

Driving Green Journey to Net Zero



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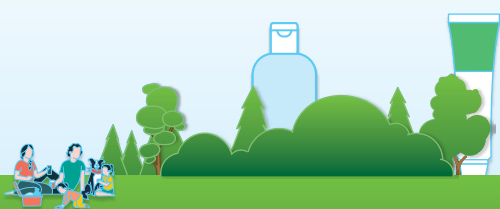


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03

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Vision



To be a Leading **Green Chemical Company**
by Creating Sustainable Value



Mission



- 1 **Customers** : Innovate and provide excellent quality products and services for long-term partnership.



- 2 **Stakeholders** :
Maximize sustainable value for stakeholders with transparency and integrity.



- 3 **Employees** : Create a work-life balance environment and high performance organization by investing in human resources.



- 4 **Society** : Show responsibility and care for sustainable development of the environment and society.



- 5 **Green Flagship** for GC Group.

Objectives and Goals

Global Green Chemicals Public Company Limited (GGC) ("the Company") systematically reviews its vision, mission, and business directions each year to align with business circumstances and outlook. For 2020–2029, GGC has objective to be a Leading of Oleochemicals and Biochemicals industry to support value-added of agricultural productivity and improve farmers' lives.

1

Become a Leading Oleochemicals Company

in the Region Maintain leadership position in Methyl Ester and Fatty Alcohols business both in domestic and in the region, which includes the ability to continuously establish healthy EBITDA margin and growth opportunity in Oleochemicals Industry.

2

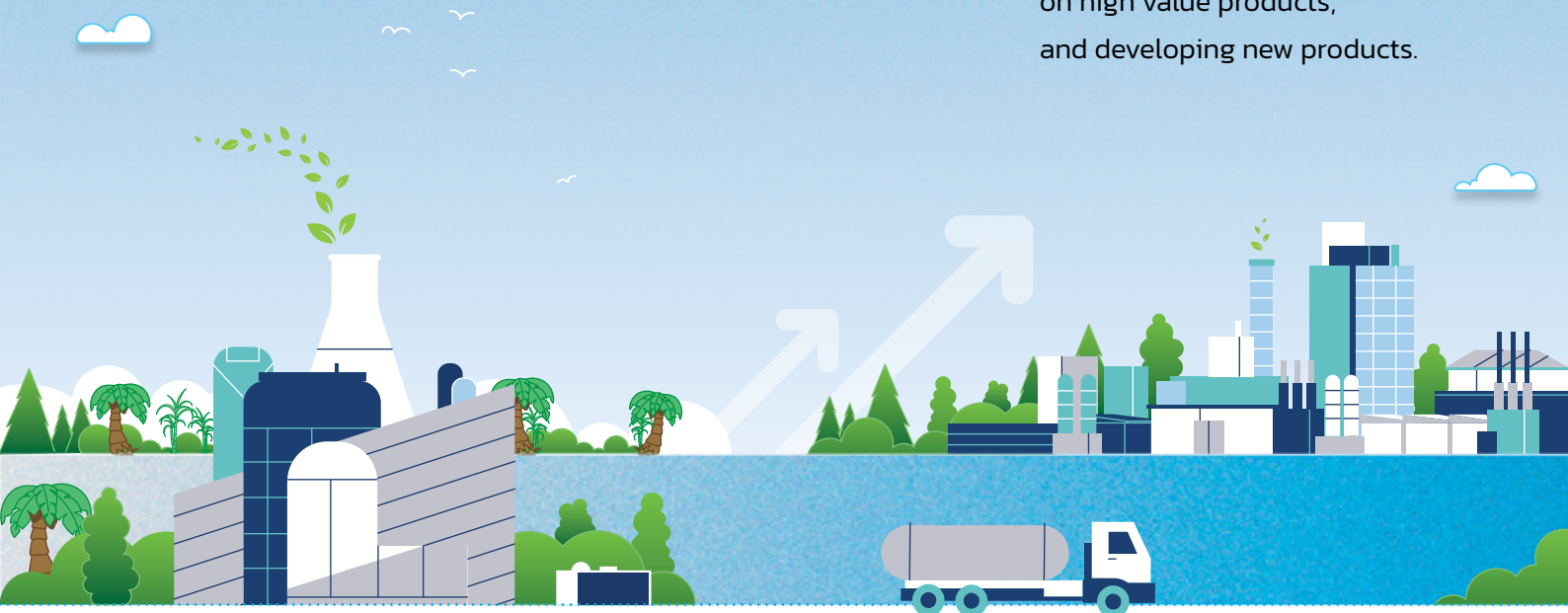
Become a Green Flagship Company in Biochemicals Business of GC Group

