The Security, Safety, Occupational Health and Environment committee comprised of representatives from employees and the organization meets at least once a month to report on and suggest measures to ensure legal compliance and adherence to safety standards. This secures the safety of employees, contractors, and those working on or visiting our premises.⁽⁴⁰³⁻⁴⁾

Security, Safety, Occupational Health and Environment Statistics

Mitr Phol Group's SHE committee gathers relevant statistics from employees and contractors on a monthly basis.⁽⁴⁰³⁻⁹⁾ The company sets annual targets for lost-time injuries and reports statistics against such targets.

The statistics show that lost-time injury frequency rates for both employees and contractors are higher than the targets. Investigations have been carried out to find the cause of the accidents and prevent them from happening again. Reviews of current work processes and more intense risk assessments have been performed, while more stress has been placed on enforcing the company's Security, Safety, Occupational Health and Environment policy. Activities to promote awareness among employees and contractors have also been held to prevent future incidents.

Lost-Time Injury Frequency Rate (LTIFR)⁽⁴⁰³⁻⁹⁾



Remarks: Statistics on security, safety, occupational health and environment can be found on page 112-113 (appendix).

Safety, Occupational Health and Environment Related Loss Control, Prevention and Reduction

In 2019, one death occurred due to an accident, as well as some injuries and lost time and days. Mitr Phol Group continues to promote knowledge and understanding about occupational safety, with an aim to achieve our zero accidents target. The Life Saving Rules⁽⁴⁰³⁻⁷⁾⁽⁴⁰³⁻⁹⁾ have been established for compliance by all relevant stakeholders as part of our promotion of safety in the workplace and the prevention of serious accidents that may lead to loss of life or damage to property. The Life Saving Rules were implemented across all business units within Mitr Phol Group this year.

Further information about the Life Saving Rules



In addition, Mitr Phol Group also has other safety measures and standards in place to guide all relevant parties to achieve optimum safety.

Promoting Awareness about Safety, Occupational Health and Environmental Protection ⁽⁴⁰³⁻⁵⁾⁽⁴⁰³⁻⁶⁾

Mitr Phol Group initiated and continues to promote a culture of safety in the workplace throughout the organization to minimize risks of loss of life and injuries among employees and contractors. We strive to constantly enhance knowledge, capabilities, and a culture of Security, Safety, Occupational Health, and

Environment, while promoting engagement among employees, communities and stakeholders. Advice is provided to employees and their representatives.



Further information



Fire drill at a factory to prepare for the event of a fire.



Safety training for employees.



Life Saving Rules for Sugar Factories Group

✓ 4 Must ✗ 3 Must not

1. Must wear

full-body safety harnesses

with double hooks and keep the hooks locked all the time when working at height greater than 2 meters.



3. Must switch off electric, air and hydraulic machinery and hang the "stop machinery" sign every time

before carrying out machinery maintenance or cleaning tasks and special permission must be sought prior to cleaning in areas where machinery is present.



5. Must not smoke in factory

except in provided areas and must throw cigarette butts only to the provided trash.



2. Must obtain work permits for risky tasks

(for example, work that involves heat or sparks, work at height greater than 2 meters, or work at spots with poor ventilation).



4. Must fasten safety belts (driver and all passengers)

prior to moving vehicles from parking lots and keep safety belts fastened throughout the journey. Factory vehicles are included.



6. Must not modify machinery

and equipment or bypass safety interlocks without permission from supervisors (manager level or higher).



7. Must not use telephone

(no call/photo taking/typing/listening) in areas prone to fires and explosions while operating machine and driving all types of vehicles.





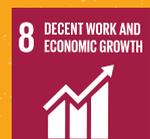
*Society
and
Communities*



2 ZERO HUNGER



4 QUALITY EDUCATION



8 DECENT WORK AND ECONOMIC GROWTH



10 REDUCED INEQUALITIES

We believe success is not possible without collaboration. Mitr Phol Group's sustainable growth is a result of collaborative efforts from several sectors, enabling everyone to move forward in a sustainable way, in line with our "Grow Together" philosophy. Mitr Phol Group prioritizes local communities as a key stakeholder group and has ensured continued community development in all aspects, from economic to social and environmental. Our sustainable community development projects, and social contribution projects lay a strong foundation onto which communities can grow, prosper, and become self-reliant.

During the past year, Mitr Phol Group has provided the following contributions for society and communities:

Type of contribution



Cash contributions

53.1 Million baht



Time

1.6 Million baht



In-kind giving

17.1 Million baht



Management overhead expenses

15.4 Million baht

Sustainable Community Development Projects

For the past six years, Mitr Phol Group has carried out sustainable community development projects with designated teams at each sugar factory who are directly responsible for working closely with local authorities and networks to ensure our targets are met. There are three key areas of development, namely community local economic, community farming and food safety and community management.



Our Goal is that by 2021

All **25** sub-districts



will have established
at least **one** learning center
per sub-district.

30% of agricultural
households in the sub-districts
are self-reliant
sugarcane farmers.



At least **10%**
of households in
the sub-districts
are model families.



Performance

2018

increased

21 sub-districts to **25** sub-districts

2019

a total of

338 villages took part in the program



more than

1,620 families



became volunteers and participated in a sufficiency economy program.



Further information

Social Enterprises

"Mitr Chuenjai company limited" was founded on Mitr Phol Group's commitment to helping farmers and communities to have secure sources of income and to become self-reliant. As we always operate our businesses with an aim to return contributions to society, we created a range of products under the brand "Chuenjai by Mitr Phol". Starting out with locally made products, the brand has expanded to include other personal goods such as cosmetics made from natural sugar. Our goal is for Mitr Chuenjai to fully become a social enterprise by 2022.



Further information



Social Development Projects

Mitr Phol Group has set up a Community Relations department that is directly responsible for promoting strong relationships with local communities through several channels. Our team engages local communities by establishing dialogue, tri-partite meetings, surveys, and analyses of communities surrounding our factories in order to collect information about their needs, wants, and expectations, as well as the impact our businesses has on local communities. In addition to these exercises, we regularly conduct the Environmental Impact Assessment (EIA) and all factories have an official grievance channel through which communities can file complaints. Data collected through all touch points is analyzed and used to formulate action plans to address the needs and expectations of communities. The data also helps us to seek ways to minimize the impact our businesses have on local communities, so both can thrive and grow together sustainably.

In 2019, Mitr Phol Group engaged 52.60% of the surrounding communities to take part in surveys. Their expectations were analyzed and incorporated as part of our social development projects. From the surveys, the top three priorities for communities were: income generation and job creation, providing support for sports and health, and providing opportunities through education for young people. Mitr Phol Group carried out several projects to promote income and create jobs, health and fitness through sports, and educational opportunities for young people. Projects include the Green Market, the Mitr Phol Cup, the Mitr Phol Art Camp, the 6 Ways to Do Good project, the Mitr Volunteers project, the RUN FOR YOU 2019 campaign, the CONNEXT ED project, the Mitr Phol Partnership School project, and other joint programs.



Chemicals-free vegetables sold at a Green Market



Mitr Kalasin Park executives with the cheerleading winners of the Mitr Phol Cup



2019 Mitr Phol Art Camp



Executives, employees, and communities take part in the RUN FOR YOU 2019 project.



Students from the Baan Nong Phai school, one of several partnership schools



Mitr Phol Group and its network in the CONNEXT ED project to promote educational opportunities in Thailand.



Using German standards of Plant Science as part of a Mitr Phol Dual Vocational project.





Water Management

6 CLEAN WATER AND SANITATION



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Water is a very important resource for our business. Climate change affects rainfall, altering the seasons and weather patterns and thereby resulting in water shortages. This has a great impact on water supply for agriculture and manufacturing and can sometimes lead to conflicts between businesses and communities. Mitr Phol Group places great importance on water management and has established a Water Management Committee to monitor and manage the company's water usage and evaluate risks of water shortages both in terms of quantity and quality. In all locations where we operate our business, we reevaluate the risk on an annual basis using the AQUEDUCT Water Risk Atlas coupled with data from the Royal Irrigation Department. The committee also closely monitors relevant laws governing water usage in Thailand. We work closely with government agencies including the Royal Irrigation Department and the Department of Groundwater Resources, and local administration agencies, as well as representatives of stakeholder groups where we operate our business to discuss water management plans to ensure an adequate supply for our business operations and the nearby communities.⁽³⁰³⁻¹⁾

Long-term Target

Mitr Phol Group has adjusted its goal of reducing water usage per production unit by a further

15% in 2021,
compared with
the 2018 baseline.

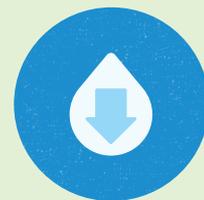
After reviewing our past performance in water management and taking into account the worsening drought, Mitr Phol Group to set its goal of reducing water usage and carries out several initiatives to ensure efficient water usage and that the goal is achieved:



Collecting rainwater



Water footprint evaluation and water balance analysis



Reducing water usage



Reusing water



Recycling treated wastewater



In addition, Mitr Phol Group also promotes efficient water management and usage among cane farmers. We support several types of irrigation systems in cane fields to suit with areas. This includes building ponds for agricultural use, and sharing knowledge about maximizing water usage efficiency through drip irrigation systems and spring irrigation system.



Water management in cane fields by using spring irrigation systems



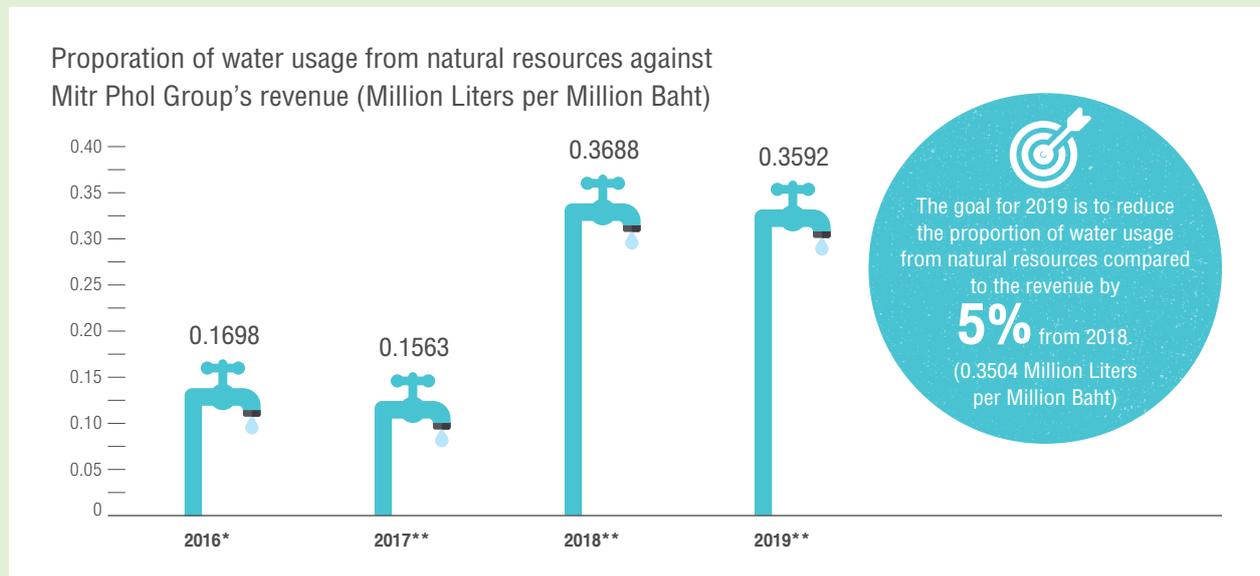
Water management in cane fields by using drip irrigation



Water management in cane fields by using Center Pivot



Proportion of Water Usage from Natural Resources Against Mitr Phol Group's Revenue



Remarks: * 2016 data refer to data collected between January 1 to December 31, 2016.

** 2017-2019 data refer to data collected between November 1 of the previous year to October 31 of that year.

Wastewater management is also a priority at Mitr Phol Group. We have efficient processes in place to remove impurities from wastewater to ensure it is compliant with relevant laws and regulations. The Mitr Phu Wiang sugar factory firstly introduced state-of-life-art system--Upflow Anaerobic Sludge Blanket (UASB) to help make wastewater management more efficient. Additionally, the biogas from the system is also used as fuel to burn carbon coals, which are used in place of resin for dye removal. This helps to reduce the amount of saltwater required for washing resin in production process. The treated wastewater is used in various activities in the factories such as watering fields and plants, and washing the floors, and etc.





*Energy
Management
and
Climate Change*

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

The worsening problem of climate change is leading to increased droughts and shortages of water and raw materials production, which affects Mitr Phol Group's business operations. We strive to ensure that our business development plans are environmentally friendly and to reduce our fossil fuel usage and carbon footprint by adopting circular economy practices and expanding from the sugar business into renewable energy. We also serve Thailand's demand for renewable energy by selling biopower to the Electricity Generating Authority of Thailand and the Provincial Electricity Authority.

We promote energy efficiency by using ISO 50001 certified energy management systems that are also compliant with Thai laws and regulations. Our company's energy conservation sub-committee is in charge of ensuring energy-related goals are achieved, with regular reporting to company management on the efficacy of the energy management systems.

Internal Energy Conservation and Greenhouse Gas Emissions Reduction Projects ⁽³⁰⁵⁻⁵⁾

To lower energy losses and enhance energy efficiency, Mitr Phol Group implements several energy conservation projects across all factories via controls and improvements of our production processes. In parallel, efforts are made to develop alternative energy to reduce greenhouse gas emissions.

Mitr Phol Group carried out the following energy conservation initiatives



Improving equipment efficiency
Improving energy efficiency for centrifugal machines and crystallization pans to reduce electricity usage, insulating evaporators and steam pipes to reduce energy losses.



Improving production efficiency
Ensuring production stability, reducing production stoppages to lower energy usage while restarting, improving sugar production processes to reduce electricity steam usage.