GGC committed to become a global prominent player in Biochemicals Industry, dividing its business into three business groups: Biochemicals, Biofuels, and Bioplastics.

3

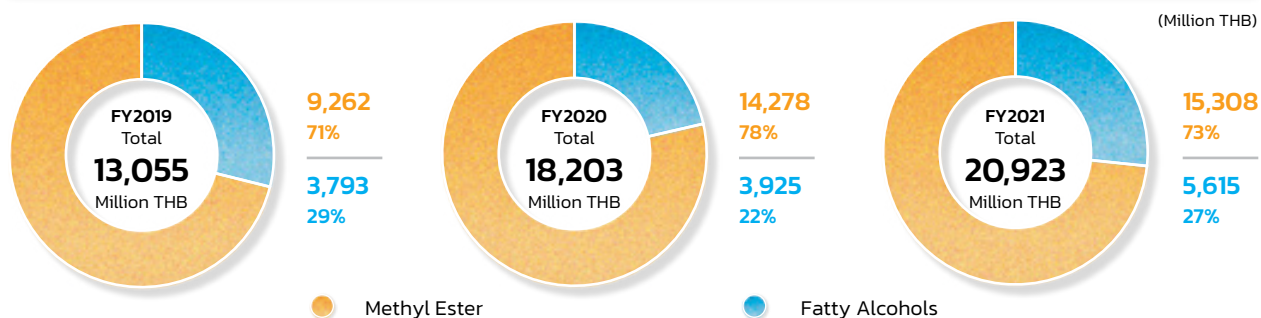
Continuously Pursuing Operational Excellences to Improve Profitability

GGC committed to expand its business. The Company plans increase revenue growth through enhancing the current plant efficiency, expanding capacity with green-filled project, increasing market share and sales revenue, emphasizing on high value products, and developing new products.

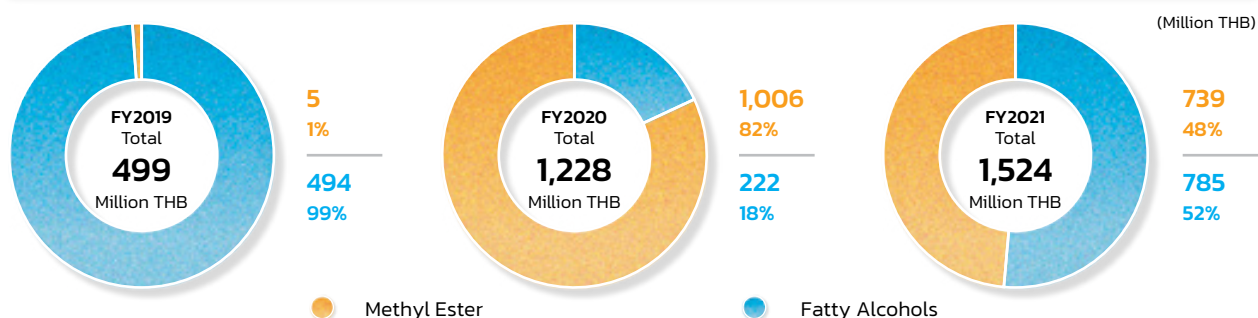


Key Financial Highlights

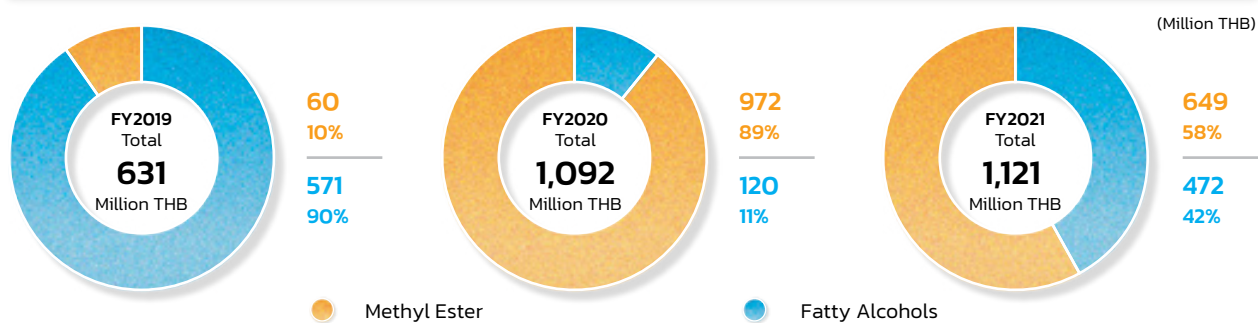
Sales Revenue



EBITDA ⁽¹⁾



Adjusted EBITDA ⁽²⁾ Breakdown by Business Group



Net Profit



Note :

⁽¹⁾ EBITDA refers to earnings before interest, tax, depreciation and amortization

⁽²⁾ Adjusted EBITDA refers to EBITDA excluding impact of inventory of Stock Gain/Loss and NRV.

Statement of Financial Position (Unit : Million THB)	FY2019	FY2020	FY2021
Total Assets	12,931	13,239	13,517
Cash, Cash-Equivalent and Short-Term Investment	3,311	2,142	1,791
Other Current Assets	3,401	3,985	4,856
Property, Plants & Equipment	4,764	4,576	4,259
Other Non-Current Assets	1,455	2,536	2,611
Total Liabilities	3,283	3,246	3,547
Interest-Bearing Debt	1,790	1,946	1,267
Other Liabilities	1,493	1,300	2,280
Total Equity	9,648	9,993	9,970

Financial Ratios	FY2019	FY2020	FY2021
Current Ratio (times)	3.6	3.2	2.2
EBITDA to Sales Revenue (%)	3.8	6.7	7.3
Net Profit to Sales Revenue (%)	0.7	3.1	1.6
Return on Total Assets (%)	2.3	4.9	3.5
Return on Equity (%)	1.0	5.7	3.3
Debt to Equity (times)	0.3	0.3	0.4
Interest-Bearing Debt to Equity (times)	0.2	0.2	0.1
Interest-Bearing Debt to EBITDA (times)	3.6	1.6	0.8

Dividend Paid (THB/Share)		Dividend Payout Ratio (%)
Year	Full Year	
2019 ⁽¹⁾	0.35	56% ⁽²⁾
2020 ⁽³⁾	0.35	64%
2021 ⁽⁴⁾	0.35	109%

Note :

⁽¹⁾ The Board of Directors at its meeting No 2/2020 held on February 14, 2020 has approved the proposal to propose at the 2020 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2019 operating performance of THB 0.35 per share, of which THB 0.15 per share was paid as an interim dividend on October 9, 2019. The final dividend payment of year 2019 (July-December 2019) was paid of THB 0.20 per share on April 23, 2020.

⁽²⁾ Calculate from Separate Financial Statements of year 2019.

⁽³⁾ The Board of Directors at its meeting No 2/2021 held on February 10, 2021 has approved the proposal to propose at the 2021 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2020 operating performance of THB 0.35 per share. The final dividend payment of year 2020 was paid of THB 0.35 per share on April 21, 2021.