In 2019



Mitr Phol Group implements several energy conservation :
29 projects



Reduces **684,000** tonnes of CO₂e of GHG emissions



Reduces energy
137 Million MJ



Save cost
28 Million Baht

In addition to reducing energy usage, these projects also lower greenhouse gas emissions from fossil fuels, electricity and steam. Mitr Phol Group also implements water management projects to reduce the volume of wastewater that flows into the treatment system, helping to reduce greenhouse gas emissions from water treatment. Moreover, the company also operates other alternative energy projects including installing a solar rooftop, running a floating solar farm, and taking part in the Thailand Voluntary Emission Reduction Program (T-VER).

The Solar Rooftop Project ⁽³⁰⁵⁻⁵⁾

The 989-kW solar rooftop on molasses storage tanks at our Mitr Phol Phu Khieo ethanol plant generates more than 1.4 million units of electricity for the Provincial Electricity Authority of Thailand. The solar rooftop not only optimizes space usage, but also provides energy security for local communities.



This is equivalent to **120 tonnes of crude** from fossil fuels



Reduces **700 tonnes** of CO₂e of GHG emissions per year.



The solar rooftop at the Mitr Phol Phu Khieo ethanol plant

The Floating Solar Farm ⁽³⁰⁵⁻⁵⁾

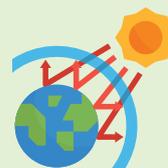
This project utilizes space in the manmade pond in the factory to produce solar energy and reduce evaporation the 997-kW solar farm generates 1.4 million units of electricity per year.



The Floating Solar Farm at Ratchasima Green Energy Company Limited

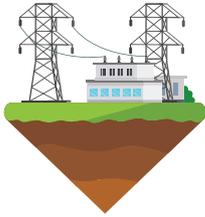


This is equivalent to **120 tonnes of crude** from fossil fuels



reduces **700 tonnes** of CO₂e in GHG emissions.

Since 2015, Mitr Phol Group has received carbon emissions certification from the Thailand Voluntary Emission Reduction Program (T-VER) run by the Thailand Greenhouse Gas Management Organization (Public Organization). To date, four of Mitr Phol Group's projects have received such certifications:



The biopower project by Mitr Pol Bio-Power (Dan Chang) (phase 2).



The biopower project by Panel Plus Bio-Power Company Limited.



The 133.6 MW thermal power from biopower project by Mitr Phol Bio-Power Phu Khieo (phase 2).



The 45 MW co-generation biopower project at Mitr Phol Bio-Power (Kuchinarai).

Carbon Credit
930,000
Tonnes CO₂

Mitr Phol Group promotes a low-carbon society and carbon neutrality by selling carbon credits to other organizations both in the public and private sectors who are looking to offset their carbon emissions. In 2019, Mitr Phol Group sold carbon credits equivalent to 327,000 tonnes of CO₂e as part of a carbon offsetting program. It is a key mechanism that allows all sectors to be involved in solving climate change and support the government's initiative to reduce carbon emissions. Currently, Mitr Phol Group generates 930,000 tonnes of CO₂e of carbon credits certified by TGO and is in the process of registering two additional projects: the Betong Biopower Plant and the Mitr Phol Biopower Plant (Phu Luang). It is expected that in 2020, certified carbon credits will reach 800,000 tonnes of CO₂e.



Further information

"Mitr Phol Group buys fresh cut cane from farmers and discourages cane burning. The project helps to minimize environmental impact and reduce greenhouse gas emissions.

Thailand Greenhouse Gas Management Organization (Public Organization) has seen that Mitr Phol Group carries out several great projects as an industry leader and hopes that the company will disclose its short-, medium-, and long-term targets for reducing greenhouse gas emissions."



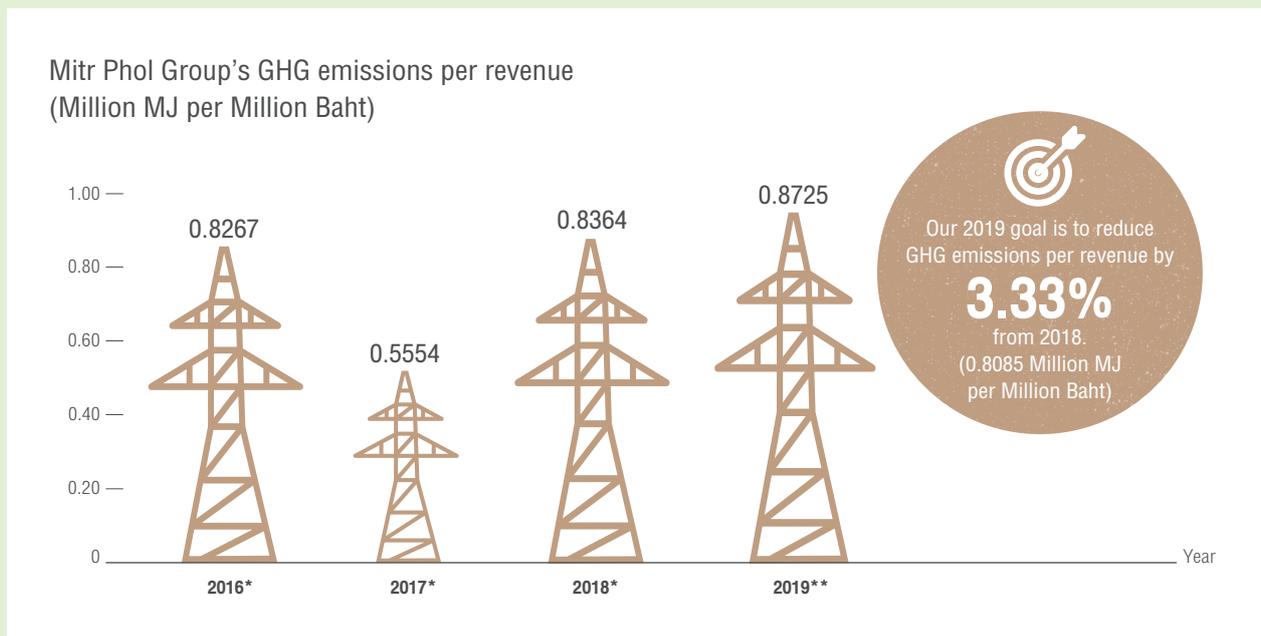
Dr. Pongvipa Lohsomboon
Deputy Director of Thailand Greenhouse Gas Management Organization (Public Organization)



Phu Khieo plant

Our energy efficiency management plans and continued efforts to reduce carbon emissions have resulted in Mitr Phol Group's greenhouse gas emissions scope 1 and 2 as shown below:

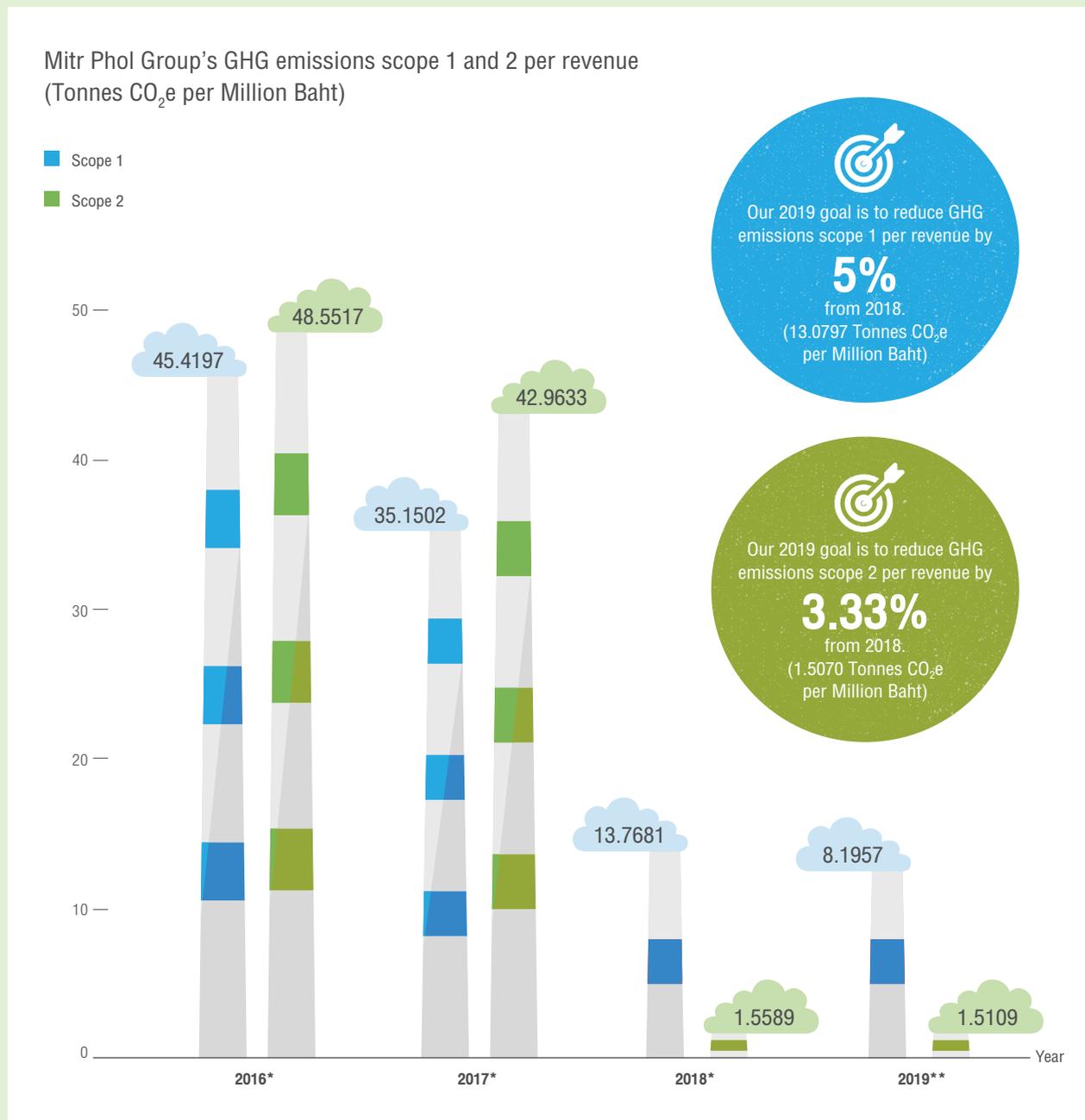
Mitr Phol Group's GHG Emissions per Revenue



Remarks: * Referring to data collected from January 1–December 31, 2016.

** Referring to data collected from November 1 of the previous year to October 31 of that year.

Mitr Phol Group's GHG Emissions Scope 1 and 2 per Revenue



Remarks: * Referring to data collected from January 1–December 31, 2016.

** Referring to data collected from November 1 of the previous year to October 31 of that year.

- Direct greenhouse gas emissions (scope 1) in 2018 and 2019 were reduced from 2016 and 2017 due to a decrease in non-renewable energy usage and an increase in solar energy, which contributed to lower carbon emissions.
- Indirect greenhouse gas emissions (scope 2) in 2018 and 2019 were reduced from 2016 and 2017 due to an increase in bioenergy usage produced by Mitr Phol Group and more solar energy, which helped to lessen power purchase from external providers.

In addition to our continued efforts in energy management and GHG emissions reduction, Mitr Phol Group also prioritizes environmental conservation in areas related to our businesses such as promoting fresh cane cutting and developing solar-powered water pumps.

Further information





*Waste
Management*

3 GOOD HEALTH
AND WELL-BEING



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Mitr Phol Group is committed to sustainable production and consumption, ensuring that our business operations are in line with the United Nations Sustainable Development Goal 12. By applying the circular economy approach and ensuring optimal utilization of resources without causing an impact on the environment and communities, we create value out of waste. For example, bagasse is used as fuel for biopower production, molasses is used in the production of ethanol, and filter cake and vinasse are used as raw materials for bio-fertilizers, which are then used in cane fields. Such efforts allow Mitr Phol Group to reduce the amount of raw materials used in our production processes, manage waste by turning it into resources, and create new businesses for the group.

Promoting the Reduction of Plastic Packaging and using Environmentally Friendly Packaging

Mitr Phol Group is committed to ensuring that our business operations are kind to the planet. We apply the 3Rs (Reduce, Reuse, Recycle) in our waste management to help reduce the usage of raw materials and the need to send waste to landfills. Realizing the impact the plastic waste crisis is having on our ecosystems, we strive to reduce single-use plastic packaging and promote the use of compostable packaging in its place.

Mitr Phol Group designs and develops safe and environmentally friendly packaging that serves the demands of consumers. The company has set a target to lower the amount of plastic in packaging with a policy to guide Mitr Phol Group's business operations.



Further information



See the Packaging Policy

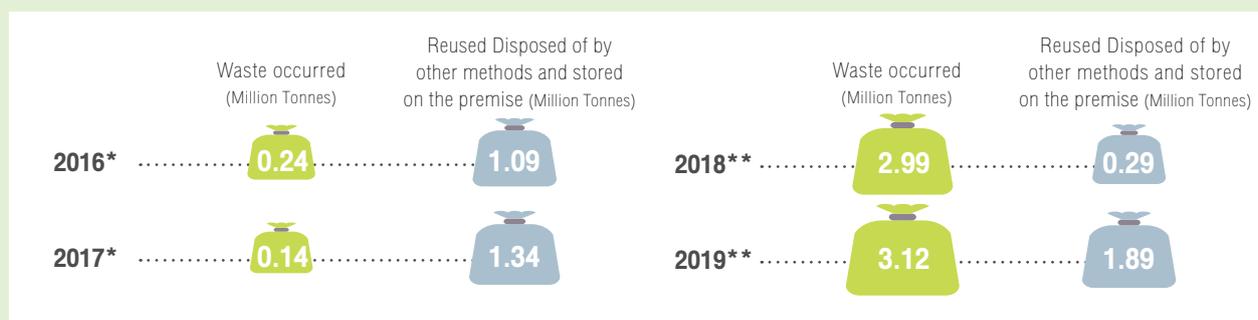


Turning Waste into Products

Mitr Phol Group collaborates with external organizations to manage waste in the most efficient way. In 2019, Panel Plus, a subsidiary of Mitr Phol Group, worked with other organizations to use biomass ashes as a raw material for cement production. The cement was molded into blocks to pave roads in our factories and to create bollards. The collaborative project is also exploring making rubber mats for pavement and running tracks. Ashes are also used as soil nutrients in an experimental farm covering 160 rais of land in Songkla province. It is expected that the initiative will help to reduce the amount of ashes sent for disposal by 16,000 tonnes and eliminate disposal costs of 4.9 million baht.