⁽⁴⁾ The Board of Directors at its meeting No 2/2022 held on February 11, 2022 has approved the proposal to propose at the 2022 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2021 operating performance of THB 0.35 per share but the right to receive dividend is subject to the approval of shareholders at the 2022 Annual General Meeting.

Message from the Chairman

Dear Shareholders,

Global Green Chemicals Plc (GGC) has commitment to be a Leading Green Chemical company to foster growth and become a sustainable development role model while remaining poised to cope with challenging transformation now and in the future, as well as operating with socio-environmental responsibility under corporate governance.

In 2021, GGC was confronted with assorted challenges and external factors, not least the ongoing COVID-19 pandemic affecting the domestic transport sector by decreasing diesel demand. However, GGC has remained committed to its business by focusing on sharpening competitiveness, developing and growing business opportunities, adjusting operating strategies and integrating cooperation with the creation of shared benefit with its allies for uninterrupted business, apart from developing the corporation in various aspects to sustain future growth so as to achieve short-term and long-term goals. To this end, GGC intensified improvement of business processes and accelerated the implementation of corporate strategies to suit shifting internal and external circumstances. As a result, In 2021 GGC has posted a three-year-high operating profit and performance outcomes in line with our strategies.

As for growing our business, GGC decided to invest in the Nakhonsawan Biocomplex Project (NBC) Phase 2, which represents Thailand's first Bio Hub, run by the joint venture GGC KTIS Bio Industrial Co., Ltd. (GKBI). The project will create high value-added products for agricultural produce by converting them into industrial products, raise our capability for the biofuel business, and grow investment opportunities for biochemical and bioplastic businesses. Besides, the project will support the

BCG Model (Bio-Circular-Green Economy) to elevate national competitiveness and drive Thailand's achievement of Sustainable Development Goals (UN SDGs) as planned, apart from fostering confidence among business partners to invest with us further on the NBC Project.

For the Sustainability, In 2021 marked GGC's milestone in becoming a world-class sustainable entity, evident in our participation in the Paris Agreement, an accord under the United Nations Framework Convention on Climate Change. To elaborate, GGC has set a goal of 20% reduction in the Green House Gas (GHG) emissions by 2030 and development of business in pursuit of the Net Zero emissions goal by 2050—challenging goals, yet an opportunity for driving GGC toward ongoing growth for long-term sustainability.

With our business foundation's sustainability principles of consistently striking a balance between our Environmental, Social, and Governance (ESG) actions. In 2021, GGC was recognized as a sustainability role model (a Lead Member) by the United Nations Global Compact for the second consecutive year that only 38 entities worldwide gained such recognition. In our first year of national-level participation, GGC also earned an Awareness Level rating from our participation in the Carbon Disclosure Project (CDP) assessment on Climate Change management. GGC assisted society through our Green Health Project, winning the Prime Minister's Export Award (PM Award) for social responsibility this year. Rated "Excellent" (Five Stars) for the four consecutive year, GGC was ranked among listed companies with outstanding corporate governance by the 2021 Corporate Governance Report (CGR) project, conducted by the Thai Institute of Directors (IOD). Finally, GGC won