Mitr Phol Group also runs other waste management projects, for example reusing wood off-cuts in the manufacturing process to lower raw material consumption, reducing general waste to minimize sending waste to landfill, and recycling bank to reduce waste from employee housing in factories. Through such efforts and projects, in 2019 Mitr Phol Group's utilization of waste was as follows.

Amount of waste across Mitr Phol Group



Remarks: * Referring to data collected from January 1–December 31, 2016.

** Referring to data collected from November 1 of the previous year to October 31 of that year.

In 2018 – 2019, additional data was collected on hazardous and non-hazardous waste that was reused and disposed of via incineration. During the same period, additional data was also collected on non-hazardous waste that was recycled and recovered.

In 2019, additional data was collected on hazardous and non-hazardous waste that was stored on the premise.

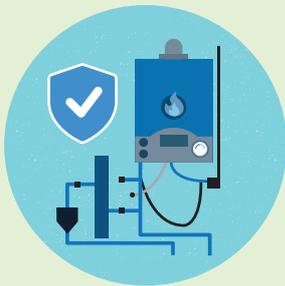


*Air Quality
Management*



Mitr Phol Group places great importance on air quality management, as the company's production processes may cause air pollution, especially dust dispersion, and this may have an adverse effect on the health of our employees and the surrounding communities. Due to concerns about the environmental impact from our business operations, we have implemented measures and projects to promote air quality within and around our factories to ensure that it is on par with generally accepted standards. Innovation and advanced environmentally friendly technology have also been used to continuously improve air quality. In 2019, the following measures and projects were carried out to protect air quality.

Mitr Phol Group's Air Pollution Preventive Measures



Ensuring appropriate fuel usage and controls of boilers' combustion factors to reduce Nitrogen oxide (NO_x) and Sulphur oxide (SO_x) and ensure complete combustion.



Installing web scrubbers with an 80% efficiency in dust control and electrostatic precipitators with an 99% efficiency in capturing dust from combustion in the biopower production process.

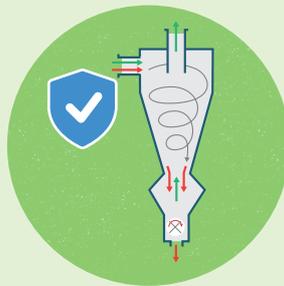


Controlling dust from conveyor belts used to transport cane into the biopower plant by regularly checking for leakages, installing a cover, and using mobile belts.



Dust control measures in bagasse storage areas:

1. Planting rows of pine trees to capture dust from bagasse piles.
2. Installing wind breaks to change wind directions.
3. Installing windsocks to monitor wind directions.
4. Spraying water using fog machines and Big Gun® sprinklers at bridgeheads, and installing dust nets.
5. Providing training for employees about controlling dust pollution from bagasse piles.
6. Install the vertical mesh wall around the bagasse pile



Controlling dust from wood substitute materials production processes by installing the multicyclone air purifiers and electrostatic precipitators with an 80% and 90% efficiency in dust control, respectively.



Install water spray at the end of the vent of the multi-cyclone.



Controlling dust at bagasse storage facilities by spraying water and installing conveyor belt covers.

Studying Air Pollutants Dispersion using AERMOD

Panel Plus Company Limited applied the AERMOD atmospheric dispersion modeling system to study air pollutants dispersion, using meteorological data and air quality results from chimneys for analyses. The project has helped the company to forecast the intensity and patterns of air pollutant dispersion and identify locations or chances of high intensity at certain times. With such knowledge and information, the company can plan controlled pollutants releases through chimneys, put in place preventive measures, and monitor air pollutants affected by changes in wind directions.

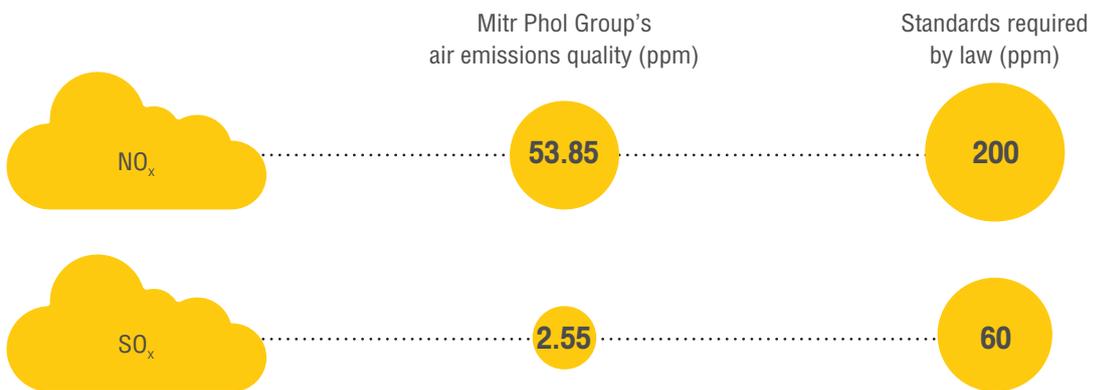


AERMOD training provided to employees.

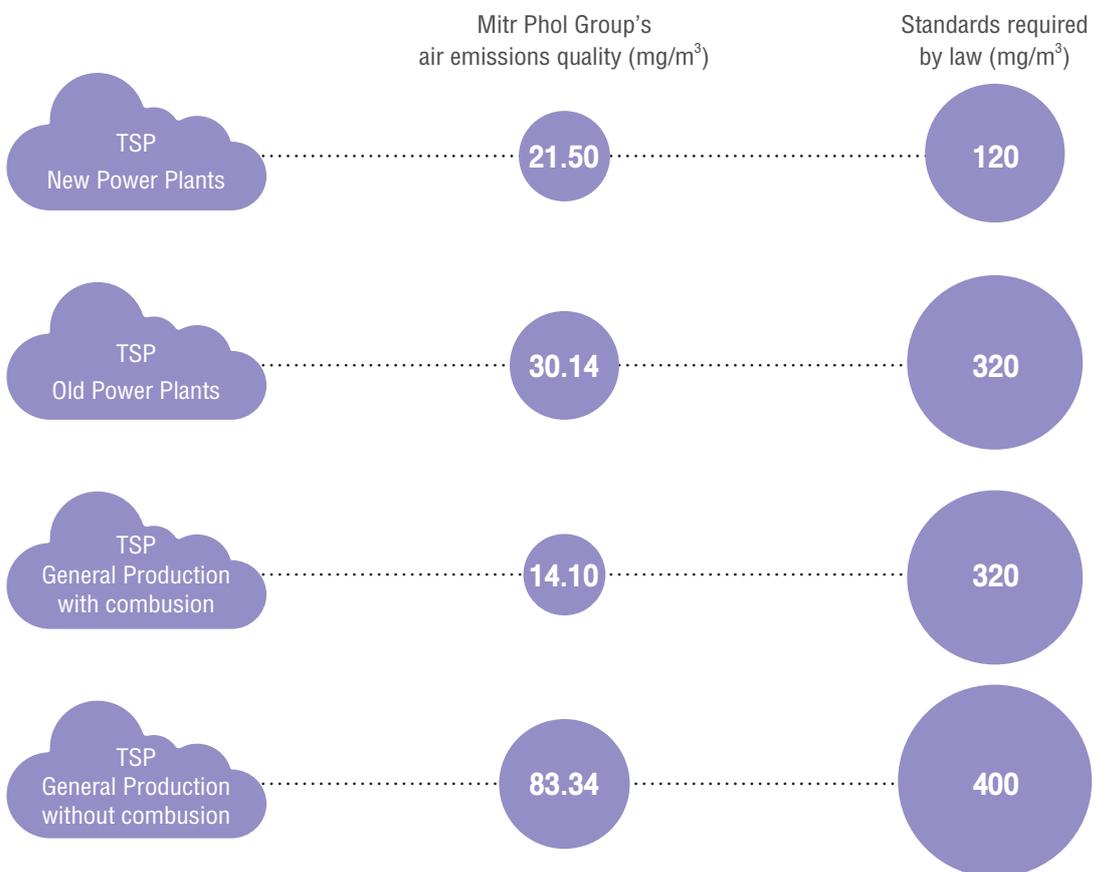


Thanks to these initiatives and projects, Mitr Phol Group's air quality performance is as follows:

Nitrogen oxide (NO_x) and Sulphur oxide (SO_x) emissions quality



Total Suspended Particulate (TSP)





Sustainable Performance – Information on Human Resources

Information on Employees

Data	Unit	2016*			2017**			2018**			2019**		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total

GRI 102-7, 102-8 (2016) Total Number of Employees

Total number of employees by gender

Total number of employees	Persons	5,878	2,231	8,109	6,389	2,575	8,964	6,012	1,880	7,892	5,988	1,953	7,941
	Percent	72.49	27.51	100	71.27	28.73	100	76.18	23.82	100	75.41	24.59	100

Total number of employees by employment contract

Permanent employee	Persons	5,268	1,587	6,855	5,854	1,768	7,622	5,869	1,837	7,706	5,878	1,917	7,795
	Percent	64.96	19.58	84.54	65.31	19.72	85.03	76.16	21.48	97.64	74.02	24.14	98.16
Temporary employee	Persons	610	644	1,254	535	807	1,342	143	43	186	110	36	146
	Percent	7.52	7.94	15.46	5.97	9.00	14.97	1.81	0.55	2.36	1.39	0.45	1.84

Total number of employees by employment type

Full-time employee	Persons	5,878	2,231	8,109	6,389	2,575	8,964	6,012	1,880	7,892	5,988	1,953	7,941
	Percent	72.49	27.51	100	71.27	28.73	100	76.18	23.82	100	75.41	24.59	100
Part-time employee	Persons	0	0	0									
	Percent	0	0	0									

Total number of employees by location

Bangkok	Persons		124	124		98	98		123	123	453	483	936
	Percent		12.34	12.34		7.40	7.40		14.84	14.84	5.71	6.08	11.79
Other area	Persons		881	881		1,227	1,227		706	706	5,535	1,470	7,005
	Percent		87.66	87.66		92.60	92.60		85.16	85.16	69.70	18.51	88.21

GRI 405-1 (2016) Diversity of Employees

Top level management	Persons	26	2	28	26	2	28	26	2	28	20	3	23
	Percent	92.86	7.14	100	92.86	7.14	100	92.86	7.14	100	86.95	13.05	100
Age > 50 years	Persons	22	1	23	21	1	22	21	1	22	15	1	16
	Percent	78.57	3.57	82.14	75.00	3.57	78.57	75.00	3.57	78.57	65.22	4.35	69.57
Age 30 – 50 years	Persons	4	1	5	5	1	6	5	1	6	5	2	7
	Percent	14.29	3.57	17.86	17.86	3.57	21.43	17.86	3.57	21.43	21.73	8.70	30.43
Age < 30 years	Persons	0	0	0	0	0	0	0	0	0	0	0	0
	Percent	0	0	0	0	0	0	0	0	0	0	0	0

Data	Unit	2016*			2017**			2018**			2019**		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Middle level management	Persons	177	48	225	189	58	247	188	59	247	175	61	236
	Percent	78.67	21.33	100	76.52	23.48	100	76.12	23.88	100	74.15	25.85	100
Age > 50 years	Persons	61	14	75	66	16	82	63	15	78	63	15	78
	Percent	27.11	6.22	33.33	26.72	6.48	33.20	25.51	6.07	31.58	26.69	6.36	33.05
Age 30 – 50 years	Persons	116	34	150	122	42	164	125	44	169	112	46	158
	Percent	51.56	15.11	66.67	49.40	17.00	66.40	50.61	17.81	68.42	47.46	19.49	66.95
Age < 30 years	Persons	0	0	0	1	0	1	0	0	0	0	0	0
	Percent	0	0	0	0.40	0	0.40	0	0	0	0	0	0
Line managers	Persons	417	224	641	459	247	706	474	276	750	470	299	769
	Percent	65.05	34.95	100	65.01	34.99	100	63.20	36.80	100	61.12	38.88	100
Age > 50 years	Persons	88	15	103	97	19	116	95	19	114	97	21	118
	Percent	13.73	2.34	16.07	13.74	2.70	16.44	12.67	2.53	15.20	12.61	2.73	15.34
Age 30 – 50 years	Persons	318	206	524	355	226	581	379	257	636	371	276	647
	Percent	49.61	32.14	81.75	50.28	32.01	82.29	50.53	34.27	84.80	48.25	35.89	84.14
Age < 30 years	Persons	11	3	14	7	2	9	0	0	0	2	2	4
	Percent	1.71	0.47	2.18	0.99	0.28	1.27	0	0	0	0.26	0.26	0.52
Officers	Persons	1,592	724	2,316	1,810	838	2,648	1,930	854	2,784	2,093	933	3,026
	Percent	68.74	31.26	100	68.35	31.65	100	69.33	30.67	100	69.17	30.83	100
Age > 50 years	Persons	212	27	239	226	33	259	221	31	252	230	35	265
	Percent	9.15	1.17	10.32	8.53	1.25	9.78	7.94	1.11	9.05	7.60	1.16	8.76
Age 30 – 50 years	Persons	939	360	1,299	1,032	400	1,432	1,171	424	1,595	1,314	477	1,791
	Percent	40.55	15.54	56.09	38.97	15.11	54.08	42.06	15.23	57.29	43.42	15.76	59.18
Age < 30 years	Persons	441	337	778	552	405	957	538	399	937	549	421	970
	Percent	19.04	14.55	33.59	20.85	15.29	36.14	19.33	14.33	33.66	18.15	13.91	32.06
Operational level	Persons	1,818	286	2,104	2,137	338	2,475	2,006	343	2,349	1,886	326	2,212
	Percent	86.40	13.60	100	86.35	13.65	100	85.36	14.64	100	85.26	14.74	100
Age > 50 years	Persons	137	14	151	137	14	151	125	15	140	125	17	142
	Percent	6.51	0.67	7.18	5.54	0.56	6.10	5.32	0.64	5.96	5.65	0.77	6.42
Age 30 – 50 years	Persons	1,002	181	1,183	1,062	199	1,261	1,039	196	1,235	981	181	1,162
	Percent	47.62	8.60	56.22	42.91	8.04	50.95	44.24	8.34	52.58	44.35	8.18	52.53
Age < 30 years	Persons	679	91	770	938	125	1,063	841	133	974	780	128	908
	Percent	32.27	4.33	36.60	37.90	5.05	42.95	35.80	5.66	41.46	35.26	5.79	41.05

Remarks: * refer to data collected between January 1 – December 31, 2016.
 ** refer to data collected between November 1 of the previous year to October 31 of the reporting year.
 The data was compiled from human resources database of Mitr Phol Group.
 Employees categorized by level refer to monthly permanent employees from operational level to top level management.

Information on New Employee Hires of Mitr Phol Group

Data	2016*		2017**		2018**		2019**	
	Number (persons)	Percent	Number (persons)	Percent	Number (persons)	Percent	Number (persons)	Percent
GRI 401-1 (2016) New Employee Hires								
Rate of new employee hires								
Male		11.15		13.45		7.72		3.53
Female		3.52		3.94		3.04		2.21
Total		14.67		17.39		10.76		5.74
By gender								
Male	764	76.02	1,025	77.36	595	71.77	275	61.52
Female	241	23.98	300	22.64	234	28.23	172	38.48
Total	1,005	100	1,325	100	829	100	447	100
By age								
< 30 years	733	72.93	1,036	78.19	601	72.50	357	79.87
30 - 50 years	267	26.57	280	21.13	213	25.69	87	19.46
> 50 years	5	0.50	9	0.68	15	1.81	3	0.67
Total	1,005	100	1,325	100	829	100	447	100
By location								
Bangkok	124	12.34	98	7.40	123	14.84	115	25.73
Others	881	87.66	1,227	92.60	706	85.16	332	74.27
Total	1,005	100	1,325	100	829	100	447	100

Remarks: * refer to data collected between January 1 - December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Information on Employee Turnover of Mitr Phol Group

Data	2016*		2017**		2018**		2019**	
	Number (persons)	Percent						
GRI 401-1 (2016) Employee Turnover								
Rate of employee turnover								
Male		8.40		8.13		8.20		7.31
Female		2.82		2.77		3.49		3.30
Total		11.22		10.90		11.69		10.61
By gender								
Male	576	74.90	620	74.61	632	70.14	570	68.92
Female	193	25.10	211	25.39	269	29.86	257	31.08
Total	769	100	831	100	901	100	827	100

Information on Employee Turnover of Mitr Phol Group

Data	2016*		2017**		2018**		2019**	
	Number (persons)	Percent						
By age								
> 50 years	26	3.38	13	1.57	13	1.45	11	1.33
30 - 50 years	340	44.21	306	36.82	337	37.40	303	36.64
< 30 years	403	52.41	512	61.61	551	61.15	513	62.03
Total	769	100	831	100	901	100	827	100
By location								
Bangkok	101	13.13	88	10.59	117	12.99	99	11.97
Others	668	86.87	743	89.41	784	87.01	728	88.03
Total	769	100	831	100	901	100	827	100

Remarks: * refer to data collected between January 1 - December 31, 2016.
** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Percentage of Employees Engaged in Negotiation (Labor Welfare Committee)

Data	2016*	2017**	2018**	2019**
GRI 102-41 (2016) Collective Bargaining Agreements				
Percentage of employees engaged in negotiation (Labor Welfare Committee)	100	100	100	100

Remarks: * refer to data collected between January 1 - December 31, 2016.
** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Maternity Leave or Parental Leave of Mitr Phol Group's Employees

Data	Gender	2016*		2017**		2018**		2019**	
		Number (persons)	Percent						
GRI 401-3 (2016) Maternity Leave or Parental Leave									
Employees that were entitled to maternity leave or parental leave	Male	0	0	0	0	0	0	0	0
	Female	2,231	100	2,575	100	1,880	100	1,953	100
Employees that took maternity leave or parental leave	Male	0	0	0	0	0	0	0	0
	Female	65	2.91	69	2.68	66	3.51	93	4.76
Employees that returned to work in the reporting period after maternity leave or parental leave ended	Male	NR	NR	NR	NR	NR	NR	NR	NR
	Female	62	95.38	67	97.10	60	90.91	87	93.55
Employees that returned to work after maternity leave or parental leave ended that were still employed 12 months after their return to work	Male	NR	NR	NR	NR	NR	NR	NR	NR
	Female	56	94.92	62	100	57	85.07	60	100

Remarks: * refer to data collected between January 1 - December 31, 2016.
** refer to data collected between November 1 of the previous year to October 31 of the reporting year.
NR refer to not relevant.

Employee Training and Development

Data	Average Training Hours of Employee (hour/person/year)			
	2016*	2017**	2018**	2019**

GRI 404-1 Average Hours of Training per Year per Employee

Average training hours of employees in Mitr Phol Group		5.63	24.94	22.20	20.63
Gender	Male	3.46	19.69	20.41	19.58
	Female	4.61	10.26	27.85	23.77
Level of Employee	Top level management	67.71	81.14	51.52	34.55
	Middle level management	42.10	55.21	49.00	35.70
	Line managers	12.04	59.54	34.88	28.83
	Officers	4.23	22.58	22.45	23.02
	Operational level	0.93	13.95	15.01	12.64

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Percentage of Employees Receiving Regular Performance and Career Development Reviews

Description	Unit	2016*			2017**			2018**			2019**		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total

GRI 404-3 (2016) Percentage of Employees Receiving Regular Performance and Career Development Reviews by Gender and Level

Top level management	Percent	100	100	100									
Middle level management	Percent	100	100	100									
Line managers	Percent	100	100	100									
Officers	Percent	100	100	100									
Operational level	Percent	100	100	100									
Total	Percent	100											

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Sustainable Performance – Information on Occupational Health and Safety

Information on Occupational Health and Safety Management System

Data	Unit	2016*	2017**	2018**	2019**
GRI 403-8 (2018) Employees and Contractors Covered by Occupational Health and Safety Management System					
Occupational health and safety management system					
Employees covered by occupational health and safety management system	Persons	NA	NA	NA	7,683
	Percent	NA	NA	NA	100
Contractors covered by occupational health and safety management system	Persons	NA	NA	NA	11,217
	Percent	NA	NA	NA	100
Occupational health and safety management system that has been internally audited					
Employees covered by occupational health and safety management system that has been internally audited	Persons	NA	NA	NA	7,683
	Percent	NA	NA	NA	100
Contractors covered by occupational health and safety management system that has been internally audited	Persons	NA	NA	NA	11,217
	Percent	NA	NA	NA	100
Occupational health and safety management system that has been audited by an external party					
Employees covered by occupational health and safety management system that has been audited by an external party	Persons	NA	NA	NA	7,212
	Percent	NA	NA	NA	93.87
Contractors covered by occupational health and safety management system that has been audited by an external party	Persons	NA	NA	NA	10,175
	Percent	NA	NA	NA	90.71

Remarks: * refer to data collected between January 1 – December 31, 2016.
 ** refer to data collected between November 1 of the previous year to October 31 of the reporting year.
 NA refer to not available or no data was collected.
 The data is excluded the data of Pacific Sugar Corp., Ltd., Mitr Phol Energy Services Co., Ltd., and Mitr Phol Sugarcane Research Center Co., Ltd.

Information on Occupational Health and Safety

Data	Unit	2016*			2017**			2018**			2019**		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
GRI 403-9 (2018) Work-related Injuries													
Number of hours worked													
Employees	hours	NA	NA	18,291,444	NA	NA	17,700,146	NA	NA	18,779,638	16,116,096	5,072,223	21,188,319
Contractors	hours	NA	NA	13,973,533	NA	NA	13,521,818	NA	NA	14,346,484	10,915,125	5,271,442	16,186,567
Fatalities as a result of work-related injury													
Employees	persons	0	0	0	0	0	0	0	0	0	1	0	1
	persons/1,000,000 hours worked	0	0	0	0	0	0	0	0	0	0.06	0	0.05
Contractors	persons	0	0	0	0	0	0	1	0	1	0	0	0
	persons/1,000,000 hours worked	0	0	0	0	0	0	NA	0	0.07	0	0	0

Data	Unit	2016*			2017**			2018**			2019**		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
High-consequence work-related injuries (excluding fatalities) ***													
Employees	Persons	0	0	0	1	0	1	2	0	2	1	0	1
	Persons/1,000,000 hours worked	0	0	0	NA	0	0.06	NA	0	0.11	0.06	0	0.05
Contractors	Persons	0	0	0	0	0	0	0	0	0	1	0	1
	Persons/1,000,000 hours worked	0	0	0	0	0	0	NA	0	0	0.09	0	0.06
Total recordable work-related injuries													
Employees	Persons	NA	NA	54	NA	NA	66	NA	NA	64	40	1	41
	Persons/1,000,000 hours worked	NA	NA	2.95	NA	NA	3.73	NA	NA	3.41	2.48	0.20	1.94
Contractors	Persons	NA	NA	40	NA	NA	47	NA	NA	44	19	2	21
	Persons/1,000,000 hours worked	NA	NA	2.86	NA	NA	3.48	NA	NA	3.07	1.74	0.38	1.30
Lost Time Injury Frequency Rate (LTIFR)													
Employees	Persons	NA	NA	16	NA	NA	21	NA	NA	28	24	1	25
	Persons/1,000,000 hours worked	NA	NA	0.87	NA	NA	1.19	NA	NA	1.49	1.49	0.20	1.18
Contractors	Persons	NA	NA	12	NA	NA	12	NA	NA	11	8	2	10
	Persons/1,000,000 hours worked	NA	NA	0.86	NA	NA	0.89	NA	NA	0.77	0.73	0.38	0.62
GRI 403-10 (2018) Work-related Ill Health													
Fatalities as a result of work-related ill health													
Employees	Persons	0	0	0	0	0	0	0	0	0	0	0	0
	Persons/1,000,000 hours worked	0	0	0	0	0	0	0	0	0	0	0	0
Contractors	Persons	0	0	0	0	0	0	0	0	0	0	0	0
	Persons/1,000,000 hours worked	0	0	0	0	0	0	0	0	0	0	0	0
Total recordable work-related ill health													
Employees	Persons	0	0	0	0	0	0	0	0	0	0	0	0
	Persons/1,000,000 hours worked	0	0	0	0	0	0	0	0	0	0	0	0
Contractors	Persons	0	0	0	0	0	0	0	0	0	0	0	0
	Persons/1,000,000 hours worked	0	0	0	0	0	0	0	0	0	0	0	0

Remarks: * refer to data collected between January 1 - December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

*** refer to injury arising from work-related incident that results in an injury and the workers cannot fully recover to pre-injury health status within 6 months.

Collecting data of work-related injury and illness are in accordance with the Mitr Phol Group's Incident Management Procedure.

Employees refer to monthly and daily permanent employees of Mitr Phol Sugar Corp., Ltd. and subsidiaries.

Contractors refer to representatives of juristic person who work for Mitr Phol and are in accordance with the Mitr Phol's hiring procedure.

The contractors include consultant and temporary employees by employment contract.

Injury data in 2019 refers to work-related injury that results in any of medical treatment, lost workday from one day onward, disability and death. For data in 2016 - 2018, injury refers to work-related injury that results in any of first aid, medical treatment, lost workday from one day onward, disability and death. Lost time injury refers to injuries arising from work-related incident that results in lost workday and the employee is not able to work the scheduled work day.

Work-related ill health refers to illness arising from work due to the diagnosis of the occupational medicine physician.

Sustainable Performance – Information on Environment

Volume of Materials Used in Production Processes of Mitr Phol Group

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
---------------	------	------	-------	--------	--------	--------

GRI 301-1 (2016) Volume of Materials Used

Mitr Phol Group	Renewable materials used	Tonnes	18,000,000.00	18,800,000.00	27,390,000.00	20,666,337.83
	Non-renewable materials used	Tonnes	9,957.00	8,511.00	216,525.00	208,539.61
Farming business	Renewable materials used	Tonnes	NA	NA	42,039.40	53,306.82
	Non-renewable materials used	Tonnes	NA	NA	28.10	39.30
Sugar business	Renewable materials used	Tonnes	16,600,000.00	17,500,000.00	23,600,001.80	17,875,543.00
	Non-renewable materials used	Tonnes	472.40	563.40	97,625.20	101,730.70
Energy business	Renewable materials used	Tonnes	1,795,762.40	1,634,941.00	2,632,005.30	2,054,341.83
	Non-renewable materials used	Tonnes	3,700.00	3,200.00	119,027.80	20,855.27
Wood substitute materials business	Renewable materials used	Tonnes	1,001,632.00	1,001,825.00	1,256,673.40	1,317,916.28
	Non-renewable materials used	Tonnes	69,438.00	67,894.00	78,903.20	84,484.91
Fertilizer business	Renewable materials used	Tonnes	10,897.60	11,965.40	22,033.10	23,808.29
	Non-renewable materials used	Tonnes	NA	NA	19.22	77.34
Logistics and warehouse business	Renewable materials used	Tonnes	NR	NR	NR	NR
	Non-renewable materials used	Tonnes	NA	NA	94.70	1,352.09
Other business	Renewable materials used	Tonnes	NA	NA	360.00	353.60
	Non-renewable materials used	Tonnes	NA	NA	0	0

GRI 301-2 (2016) Recycled Input Materials Used

Mitr Phol Group	Percentage of recycled input materials used	Percent	0.03	0.03	0.15	0.03
Wood substitute materials business	Percentage of recycled input materials used	Percent	0.56	0.55	3.07	4.51
	Recycled input materials used	Tonnes	6,004.30	5,887.60	40,992.70	63,200.10

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Volume of materials that were purchased from business in Mitr Phol was eliminated from the data of materials used for Mitr Phol Group.