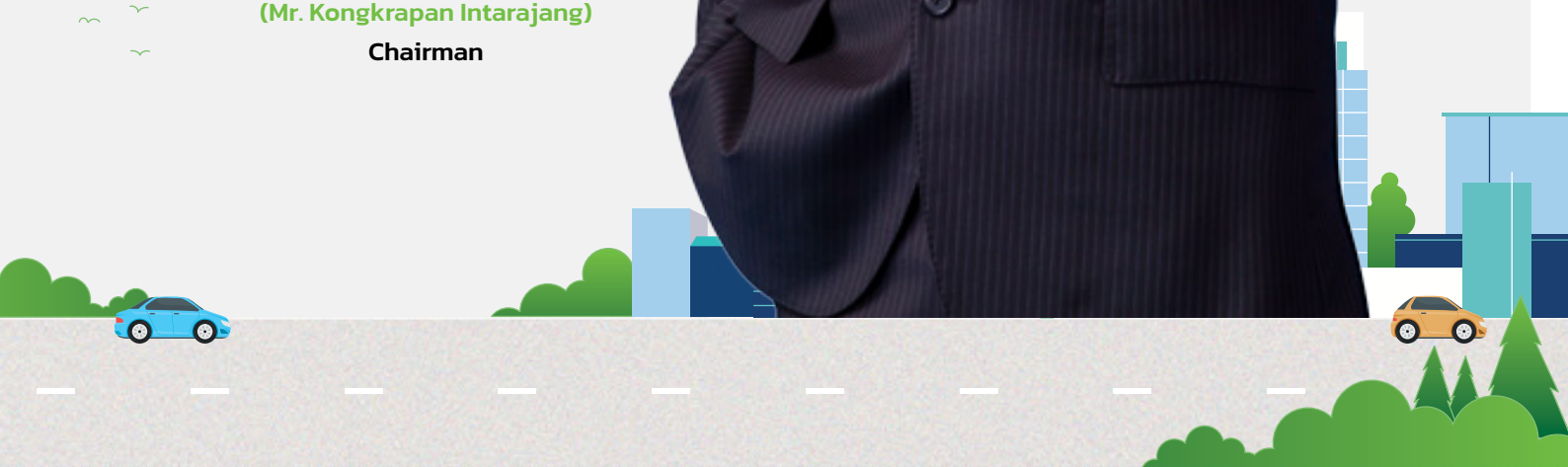
the Thai Private Sector Collective Action against Corruption (CAC) membership renewed for the first time this year.

On behalf of the Board of Directors and management, I would therefore like to express my sincere gratitude to all stakeholders for the trust and wonderful support to our undertaking all along and to express my appreciation to all employees for tirelessly contributing to GGC's robust growth. GGC pledges to maintain our business under the sustainable approach to become a Leading Green Chemical company, poised to drive our creativity for sustainable values.

"GGC has commitment to be
**a Leading Green Chemical company
to foster growth and become
a sustainable development
role model** while remaining poised to
cope with challenging transformation
now and in the future, as well as operating
with socio-environmental responsibility
under corporate governance."



(Mr. Kongkrapan Intarajang)
Chairman





Section

01



Business Operation and Business Overview



Business Operations and Business Overview

1. Structure and Operation of Group Companies

1.1 Policy and Business Overview

1.1.1 Vision, Mission, Business Objectives and Strategies

Vision

To be a Leading Green Chemical Company by Creating Sustainable Value

Mission

- 1) Customers: Innovate and provide excellent quality products and services for long-term partnership.
- 2) Stakeholders: Maximize sustainable value for stakeholders with transparency and integrity.
- 3) Employees: Create a work-life balance environment and high-performance organization by investing in human resources.
- 4) Society: Show responsibility and care for sustainable development of the environment and society.
- 5) Green Flagship Company for GC Group.

Objectives and Goals

Each year Global Green Chemicals Public Company (GGC) (“the Company”) systematically reviews its vision, mission, and business directions to align with business circumstances and outlook. For 2021-2030, the Company strives to be a leader in the Oleochemicals and Biochemicals in support of value addition to agricultural production and improvement of farmers’ lives.

1. Leader in the Regional Oleochemicals Industry

GGC strives to be a domestic and regional leader in the Methyl Ester and Fatty Alcohol businesses while nurturing its ability to constantly maintain profit margins and improving Oleochemicals growth capacity in the industry.

2. Green Flagship Company for GC Group

GGC strives to be an outstanding world-class green chemical producer in each market where it operates Biochemicals, Biofuels and Bioplastics.

3. A company that generates secure and continual growth and profits

GGC strives to grow its businesses for steady return growth by improving its current plants and enabling capacity growth by investing in new plants, market share and sales growth with a focus on high-value products, and diversified product types.