Only wood substitute materials business uses recycled materials to replace virgin materials.

Information on Energy Consumption

Business Unit	Data	Unit	2016*	2017**	2018**	2019**	
GRI 302-1 (2016) Energy Consumption within the Organization							
Mitr Phol Group	Total energy consumption within the organization	Million MJ	73,689.57	57,099.59	60,413.12	60,916.52	
	Energy consumption within organization from non-renewable fuel	Million MJ	767.12	692.58	232.85	333.69	
	Energy consumption within organization from renewable fuel	Million MJ	72,922.45	56,407.01	64,583.13	65,557.97	
	Fuel types used						
	Non-renewable fuel						
	- Liquefied petroleum gas (LPG)	Million MJ	NA	NA	52.37	79.24	
	- Gasoline	Million MJ	NA	NA	14.76	21.56	
	- Fuel oil	Million MJ	NA	NA	41.90	42.38	
	Non-renewable fuel mixed with renewable fuel						
	- Biodiesel B5	Million MJ	NA	NA	126.74	110.41	
	- Biodiesel B10	Million MJ	NA	NA	0	75.94	
	- Gasohol E10/Gasohol 91/Gasohol 95	Million MJ	NA	NA	1.44	12.25	
	- Gasohol E20	Million MJ	NA	NA	0.01	1.80	
	- Gasohol E85	Million MJ	NA	NA	0	0.45	
	Renewable fuel						
	- Biogas	Million MJ	NA	NA	495.65	370.57	
	- Biomass	Million MJ	NA	NA	64,083.14	65,177.06	
	Electricity and steam purchased from outside Mitr Phol Group	Million MJ	623.79	662.27	588.00	547.77	
	- Non-renewable electricity purchased	Million MJ	623.79	662.27	588.00	547.77	
	- Non-renewable steam purchased	Million MJ	0	0	0	0	
Generated electricity from solar power	Million MJ	NA	NA	114.92	379.80		
Electricity and steam sold to outside Mitr Phol Group	Million MJ	NA	NA	5,105.78	5,902.71		
- Renewable electricity sold	Million MJ	NA	NA	5,105.78	5,902.71		
- Renewable steam sold	Million MJ	NA	NA	0	0		
Farming business	Total energy consumption within the organization	Million MJ	NA	NA	122.40	378.60	
	Energy consumption within organization from non-renewable fuel	Million MJ	NA	NA	7.10	10.37	
	Energy consumption within organization from renewable fuel	Million MJ	NA	NA	0.24	0.36	
	Electricity and steam purchased from outside organization	Million MJ	NA	NA	1.20	3.00	
	- Non-renewable electricity purchased	Million MJ	NA	NA	1.20	3.00	
	- Renewable electricity purchased	Million MJ	NR	NR	NR	NR	
	- Renewable steam purchased	Million MJ	NR	NR	NR	NR	
	Generated electricity from solar power	Million MJ	NA	NA	113.86	364.87	

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
Sugar business	Total energy consumption within the organization	Million MJ	36,380.45	31,056.02	40,955.42	34,632.96
	Energy consumption within organization from non-renewable fuel	Million MJ	28.31	26.81	85.01	88.59
	Energy consumption within organization from renewable fuel	Million MJ	14.38	4.65	4,055.17	3,874.64
	Electricity and steam purchased from outside organization	Million MJ	36,337.76	31,024.56	37,120.95	30,991.14
	– Non-renewable electricity purchased	Million MJ	20.38	20.25	28.14	16.43
	– Renewable electricity purchased	Million MJ	1,812.61	1,632.87	1,763.57	2,111.99
	– Renewable steam purchased	Million MJ	34,504.77	29,371.44	35,329.24	28,862.72
	Generated electricity from solar power	Million MJ	NR	NR	NR	NR
	Electricity and steam sold to outside organization	Million MJ	NA	NA	305.71	321.41
	– Renewable electricity sold	Million MJ	NA	NA	305.71	321.41
	– Renewable steam sold	Million MJ	NR	NR	NR	NR
Energy business	Total energy consumption within the organization	Million MJ	36,815.93	40,508.12	13,572.23	21,642.83
	Energy consumption within organization from non-renewable fuel	Million MJ	225.22	267.14	75.03	68.17
	Energy consumption within organization from renewable fuel	Million MJ	36,590.71	40,240.98	56,729.66	57,933.60
	Electricity and steam purchased from outside organization	Million MJ	NA	NA	43.51	80.36
	– Non-renewable electricity purchased	Million MJ	NA	NA	43.51	80.36
	– Renewable electricity purchased	Million MJ	NA	NA	0	0
	– Renewable steam purchased	Million MJ	NA	NA	0	0
	Generated electricity from solar power	Million MJ	NR	NR	0.98	3.93
	Electricity and steam sold to outside organization	Million MJ	NA	NA	43,276.95	36,443.23
	– Renewable electricity sold	Million MJ	NA	NA	6,550.21	7,692.21
	– Renewable steam sold	Million MJ	NA	NA	36,726.74	28,751.02
Wood substitute materials business	Total energy consumption within the organization	Million MJ	462.25	362.50	4,279.27	4,215.58
	Energy consumption within organization from non-renewable fuel	Million MJ	37.31	18.49	44.96	107.00
	Energy consumption within organization from renewable fuel	Million MJ	NA	NA	3,746.86	3,676.77
	Electricity and steam purchased from outside organization	Million MJ	424.94	344.01	502.97	432.43
	– Non-renewable electricity purchased	Million MJ	424.94	344.01	502.97	432.43
	– Renewable electricity purchased	Million MJ	NA	NA	0	0
	– Renewable steam purchased	Million MJ	NR	NR	NR	NR
	Generated electricity from solar power	Million MJ	NR	NR	0.08	0.11
	Electricity and steam sold to outside organization	Million MJ	NR	NR	15.60	1.07
	– Renewable electricity sold	Million MJ	NR	NR	15.60	1.07
	– Renewable steam sold	Million MJ	NR	NR	NR	NR

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
Fertilizer business	Total energy consumption within the organization	Million MJ	1.74	1.91	55.42	80.13
	Energy consumption within organization from nonrenewable fuel	Million MJ	NA	NA	0.53	5.41
	Energy consumption within organization from renewable fuel	Million MJ	NA	NA	50.69	69.19
	Electricity and steam purchased from outside organization	Million MJ	1.74	1.91	4.21	5.53
	- Non-renewable electricity purchased	Million MJ	1.74	1.91	2.05	5.53
	- Renewable electricity purchased	Million MJ	NA	NA	2.16	0
	- Renewable steam purchased	Million MJ	NR	NR	NR	NR
	Generated electricity from solar power	Million MJ	NR	NR	NR	NR
Logistics and warehouse business	Total energy consumption within the organization	Million MJ	28.23	27.88	28.39	29.73
	Energy consumption within organization from nonrenewable fuel	Million MJ	0.16	0.02	20.14	20.36
	Energy consumption within organization from renewable fuel	Million MJ	NA	NA	0.50	1.32
	Electricity and steam purchased from outside organization	Million MJ	28.07	27.86	7.75	8.05
	- Non-renewable electricity purchased	Million MJ	28.07	27.86	7.75	8.05
	- Renewable electricity purchased	Million MJ	NR	NR	NR	NR
	- Renewable steam purchased	Million MJ	NR	NR	NR	NR
	Generated electricity from solar power	Million MJ	NR	NR	NR	NR
Other business	Total energy consumption within the organization	Million MJ	0.98	1.03	2.48	48.74
	Energy consumption within organization from nonrenewable fuel	Million MJ	NA	NA	0.09	33.78
	Energy consumption within organization from renewable fuel	Million MJ	NA	NA	0.01	2.10
	Electricity and steam purchased from outside organization	Million MJ	0.98	1.03	2.38	1.97
	- Non-renewable electricity purchased	Million MJ	0.98	1.03	2.38	1.97
	- Renewable electricity purchased	Million MJ	NR	NR	NR	NR
	- Renewable steam purchased	Million MJ	NR	NR	NR	NR
	Generated electricity from solar power	Million MJ	NR	NR	NR	10.89

GRI 302-2 (2016) Energy Consumption Outside of the Organization

Mitr Phol Group	Energy consumption outside of the organization	Million MJ	NA	NA	5,344.05	2,217.01
Farming business	Energy consumption outside of the organization	Million MJ	NA	NA	10.88	13.85
Sugar business	Energy consumption outside of the organization	Million MJ	NA	NA	2,062.35	583.40
Energy business	Energy consumption outside of the organization	Million MJ	NA	NA	626.40	217.41
Wood substitute materials business	Energy consumption outside of the organization	Million MJ	NA	NA	295.70	173.05
Fertilizer business	Energy consumption outside of the organization	Million MJ	NA	NA	3.70	1.09
Logistics and warehouse business	Energy consumption outside of the organization	Million MJ	NA	NA	1.26	0.13
Other business	Energy consumption outside of the organization	Million MJ	NA	NA	2,343.76	1,228.08

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
---------------	------	------	-------	--------	--------	--------

GRI 302-3 (2016) Energy Intensity

Mitr Phol Group	Energy consumption within the organization per revenue	Million MJ/ Million Baht	0.8197	0.5491	0.8364	0.8725
	Energy consumption outside the organization per revenue	Million MJ/ Million Baht	NA	NA	0.0740	0.0318
Sugar business	Energy consumption within the organization per total sugar production	Million MJ/ Tonnes sugar production	0.0185	0.0158	0.0246	0.0130
		MWh/ Tonnes sugar production	5.1298	4.3790	6.8260	3.6202

Cost of Energy Consumption

Mitr Phol Group	Cost of energy consumption	Million Baht	NA	NA	8,756.06	8,786.79
-----------------	----------------------------	--------------	----	----	----------	----------

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Net calorific values refer to the data of the Department of Alternative Energy Development and Efficiency and the IPCC 2006.

Mitr Phol Group generates electricity and steam produced from biomass to use within Mitr Phol Group, and electricity produced from biomass to sell to outside Mitr Phol Group. Additionally, we purchase non-renewable electricity from outside organization to use within Mitr Phol Group.

Energy consumption within the organization for the proportion of energy consumption within the organization per revenue and total sugar production was included only energy consumption of fuel, electricity, steam and solar power.

Energy consumption outside the organization includes energy consumption for raw material transportation by third-party organization, product transportation by third-party organization, and employee's ground transportation and air travel.

Biomass fuel includes bagasses, wood chips, etc.

Information on Water Usage by the Water Sources

Business Unit	Data	Unit	All Areas				Area with Water Stress			
			2016*	2017**	2018**	2019**	2016*	2017**	2018**	2019**

GRI 303-3 (2018) Water Withdrawal

Mitr Phol Group	Total volume of water from surface water	Million liters	14,400.00	15,570.00	21,056.49	18,128.52	8,810.00	9,520.00	10,809.17	5,085.66
	- Freshwater (< 1,000 mg/L TDS)	Million liters	14,400.00	15,570.00	21,056.49	18,128.52	8,810.00	9,520.00	10,809.17	5,085.66
	- Other water (> 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0
	Total volume of water from groundwater	Million liters	801.00	613.00	1,242.63	2,012.96	574.00	414.00	253.84	2.93
	- Freshwater (< 1,000 mg/L TDS)	Million liters	801.00	613.00	1,242.63	2,012.96	574.00	414.00	253.84	2.93
	- Other water (> 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0
	Total volume of water from third-party water	Million liters	61.00	70.00	4,342.85	4,941.53	2.00	3.00	2,212.40	2,299.29
	- Freshwater (< 1,000 mg/L TDS)	Million liters	61.00	70.00	4,342.85	4,941.53	2.00	3.00	2,212.40	2,299.29
	- Other water (> 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0
Total volume of water from third-party water	Surface water	Million liters					2.00	3.00	2,212.40	2,299.29
	Groundwater	Million liters					0	0	0	0
Total volume of water		Million liters	15,262.00	16,253.00	26,641.97	25,083.01	9,386.00	9,937.00	13,275.41	7,387.89

Business Unit	Data		Unit	All Areas				Area with Water Stress			
				2016*	2017**	2018**	2019**	2016*	2017**	2018**	2019**
Farming business	Total volume of water from surface water		Million liters	NA	NA	6,979.23	3,334.27	NA	NA	5,536.74	1,913.35
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	NA	NA	6,979.23	3,334.27	NA	NA	5,536.74	1,913.35
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	NA	NA	0	0	NA	NA	0	0
	Total volume of water from groundwater		Million liters	NA	NA	83.00	94.35	NA	NA	83.00	0
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	NA	NA	83.00	94.35	NA	NA	83.00	0
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	NA	NA	0	0	NA	NA	0	0
	Total volume of water from third-party water		Million liters	NA	NA	0	0	NA	NA	0	0
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	NA	NA	0	0	NA	NA	0	0
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	NA	NA	0	0	NA	NA	0	0
	Total volume of water from third-party water		Surface water	Million liters					NA	NA	0
		Groundwater	Million liters					NA	NA	0	0
Total volume of water			Million liters	NA	NA	7,062.23	3,428.62	NA	NA	5,619.74	1,913.35
Sugar business	Total volume of water from surface water		Million liters	8,490.00	8,480.00	7,711.95	5,810.03	6,470.00	5,960.00	3,966.17	3,172.31
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	8,490.00	8,480.00	7,711.95	5,810.03	6,470.00	5,960.00	3,966.17	3,172.31
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from groundwater		Million liters	0	300.00	123.10	106.15	0	300.00	123.10	0
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	0	300.00	123.10	106.15	0	300.00	123.10	0
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from third-party water		Million liters	0	0	333.59	457.49	0	0	303.29	29.76
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	0	0	333.59	457.49	0	0	303.29	29.76
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from third-party water		Surface water	Million liters					0	0	303.29
		Groundwater	Million liters					0	0	0	0
Total volume of water			Million liters	8,490.00	8,780.00	8,168.64	6,373.67	6,470.00	6,260.00	4,392.56	3,202.07
Energy business	Total volume of water from surface water		Million liters	5,910.00	7,090.00	6,351.85	8,974.22	2,340.00	3,560.00	1,292.79	0
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	5,910.00	7,090.00	6,351.85	8,974.22	2,340.00	3,560.00	1,292.79	0
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from groundwater		Million liters	570.00	110.00	157.49	890.64	570.00	110.00	30.87	2.93
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	570.00	110.00	157.49	890.64	570.00	110.00	30.87	2.93
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from third-party water		Million liters	0	0	3,929.13	4,404.14	0	0	1,896.92	2,261.43
	- Freshwater (\leq 1,000 mg/L TDS)		Million liters	0	0	3,929.13	4,404.14	0	0	1,896.82	2,261.43
	- Other water ($>$ 1,000 mg/L TDS)		Million liters	0	0	0	0	0	0	0	0
	Total volume of water from third-party water		Surface water	Million liters					0	0	1,896.82
		Groundwater	Million liters					0	0	0	0
Total volume of water			Million liters	6,480.00	7,200.00	10,438.48	14,269.00	2,910.00	3,670.00	3,220.48	2,264.36

Business Unit	Data	Unit	All Areas				Area with Water Stress				
			2016*	2017**	2018**	2019**	2016*	2017**	2018**	2019**	
Wood substitute materials business	Total volume of water from surface water	Million liters	0	0	0	0	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from groundwater	Million liters	227.00	200.00	856.56	898.66	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	227.00	200.00	856.56	898.66	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Million liters	21.00	20.00	20.82	27.52	2.00	3.00	3.53	2.61	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	21.00	20.00	20.82	27.52	2.00	3.00	3.53	2.61	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Surface water	Million liters					2.00	3.00	3.53	2.61
		Groundwater	Million liters					0	0	0	0
	Total volume of water	Million liters		247.00	219.00	877.38	926.18	2.00	3.00	3.53	2.61
Fertilizer business	Total volume of water from surface water	Million liters	0	0	0	0	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from groundwater	Million liters	4.00	4.00	5.61	6.31	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	4.00	4.00	5.61	6.31	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Million liters	0	0	0.21	5.49	0	0	0	5.49	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	0	0	0.21	5.49	0	0	0	5.49	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Surface water	Million liters					0	0	0	5.49
		Groundwater	Million liters					0	0	0	0
	Total volume of water	Million liters		4.00	4.00	5.82	11.80	0	0	0	5.49
Logistics and warehouse business	Total volume of water from surface water	Million liters	0	0	0	0	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from groundwater	Million liters	0	0	0	0	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Million liters	40.00	50.00	46.76	34.61	0	0	0	0	
	- Freshwater (\leq 1,000 mg/L TDS)	Million liters	40.00	50.00	46.76	34.61	0	0	0	0	
	- Other water ($>$ 1,000 mg/L TDS)	Million liters	0	0	0	0	0	0	0	0	
	Total volume of water from third-party water	Surface water	Million liters					0	0	0	0
		Groundwater	Million liters					0	0	0	0
	Total volume of water	Million liters		40.00	50.00	46.76	34.61	0	0	0	0

Business Unit	Data		Unit	All Areas				Area with Water Stress			
				2016*	2017**	2018**	2019**	2016*	2017**	2018**	2019**
Other business	Volume of water discharge by destination	Volume of water discharge to surface water	Million liters	NA	NA	0.84	0.84				
		Volume of water discharge to groundwater	Million liters	NA	NA	0	0				
		Volume of water discharge to third-party water	Million liters	NA	NA	0	2.82				
		Total volume of water discharge	Million liters	NA	NA	0.84	3.65				
	Volume of water discharge to outside organization	Freshwater (<= 1,000 mg/L TDS)	Million liters	NA	NA	0.84	3.65	NA	NA	0.84	0
Other water (> 1,000 mg/L TDS)		Million liters	NA	NA	0	0	NA	NA	0	0	

GRI 303-5 (2018) Water Consumption

Mitr Phol Group	Total water consumption	Million liters	16,101.00	18,193.00	26,570.73	25,066.19	9,379.00	11,715.00	13,274.58	7,387.89
Farming business	Total water consumption	Million liters	NA	NA	7,062.23	3,428.62	NA	NA	5,619.74	1,913.35
Sugar business	Total water consumption	Million liters	9,330.00	10,720.00	8,168.64	6,373.67	6,467.00	8,042.00	4,392.56	3,202.07
Energy business	Total water consumption	Million liters	6,480.00	7,200.00	10,438.48	14,269.00	2,910.00	3,670.00	3,220.48	2,264.36
Wood substitute materials business	Total water consumption	Million liters	247.00	219.00	818.28	916.23	2.00	3.00	3.53	2.61
Fertilizer business	Total water consumption	Million liters	4.00	4.00	5.82	11.80	0	0	0	5.49
Logistics and warehouse business	Total water consumption	Million liters	40.00	50.00	35.46	31.39	0	0	0	0
Other business	Total water consumption	Million liters	NA	NA	41.83	35.48	NA	NA	38.25	0

Total Net Fresh Water Consumption

Mitr Phol Group	Total net fresh water consumption	Million cubic meters	15.16	16.14	26.57	25.07				
-----------------	-----------------------------------	----------------------	-------	-------	-------	-------	--	--	--	--

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

The water risk map of the AQUEDUCT Water Risk Atlas was used for risk assessment of water stress area.

Total net fresh water consumption = Total volume of third-party water + Total volume of fresh surface water + Total volume of fresh ground water – water returned to the source of extraction at similar or higher quality as water extracted.

Volume of produced water is not included in the volume of water withdrawal from water sources.

Water Quality Post-treatment by Business Unit

Business Unit	Water Quality	Standard Level	Average of Water Quality Post-treatment in Each Year			
			2016*	2017**	2018**	2019**
GRI 303-4 (2018) Water Quality Post-treatment						
Farming business	BOD (mg/l)	20.00	NR	NR	NR	NR
	COD (mg/l)	120.00	NR	NR	NR	NR
	TSS (mg/l)	50.00	NR	NR	NR	NR
Sugar business	BOD (mg/l)	20.00	7.90	5.90	5.80	4.90
	COD (mg/l)	120.00	78.70	65.50	60.50	53.60
	TSS (mg/l)	50.00	21.40	12.70	19.10	16.10
Energy business	BOD (mg/l)	20.00	5.20	5.30	30.10	17.40
	COD (mg/l)	120.00	70.80	65.90	122.30	82.40
	TSS (mg/l)	50.00	255.20	13.80	49.60	33.30
Wood substitute materials business	BOD (mg/l)	20.00	13.00	17.00	14.50	14.50
	COD (mg/l)	120.00	95.00	90.00	83.40	93.80
	TSS (mg/l)	50.00	22.00	25.00	33.60	34.00
Fertilizer business	BOD (mg/l)	20.00	NR	NR	NR	NR
	COD (mg/l)	120.00	NR	NR	NR	NR
	TSS (mg/l)	50.00	NR	NR	NR	NR
Logistics and warehouse business	BOD (mg/l)	20.00	5.00	13.00	2.70	6.60
	COD (mg/l)	120.00	NA	NA	35.40	62.40
	TSS (mg/l)	50.00	9.10	10.00	9.10	16.70
Other business	BOD (mg/l)	20.00	NA	NA	13.00	1.10
	COD (mg/l)	120.00	NA	NA	63.50	5.30
	TSS (mg/l)	50.00	NA	NA	25.00	2.10

Remarks: * refer to data collected between January 1 - December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Standard level is in accordance with the standards in the Notification of the Ministry of Industry, B.E. 2560 (2017), Re: Prescribing the Standards for the Control of Water Discharge from the Factory.

Greenhouse Gas (GHG) Emission

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
GRI 305-1 (2016) Direct GHG Emissions (Scope 1)						
Mitr Phol Group	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	4,082,914.80	3,655,515.10	994,512.89	572,237.12
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	266,830.00	216,345.49
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	727,682.89	355,891.62
Farming business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	418.77	828.96
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	392.19	789.61
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	26.58	39.35
Sugar business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	515,191.37	204,228.33
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	150,332.20	180,752.45
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	364,859.17	23,475.88
Energy business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	414,740.27	294,993.61
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	106,083.41	21,347.47
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	308,656.86	273,646.14
Wood substitute materials business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	57,954.04	66,274.59
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	4,060.53	8,045.17
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	53,893.51	58,229.42
Fertilizer business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	4,614.89	1,602.78
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	4,422.77	1,323.36
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	192.12	279.42
Logistics and warehouse business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	1,504.76	1,644.40
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	1,450.11	1,509.03
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	54.65	135.37
Other business	Direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	88.80	2,664.45
	Gross direct GHG emissions (Scope 1)	Tonnes CO ₂ e	NA	NA	88.80	2,578.41
	Biogenic CO ₂ emissions	Tonnes CO ₂	NA	NA	0	86.04

Business Unit	Data	Unit	2016*	2017**	2018**	2019**
GRI 305-2 (2016) Energy Indirect GHG Emissions (Scope 2)						
Mitr Phol Group	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	4,364,462.00	4,468,053.30	112,601.66	105,491.72
Farming business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	307.09	577.51
Sugar business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	43,788.30	36,243.09
Energy business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	8,379.47	15,476.74
Wood substitute materials business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	96,832.52	83,279.03
Fertilizer business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	395.86	1,065.24
Logistics and warehouse business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	1,492.81	1,550.30
Other business	Energy indirect GHG emissions (Scope 2)	Tonnes CO ₂ e	NA	NA	459.14	378.64
GRI 305-3 (2016) Other Indirect GHG Emissions (Scope 3)						
Mitr Phol Group	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	397,520.50	163,644.75
Farming business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	833.67	1,061.49
Sugar business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	157,937.69	44,649.08
Energy business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	47,946.54	16,646.75
Wood substitute business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	22,631.77	13,269.60
Fertilizer business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	255.31	83.63
Logistics and warehouse business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	85.93	9.98
Other business	Other indirect GHG emissions (Scope 3)	Tonnes CO ₂ e	NA	NA	167,829.58	87,924.22
GRI 305-4 (2016) GHG Emissions Intensity						
Mitr Phol Group	Direct GHG emissions (Scope 1) per revenue	Tonnes CO ₂ e/ Million Baht	45.4197	35.1502	13.7681	8.1957
	Energy indirect GHG emissions (Scope 2) per revenue	Tonnes CO ₂ e/ Million Baht	48.5517	42.9633	1.5589	1.5109
	Other indirect GHG emissions (Scope 3) per revenue	Tonnes CO ₂ e/ Million Baht	NA	NA	5.50	2.3438
Sugar business	Direct GHG emissions (Scope 1) per total sugar production	Tonnes CO ₂ e/Tonnes sugar production	NA	NA	0.3091	0.0769
	Energy indirect GHG emissions (Scope 2) per total sugar production	Tonnes CO ₂ e/Tonnes sugar production	NA	NA	0.0263	0.0139

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Reporting of GHG emissions includes CO₂, CH₄ and N₂O gas.

Emission factors of GHG emissions refer to the data of Thailand Greenhouse Gas Management Organization (Public Organization), IPCC 2006 and Defra 2018. The data of GWP refers to GHG Protocol.

Reporting scope of GHG emissions is operational control.

Reporting of indirect GHG emissions (Scope 2) is the location-based method.

Direct GHG emissions (Scope 1) in 2018 and 2019 for Mitr Phol Group were reduced from 2016 and 2017 due to a decrease in non-renewable energy usage and an increase in solar energy, which contributed to lower GHG emissions.

Indirect GHG emissions (Scope 2) in 2018 and 2019 for Mitr Phol Group were reduced from 2016 and 2017 due to an increase in bioenergy usage produced by Mitr Phol Group and more solar energy, which helped to lessen electricity purchased from external providers.

Other indirect GHG emissions (Scope 3) includes GHG emissions from raw material transportation by third-party organization, product transportation by third-party organization, and employee's ground transportation and air travel.

Air Emissions Quality from Factory

Business Unit	Air Quality	Standard Level	Average of Air Emission Quality in Each Year			
			2016*	2017**	2018**	2019**
GRI 305-7 (2016) Air Quality						
Sugar business	NO _x (ppm)	≤ 200	112.00	83.40	58.70	44.92
	SO _x (ppm)	≤ 60	5.90	12.00	2.61	1.74
	CO (ppm)	≤ 690	327.80	306.00	182.50	166.58
	TSP (mg/m ³) ¹⁾	≤ 120	18.80	6.40	23.83	29.40
	TSP (mg/m ³) ³⁾	≤ 320	NA	NA	NA	26.65
	TSP (mg/m ³) ⁴⁾	≤ 400	NA	NA	NA	4.68
Energy business	NO _x (ppm)	≤ 200	62.37	66.84	113.89	81.54
	SO _x (ppm)	≤ 60	2.20	1.89	6.15	3.19
	CO (ppm)	≤ 690	172.57	127.16	353.66	177.12
	TSP (mg/m ³) ¹⁾	≤ 120	28.09	19.77	41.76	22.46
	TSP (mg/m ³) ²⁾	≤ 320	17.40	1.10	11.80	30.14
	TSP (mg/m ³) ⁴⁾	≤ 400	NR	NR	NR	NR
Wood substitute materials business	NO _x (ppm)	≤ 200	11.00	15.00	38.58	20.95
	SO _x (ppm)	≤ 60	2.00	2.00	3.36	2.24
	CO (ppm)	≤ 690	264.00	132.00	110.11	53.82
	TSP (mg/m ³) ¹⁾	≤ 120	130.00	160.00	79.74	4.95
	TSP (mg/m ³) ³⁾	≤ 320	NA	NA	NA	2.54
	TSP (mg/m ³) ⁴⁾	≤ 400	NA	NA	NA	81.20
Fertilizer business	NO _x (ppm)	≤ 200	NR	NR	NR	20.41
	SO _x (ppm)	≤ 60	NR	NR	NR	1.31
	CO (ppm)	≤ 690	NR	NR	NR	11.20
	TSP (mg/m ³) ¹⁾	≤ 120	NR	NR	NR	NR
	TSP (mg/m ³) ³⁾	≤ 320	NR	NR	NR	NR
	TSP (mg/m ³) ⁴⁾	≤ 400	NR	NR	NR	204.54

Remarks: * refer to data collected between January 1 - December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Farming, logistics and warehouse, and other businesses do not have air emission stacks.