Company Strategy

GGC remains committed to implementing its vision and mission. The Company focus on establishing and maintaining competitiveness, Biochemical business growth, stakeholder-oriented approach, sustainable business conduct, and other organizational development to support future growth plans. The Company also deliberated, reviewed, and adjusted operating and corporate strategies in line with the dynamic environment. The Company adopt the directions and strategic plans as a corporate goal-setting framework and monitor results regularly to ensure achievement of short-term and long-term goals.

In 2021 The Company actively improved business processes. The Company accelerated the implementation process of corporate strategies in response to the change of internal and external situations. The key strategies are as follows:

1. Strengthen Business as Usual (BAU)

The Company defined an approach to enable ourselves to compete better, including raising productivity, through three actions:

- 1) **Plant Reliability Excellence** GGC improved our processes developed as well as upgrading our operational excellence for reliability and integrity of all plants to ensure leading positions in the industry. Such actions raised our reliability and process efficiency to the maximum while maintaining product quality at high standards with due regard for safety and environmental impacts.
- 2) **Supply Chain Optimization** GGC improved, revised, and lowered our operating expenses across our supply chain, ranging from feedstock procurement, transport, production, marketing, inventory management, Including risk management of feedstock and product price volatility as well as contract management for the transport and storage of feedstock and merchandise to in turn manage cost reduction on feedstock and logistics. Our goal is management higher efficiency under proper costs to grow our competitiveness.
- 3) **Sales & Marketing Focus and Development** GGC split our sales and marketing activities into two groups:
 - (i) **Biofuels:** GGC focused on fostering price reliability with our business partners by raising the security of product delivery (product and service quality) through efficient management of feedstock, logistics, and process standards.
 - (ii) **Oleochemicals:** GGC executed portfolio management for high-value markets. The Company are the only domestic producer of Fatty Alcohols, a competitive advantage over rivals from Malaysia and

Indonesia. The Company also commanded extended Oleochemicals products toward downstream businesses by jointly developing products and market strategies with GC Group companies to meet the needs of customers in this group.

2. Growth Portfolio

GGC envisaged opportunities for growing the Biochemicals business to create steady revenue over the long term to supplement its current business leadership by investing in products that leverage oil palm feedstock into high-value products. To elaborate, our focus is on assorted downstream products, including home and personal care products, food ingredients, and nutraceuticals, to meet our growth strategies for Biochemicals.

This effort includes our Biochemicals and Bioplastics projects, an extension of the Nakhonsawan Biocomplex Project (NBC), whose feedstock is sugarcane and sugar. Today the project is under market and viability investigation with business partners. To this end, GGC has invested in developing infrastructure and assorted public utilities systems under the NBC Phase 2 Project to sustain future projects that would link up with our products into Biochemicals and Bioplastics businesses.

Our goal is also to become the Green Flagship of GC Group by growing our business through business acquisition and focusing on studying the feasibility of connecting the businesses of joint ventures in GC Group to grow our competitiveness in four aspects: (1) Technology Synergy (2) Market Synergy (3) Knowledge Transfer and (4) Production Integration.

3. Build up capability to sustain business in Long Term

GGC's approach to capability enhancement in key business areas (present and future) assures us that the company would achieve its goals, namely:

Development of HR Effectiveness This development must align with business goals while enhancing organizational strengths to sustain our driving of current businesses and future business growth plans.

Governance, Risk and Compliance execution (GRC) This execution assures stakeholders and allows for sustainable and continual development together with internal process improvement by focusing on achieving an internal control system of international standards of The Committee of Sponsoring Organizations of the Treadway Commission (COSO). This achievement aids our objective of internal control with efficiency and international standards.

Furthermore, GGC strives to be one of prototype entities of the world on sustainability under the certification of **the Dow Jones Sustainability Indices (DJSI)** for acceptance by stakeholders in balanced economic, social, and environmental aspects underlined by ethics and good governance. To this end, GGC rely on the collaboration of all employees in order to proceed with sustainable development. Our road map for readying GGC's application to become such prototype entity was endorsed by the Corporate Governance and Sustainable Development Committee. In addition, GGC has appointed a Sustainability Development Committee to drive our actions, counsel, and support the work of Sustainability Development Agent so that sustainable practices align with GGC's core policy and international principles alike.