Air quality standards:

- 1) The definition of new power plant is in accordance with the definition under the Notification of the Ministry of Industry, B.E. 2547 (2004), Re: Prescribing Air Pollutant Concentrations from Power Plant Producing, Distributing or Selling Electricity.
- 2) The definition of old power plant is in accordance with the definition under the Notification of the Ministry of Industry, B.E. 2547 (2004), Re: Prescribing Air Pollutant Concentrations from Power Plant Producing, Distributing or Selling Electricity.
- 3) The Notification of the Ministry of Industry, B.E. 2549 (2006), Re: Prescribing Air Pollutant Concentrations from Factory, for general manufacturing with fuel combustion.
- 4) The Notification of the Ministry of Industry, B.E. 2549 (2006), Re: Prescribing Air Pollutant Concentrations from Factory, for general manufacturing without fuel combustion.

Mitr Phol Group's Waste Management

Business Unit	Waste to Disposal	Unit	2016*	2017**	2018**	2019**
---------------	-------------------	------	-------	--------	--------	--------

GRI 306-2 (2016) Waste By Type and Disposal Method

Mitr Phol Group	Total wastes	Tonnes	1,327,325.10	1,478,300.00	3,278,438.97	5,001,379.15
	Hazardous wastes	Tonnes	889.30	1,027.40	57,006.83	103,489.05
	Reuse	Tonnes	NA	NA	41.80	4.28
	Recycle	Tonnes	196.01	276.67	15,275.52	21,351.76
	Recovery	Tonnes	115.80	131.10	25,768.50	43,578.91
	Incineration	Tonnes	NA	NA	57.90	718.43
	Landfill	Tonnes	324.00	508.90	15,744.30	37,705.16
	Others	Tonnes	253.40	110.70	118.83	35.00
	On-site storage	Tonnes	NA	NA	NA	95.52
	Non-hazardous wastes	Tonnes	1,326,435.80	1,477,272.60	3,221,432.12	4,897,890.10
	Reuse	Tonnes	NA	NA	1,601.63	110.30
	Recycle	Tonnes	NA	NA	319,348.61	441,640.98
	Composting	Tonnes	234,954.30	141,345.10	1,432,557.48	1,788,907.49
	Recovery	Tonnes	NA	NA	1,196,165.50	820,362.93
	Incineration	Tonnes	NA	NA	109.60	6.18
	Landfill	Tonnes	126,931.90	138,100.00	7,497.80	103,769.57
	Others	Tonnes	964,549.60	1,197,827.50	264,151.50	1,153,759.87
On-site storage	Tonnes	NA	NA	NA	589,332.78	
Sugar business	Total wastes	Tonnes	62,687.10	93,369.60	1,796,750.69	2,231,241.86
	Hazardous waste	Tonnes	515.40	744.50	31,204.60	98,849.10
	Reuse	Tonnes	0	0	0	1.88
	Recycle	Tonnes	121.90	172.20	15,270.30	17,565.04
	Recovery	Tonnes	94.70	88.70	117.70	43,566.14
	Incineration	Tonnes	NA	NA	47.60	8.92
	Landfill	Tonnes	288.60	476.50	15,714.20	37,643.47
	Others	Tonnes	10.20	7.10	54.80	2.09
	On-site storage	Tonnes	NA	NA	NA	61.57
	Non-hazardous waste	Tonnes	62,171.70	92,625.10	1,765,546.09	2,132,392.76
	Reuse	Tonnes	NA	NA	1,601.60	26.35
	Recycle	Tonnes	NA	NA	176,209.51	398,592.26
	Composting	Tonnes	55,684.40	84,019.40	396,851.48	327,472.78
	Recovery	Tonnes	NA	NA	1,164,427.10	579,303.01
	Incineration	Tonnes	NA	NA	37.90	0
	Landfill	Tonnes	3,444.80	5,016.40	6,148.80	103,406.24
	Others	Tonnes	3,042.50	3,589.30	20,269.70	648,583.94
On-site storage	Tonnes	NA	NA	NA	75,003.00	

Business Unit	Waste to Disposal	Unit	2016*	2017**	2018**	2019**
Energy business	Total wastes	Tonnes	1,264,384.20	1,363,086.20	1,320,543.53	2,754,439.98
	Hazardous waste	Tonnes	208.40	163.00	68.83	4,448.49
	Reuse	Tonnes	NA	NA	7.50	2.40
	Recycle	Tonnes	39.00	62.60	5.20	3,603.75
	Recovery	Tonnes	12.80	30.10	14.60	12.77
	Incineration	Tonnes	NA	NA	10.30	709.51
	Landfill	Tonnes	24.90	28.30	30.10	61.69
	Others	Tonnes	131.70	42.00	1.13	27.14
	On-site storage	Tonnes	NA	NA	NA	31.23
	Non-hazardous waste	Tonnes	1,264,175.80	1,362,923.20	1,320,474.70	2,749,991.49
	Reuse	Tonnes	0	0	0	25.33
	Recycle	Tonnes	NA	NA	7,896.20	27,833.67
	Composting	Tonnes	179,209.90	57,194.70	1,035,689.50	1,461,434.71
	Recovery	Tonnes	NA	NA	31,724.90	241,059.92
	Incineration	Tonnes	NA	NA	63.10	6.18
	Landfill	Tonnes	123,458.80	133,058.40	1,258.50	203.95
	Others	Tonnes	961,507.10	1,172,670.10	243,842.50	505,135.13
	On-site storage	Tonnes	NA	NA	NA	514,292.60
	Wood substitute materials business	Total wastes	Tonnes	193.10	21,819.50	160,978.90
Hazardous waste		Tonnes	164.80	119.20	25,636.20	183.37
Reuse		Tonnes	0	0	0	0
Recycle		Tonnes	34.50	41.20	0	182.97
Recovery		Tonnes	8.30	12.30	25,636.20	0
Incineration		Tonnes	0	0	0	0
Landfill		Tonnes	10.50	4.10	0	0
Others		Tonnes	111.50	61.60	0	0
On-site storage		Tonnes	NA	NA	NA	0.40
Non-hazardous waste		Tonnes	28.30	21,700.30	135,342.70	15,426.44
Reuse		Tonnes	0	0	0	58.62
Recycle		Tonnes	NA	NA	135,225.90	15,215.04
Composting		Tonnes	NA	107.00	0	0
Recovery		Tonnes	0	0	0	0
Incineration		Tonnes	0	0	0	0
Landfill		Tonnes	28.30	25.20	77.50	152.78
Others		Tonnes	NA	21,568.10	39.30	0
On-site storage		Tonnes	NA	NA	NA	0

Business Unit	Waste to Disposal	Unit	2016*	2017**	2018**	2019**
Fertilizer business	Total wastes	Tonnes	60.00	24.00	46.50	27.00
	Hazardous waste	Tonnes	0	0	0	0.30
	On-site storage	Tonnes	NA	NA	NA	0.30
	Non-hazardous waste	Tonnes	60.00	24.00	46.50	26.70
	Reuse	Tonnes	0	0	0	0
	Recycle	Tonnes	NA	NA	17.00	0
	Composting	Tonnes	60.00	24.00	16.50	0
	Recovery	Tonnes	0	0	0	0
	Incineration	Tonnes	0	0	0	0
	Landfill	Tonnes	0	0	13.00	2.40
	Others	Tonnes	0	0	0	1.80
	On-site storage	Tonnes	NA	NA	NA	22.50
Logistics and warehouse business	Total wastes	Tonnes	0.70	0.70	110.70	41.85
	Hazardous waste	Tonnes	0.70	0.70	97.20	6.13
	Reuse	Tonnes	NA	NA	34.30	0
	Recycle	Tonnes	0.70	0.70	0	0
	Recovery	Tonnes	0	0	0	0
	Incineration	Tonnes	0	0	0	0
	Landfill	Tonnes	0	0	0	0
	Others	Tonnes	NA	NA	62.90	4.11
	On-site storage	Tonnes	NA	NA	NA	2.02
	Non-hazardous waste	Tonnes	0	0	13.50	35.72
	Reuse	Tonnes	0	0	0	0
	Recycle	Tonnes	0	0	0	0
	Composting	Tonnes	0	0	0	0
	Recovery	Tonnes	NA	NA	13.50	0
	Incineration	Tonnes	0	0	0	0
	Landfill	Tonnes	0	0	0	0
	Others	Tonnes	0	0	0	26.22
	On-site storage	Tonnes	NA	NA	NA	9.50

Business Unit	Waste to Disposal	Unit	2016*	2017**	2018**	2019**
Other business	Total wastes	Tonnes	0	0	8.60	18.65
	Hazardous waste	Tonnes	0	0	0	1.66
	Others	Tonnes	NA	NA	NA	1.66
	On-site storage	Tonnes	NA	NA	NA	0
	Non-hazardous waste	Tonnes	0	0	8.60	16.99
	Reuse	Tonnes	NA	NA	0	0
	Recycle	Tonnes	NA	NA	0	0.01
	Composting	Tonnes	NA	NA	0	0
	Incineration	Tonnes	NA	NA	0	0
	Landfill	Tonnes	NA	NA	8.60	4.20
	Others	Tonnes	NA	NA	0	12.78
	On-site storage	Tonnes	NA	NA	NA	0

Remarks: * refer to data collected between January 1 - December 31, 2016.
 ** refer to data collected between November 1 of the previous year to October 31 of the reporting year.
 NA refer to not available or no data was collected.
 NR refer to not relevant.
 The data of wastes disposal was referred to the data provided by the waste disposers and the waste disposal report submitted to government authorities.
 In 2018-2019, the data of hazardous wastes and non-hazardous wastes reused and disposed by incineration were additionally included in the data collection, and the data of non-hazardous wastes recycled and disposed by recovery were added in the data collection.
 The waste data for farming business was not included in the data collection.
 Other disposal method includes sorting for sale, waste stabilization.

Non-compliance with Environmental Laws and Regulations

Business Unit	Non-compliance with Environmental Laws and Regulations	Unit	2016*	2017**	2018**	2019**
---------------	--	------	-------	--------	--------	--------

GRI 307-1 Non-compliance with Environmental Laws and Regulations

Mitr Phol Group	Number of cases for significant fines for non-compliance with laws and regulations	Cases	0	0	0	0
	Significant fines for non-compliance with laws and regulations	Baht	0	0	0	0
	Number of non-monetary sanctions	Cases	0	0	0	0
	Number of cases brought through dispute resolution mechanism	Cases	0	0	0	0

Remarks: * refer to data collected between January 1 - December 31, 2016.
 ** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Environmental Protection Expenses

Business Unit	Types of Expenses for Environmental Protection	Unit	Expenses for Environmental Protection			
			2016*	2017**	2018**	2019**
Mitr Phol Group	Total environmental expenses and investment	Baht	74,496,153	246,313,517	239,708,398	302,693,905
	- Air and water pollution management	Baht	53,916,712	58,441,291	147,822,717	161,025,039
	- Environmental promotion and development	Baht	20,589,441	187,872,226	91,885,681	141,668,866
Farming business	Total environmental expenses and investment	Baht	NA	NA	240	240
	- Air and water pollution management	Baht	NA	NA	240	240
	- Environmental promotion and development	Baht	NA	NA	0	0
Sugar business	Total environmental expenses and investment	Baht	46,890,000	214,290,000	103,190,239	64,701,518
	- Air and water pollution management	Baht	33,640,000	34,140,000	73,613,544	36,432,118
	- Environmental promotion and development	Baht	13,250,000	180,150,000	29,576,695	28,269,400
Energy business	Total environmental expenses and investment	Baht	24,650,000	27,920,000	128,136,049	223,399,751
	- Air and water pollution management	Baht	18,200,000	21,060,000	66,265,300	110,240,445
	- Environmental promotion and development	Baht	6,450,000	6,860,000	61,870,749	113,159,306
Wood substitute materials business	Total environmental expenses and investment	Baht	86,623	176,938	7,730,065	14,138,891
	- Air and water pollution management	Baht	86,623	176,938	7,291,828	13,898,731
	- Environmental promotion and development	Baht	0	0	438,237	240,160
Fertilizer business	Total environmental expenses and investment	Baht	2,220,889	3,239,153	140,000	80,100
	- Air and water pollution management	Baht	1,769,889	2,789,153	140,000	80,100
	- Environmental promotion and development	Baht	451,000	450,000	0	0
Logistics and warehouse business	Total environmental expenses and investment	Baht	457,441	496,226	441,000	267,600
	- Air and water pollution management	Baht	119,000	184,000	441,000	267,600
	- Environmental promotion and development	Baht	338,441	312,226	0	0
Other business	Total environmental expenses and investment	Baht	191,200	191,200	70,805	105,805
	- Air and water pollution management	Baht	91,200	91,200	70,805	105,805
	- Environmental promotion and development	Baht	100,000	100,000	0	0

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

NA refer to not available or no data was collected.

NR refer to not relevant.

Air and water pollution management includes expenses of waste disposal, treatment of pollutants (air and water), machinery and equipment maintenance and environmental impact assessment.

Environmental promotion and development includes expenses of training, environmental management system services, environmental management certificates from external organizations, environmental protection projects and other services related to environment.

Sustainable Performance – Information on Product Responsibility

Information on Customer Health and Safety

Data	Unit	2016*	2017**	2018**	2019**
G4 FP-5 Percentage of Production Volume Manufactured in Sites Certified by an Independent Third-party According to Internationally Recognized Food Safety Management System Standards					
Production volume manufactured in sites certified according to Internationally recognized food safety management system standards	Percent	100	100	100	100

Remarks: * refer to data collected between January 1 – December 31, 2016.

** refer to data collected between November 1 of the previous year to October 31 of the reporting year.

Internationally recognized food safety management system standards of the sugar factories include Good Management Practice (GMP), Hazard Analysis Critical Control Point (HACCP), Food Safety Management System Standard (ISO 22000) and Food Safety System Certification 22000 (FSSC 22000).



GRI Content Index

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the report.

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
--------------	-------------	--------------------------------	----------	-----------------------	------

GRI 101: Foundation 2016

General Disclosures					
GRI 102: General Disclosures 2016	Organization Profile				
	102-1 Name of the organization	8			
	102-2 Activities, brands, products, and services	12-13			
	102-3 Location of headquarters	20			
	102-4 Location of operations	https://www.mitrphol.com/about-us.php			
	102-5 Ownership and legal form	20-21			
	102-6 Markets served	12-13, https://www.mitrphol.com/page_detail.php?p=1&topic=98			
	102-7 Scale of the organization	12-13, 63, 107			
	102-8 Information on employees and other workers	63, 107			8, 10
	102-9 Supply chain	18-19			
	102-10 Significant changes to the organization and its supply chain	Remark: No significant changes during the reporting period			
	102-11 Precautionary principle or approach	39-46			
	102-12 External initiatives	14, 38 https://www.mitrphol.com/about-us.php			
102-13 Membership of associations	29-31				
Strategy					
102-14 Statement from senior decision-maker	6-7				
102-15 Key impacts, risks, and opportunities	6-7, 11, 39-46				
Ethics and Integrity					
102-16 Values, principles, standards, and norms of behavior	9-10, 35-37			16	
102-17 Mechanisms for advice and concerns about ethics	38-39 https://www.mitrphol.com/whistleblowing-th.php			16	
Governance					
102-18 Governance structure	34				
102-22 Composition of the highest governance body and its committees	https://www.mitrphol.com/about-us.php				
102-26 Role of highest governance body in setting purpose, values, and strategy	33				
102-30 Effectiveness of risk management processes	39				
102-31 Review of economic, environmental, and social topics	39-46				

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
Stakeholder Engagement					
	102-40 List of stakeholder groups	23, https://www.mitrphol.com/page_detail.php?p=1&topic=97			
	102-41 Collective bargaining agreements	110			8
	102-42 Identifying and selecting stakeholders	https://www.mitrphol.com/page_detail.php?p=1&topic=97			
	102-43 Approach to stakeholder engagement	https://www.mitrphol.com/page_detail.php?p=1&topic=97			
	102-44 Key topics and concerns raised	https://www.mitrphol.com/page_detail.php?p=1&topic=97			
Reporting Practice					
	102-45 Entities included in the consolidated financial statements	25			
	102-46 Defining report content and topic boundaries	25, 28			
	102-47 List of material topics	27-28			
	102-48 Restatements of information	Remark: No restatements of information in 2019.			
	102-49 Changes in reporting	25			
	102-50 Reporting period	25			
	102-51 Date of most recent report	Remark: Most recent previous report is 2018 Mitr Phol Group Sustainability Report.			
	102-52 Reporting cycle	25			
	102-53 Contact point for questions regarding the report	28			
	102-54 Claims of reporting in accordance with the GRI standards	25			
	102-55 GRI content index	135-140			
	102-56 External assurance	141-142			
Economic Performance					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	12			
	103-2 The management approach and its components	12			
	103-3 Evaluation of the management approach	12			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	15			8, 9
Procurement Practices					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	49-51			
	103-2 The management approach and its components	49-51			
	103-3 Evaluation of the management approach	49-51			
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	49			8

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
Anti-Corruption					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	35			
	103-2 The management approach and its components	35			
	103-3 Evaluation of the management approach	36-37			
GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	37			16
	205-3 Confirmed incidents of corruption and actions taken	39			16
Anti-Competitive Behavior					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	38			
	103-2 The management approach and its components	38			
	103-3 Evaluation of the management approach	38			
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	39			16
Tax					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	15			
	103-2 The management approach and its components	15			
	103-3 Evaluation of the management approach	15			
GRI 207: Tax 2019	207-4 Country-by-country reporting	16			
Materials					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	101			
	103-2 The management approach and its components	101			
	103-3 Evaluation of the management approach	101			
GRI 301: Materials 2016	301-1 Materials used by weight or volume	114			8, 12
	301-2 Recycled input materials used	114			8, 12
Energy					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	95			
	103-2 The management approach and its components	95-99			
	103-3 Evaluation of the management approach	95-99			
GRI 302: Energy 2016	302-1 Energy consumption within the organization	115-117		✓	7, 8, 12, 13
	302-2 Energy consumption outside of the organization	117			7, 8, 12, 13
	302-3 Energy intensity	118			7, 8, 12, 13
Water					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	91			
	103-2 The management approach and its components	91-93			
	103-3 Evaluation of the management approach	91-93			
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	91			6, 12
	303-2 Management of water discharge-related impacts	93			6
	303-3 Water withdrawal	118-121		✓	6
	303-4 Water discharge	121-125		✓	6
	303-5 Water consumption	124		✓	6

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
Emissions					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	95, 103			
	103-2 The management approach and its components	95-99, 103-105			
	103-3 Evaluation of the management approach	95-99, 103-105			
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	126		✓	12, 13
	305-2 Energy indirect (Scope 2) GHG emissions	127		✓	3, 12, 13
	305-3 Other indirect (Scope 3) GHG emissions	127			3, 12, 13
	305-4 GHG emissions intensity	127			13
	305-5 Reduction of GHG emissions	95-96			13
	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	128			3, 12
Effluents and Waste					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	101			
	103-2 The management approach and its components	101			
	103-3 Evaluation of the management approach	101			
GRI 306: Effluents and Waste 2016	306-2 Waste by type and disposal method	129-132			3, 12
Environmental Compliance					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	91, 95, 103			
	103-2 The management approach and its components	91, 95, 103-104, https://www.mitrphol.com/whistleblowing-th.php			
	103-3 Evaluation of the management approach	91, 95			
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	132			16
Supplier Environmental Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	49			
	103-2 The management approach and its components	49-51			
	103-3 Evaluation of the management approach	50-51			
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	50			
Employment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	63			
	103-2 The management approach and its components	63-75			
	103-3 Evaluation of the management approach	73, 75			
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	109-110			5, 8, 10
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	74			3, 5, 8
	401-3 Parental leave	110			5, 8
Occupational Health and Safety					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	83			
	103-2 The management approach and its components	83			
	103-3 Evaluation of the management approach	83			

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	83			8
	403-2 Hazard identification, risk assessment, and incident investigation	83			3, 8
	403-3 Occupational health services	84			8
	403-4 Worker participation, consultation, and communication on occupational health and safety	84			8
	403-5 Worker training on occupational health and safety	85			8
	403-6 Promotion of worker health	85			8
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	84			8
	403-8 Workers covered by an occupational health and safety management system	112			8
	403-9 Work-related injuries	84, 112-113		✓	3, 8
	403-10 Work-related ill health	113		✓	3, 8
Training and Education					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	65			
	103-2 The management approach and its components	68			
	103-3 Evaluation of the management approach	68-70			
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	72, 111			4, 5, 8, 10
	404-2 Programs for upgrading employee skills and transition assistance programs	65-68			8
	404-3 Percentage of employees receiving regular performance and career development reviews	111			5, 8, 10
Diversity and Equal Opportunity					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	63			
	103-2 The management approach and its components	63-64			
	103-3 Evaluation of the management approach	64			
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	107-108			5, 8
Child Labor					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	49			
	103-2 The management approach and its components	49-51, 79-81			
	103-3 Evaluation of the management approach	50-51			
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	50-51, 79-81			8, 16
Human Rights Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	77			
	103-2 The management approach and its components	77-81			
	103-3 Evaluation of the management approach	77			
GRI 412: Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	https://www.mitrphol.com/page_detail.php?p=1&topic=55			

GRI Standard	Disclosures	Page Number/ Website/Remark	Omission	External Assurance	SDGs
Supplier Social Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	49			
	103-2 The management approach and its components	49-51			
	103-3 Evaluation of the management approach	50-51			
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	50-51			5, 8
Customer Health and Safety					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	55			
	103-2 The management approach and its components	55-59			
	103-3 Evaluation of the management approach	57-59			
GRI 416: Customer Health and Safety 2016	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	55			16
Marketing and Labeling					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	55			
	103-2 The management approach and its components	55-59			
	103-3 Evaluation of the management approach	57-59			
GRI 417: Marketing and Labeling 2016	417-3 Incidents of non-compliance concerning marketing communications	56			16
Product and Service Labelling					
FP-5	FP-5 Percentage of production volume manufactured in sites certified by an independent third party according to internationally recognized food safety management system standards	134			



KPMG Phoomchai Audit Ltd.
50th Floor, Empire Tower
1 South Sathorn Road, Yannawa
Sathorn, Bangkok 10120, Thailand
Tel +66 2677 2000
Fax +66 2677 2222
Website home.kpmg/th

บริษัท เคพีเอ็มจี ภูมิภาค ไทย สอบบัญชี จำกัด
ชั้น 50 เอ็มไพร์ทาวเวอร์
1 ถนนสาทรใต้ แขวงยานนาวา
เขตสาทร กรุงเทพฯ 10120
โทร +66 2677 2000
แฟกซ์ +66 2677 2222
เว็บไซต์ home.kpmg/th

Independent limited assurance report

To the Directors of Mitr Phol Group (“MP”)

Conclusion

Based on the procedures performed, as described below, nothing has come to our attention that causes us to believe that the selected subject matters (“Subject Matters”) identified below and included in the Sustainability Report 2019 (the “Report”) for the year ended 31 October 2019 are not, in all material respects, prepared in compliance with the reporting criteria (the “Criteria”).

Our Responsibilities

We have been engaged by MP and are responsible for providing a limited assurance conclusion in respect of the Subject Matters for the year ended 31 October 2019 to be included in the Report as identified below.

Our assurance engagement is conducted in accordance with the International Standard on Assurance Engagements ISAE 3000 *Assurance Engagements other than Audits or Reviews of Historical Financial Information* and ISAE 3410 *Assurance on Greenhouse Gas Statements*. These standards require the assurance team to possess the specific knowledge, skills and professional competencies needed to provide assurance on sustainability information, and that we plan and perform the engagement to obtain limited assurance on whether the Subject Matters are prepared, in all material respects, in compliance with the Criteria. We have complied with the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants to ensure their independence. The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Except for the Subject Matters, we have not been engaged to provide an assurance conclusion on any other information disclosed within the Report.

Subject Matters

Subject Matters comprised of the following data expressed numerically or in descriptive text for the year ended 31 October 2019:

- GRI 302-1 Energy consumption within the organization (2016)
- GRI 305-1 Direct (Scope 1) GHG emissions (2016)
- GRI 305-2 Energy indirect (Scope 2) GHG emissions (2016)
- GRI 303-3 Water withdrawal (2018)
- GRI 303-4 Water discharge (2018)
- GRI 303-5 Water consumption (2018)
- GRI 403-9 Work-related injuries (2018)
- GRI 403-10 Work-related ill health (2018)

The scope of Subject Matters covers the data of MP’s operation in Thailand, including Farming business, Sugar business, Energy business, Wood substitute materials business, Fertilizer business, Logistics and warehouse business and Other businesses.

Criteria

The Subject Matters were assessed according to the following criteria:

- The Sustainability Reporting Standards of the Global Reporting Initiative (“GRI Standards”);

Directors’ and management’s responsibilities

The directors and management of MP are responsible for the preparation and presentation of the Subject Matters, specifically ensuring that in all material respects the Subject Matters are prepared and presented in accordance



with the Criteria. This responsibility also includes the internal controls relevant to the preparation of the Report that is free from material misstatement whether due to fraud or error.

Procedure performed

In forming our limited assurance conclusion over the Subject Matters, our procedures consisted of making enquiries and applying analytical and other evidence gathering procedures including:

- Interviews with senior management and relevant staff at corporate and operating sites;
- Inquiries about the design and implementation of the systems and methods used to collect and process the information reported, including the aggregation of source data into the Subject Matters;
- Inquiries about managements practices and procedures related to identifying stakeholders and their expectations, determining material sustainability matters and implementing sustainability policies and guidelines;
- Conducts site-level review for 5 sites (onsite visit for 3 sites and offsite review via remote conference for 2 sites) selected on the basis of risk analysis including the consideration of both quantitative and qualitative criteria. The selected sites will be representative for sugar business, energy business, wood substitute materials business and farming business;
- Agreeing the Subject Matters to relevant underlying sources on a sample basis to determine whether all the relevant information has been included in the Subject Matters and prepared in accordance with the Criteria.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance opinion.

Inherent limitations

Due to the inherent limitations of any internal control structure it is possible that errors or irregularities in the information presented in the Report may occur and not be detected. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation and presentation of the Report, as the engagement has not been performed continuously throughout the period and the procedures performed were undertaken on a test basis.

Restriction of use of our report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than MP, for any purpose or in any other context. Any party other than MP who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than MP for our work, for this independent limited assurance report, or for the conclusions we have reached.

KPMG Phoomchai Audit Ltd.

Bangkok

30 September 2020



***Growing Together,
Forwarding to
the Circular
Economy***

Mitr Phol Group
2 Ploenchit Center, 3rd Floor,
Sukhumvit Road, Klongtoey, Bangkok 10110
Tel. +66 2794 1000 Fax. +66 2656 8494
www.mitrphol.com



Global Compact
Network Thailand
Membership
No. 106471

Printed with Soy Ink

Printed with Carbon Neutral
1777-73851344-VCU-009