1.1.2 Milestones and Awards in 2021

Milestones

September 2021: GGC and GIZ launched Sustainable and Climate-Friendly Palm Oil Production and Procurement in Thailand (SCPOPP) Project

Together with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Thailand, GGC launched the Sustainable and Climate-Friendly Palm Oil Production and Procurement in Thailand (SCPOPP) Project to promote and develop the caliber of small farmers up to the Roundtable on Sustainable Palm Oil (RSPO) standard, a key tool to carve marketing opportunities for Thailand's sustainable palm oil, enabling it to access world markets.

December 2021: Signing of Investment Agreement on the Utility Provider and Infrastructure Project for the Nakhonsawan Biocomplex Phase 2 (NBC Phase 2)

GGC KTIS Bioindustrial Company Limited (GKBI), a joint venture between GGC and Kaset Thai International Sugar Corporation Public Company Limited, signed a joint-venture agreement for the Utility Provider and Infrastructure Project for the Nakhonsawan Biocomplex Phase 2 (NBC Phase 2) Project with NatureWorks Asia Pacific Company Limited, a subsidiary of NatureWorks LLC. Holding equal (50%) shares in NatureWorks LLC is GC International Corporation, a subsidiary of PTT Global Chemical Plc (GC), and Cargill Incorporated (Cargill). The signing marked a milestone step for the NBC Project that would assure foreign investors investing in the NBC project. NBC Phase 2 would focus on adding value to agricultural produces and extend it to a high-value added industry, namely Biochemicals and Bioplastics products with sugarcane as feedstock, through sophisticated technology that are friendly to society and the environment alike.

Awards in 2021

April 2021: Halal Award (7th consecutive year)

GGC won a Halal Award for 2020 after the Office of the Islam Committee (Rayong) and the Halal Administration Section had rated it at the "Credit" (good) for commanding Halal quality management under the requirements of the office for the seventh consecutive year. This acclaim echoed GGC's commitment to the constant application of Halal standards to its continual production and development processes to instill confidence among Muslims worldwide.

April 2021: First CAC membership

GGC won first CAC (Thai Private Sector Collective Action Coalition against Corruption) membership, underlining business transparency. This represented our pride and illustrated the power of collaboration of GGC, which is the Thai private sector that earnestly fights corruption and truly implements its anti-corruption policy.

September 2021: Recognition by UN as a LEAD world-class sustainable business entity (2nd consecutive year)

GGC was ranked by the UN Global Compact of the United Nations as one of 38 world-class sustainable organizations and the top three Thai entities ranked as the top group (LEAD) for two consecutive years, a result of its determination to constantly apply its sustainable development strategies and driving them to its supply chain in support of Sustainable Development Goals (SDGs) goal achievement in the world. GGC was proud to be a leading

Biochemical company that is ready to relentlessly drive a force of creativity to sustainable economic value for Thailand's agricultural and industrial sectors. GGC ready to share this world-class success by sharing knowledge and business development approach with other organizations and sectors to collectively develop toward sustainability.

October 2021: CSR-DIW Continuous Award (7th consecutive year)

GGC received a CSR-DIW Continuous Award for 2021 certificated and plaqued for the seventh consecutive year from the Department of Industrial Works, Ministry of Industry. This acclaim echoed GGC's commitment to green business and operation by obeying laws and requirements concerning social responsibility, engagement in community development, meeting community's demand, and setting goals for plants to have a balanced social responsibility standard (economy, society, and environment) and to focus on sustainable community development.

November 2021: Listed company with the "Excellent" corporate governance (five stars) (4th consecutive year)

GGC was named by The Stock Exchange of Thailand (SET) as one of 37 listed companies of the "Excellent" (five stars) group for the fourth consecutive year under the Corporate Governance Report of Thai Listed Companies (CGR) Project of the Thai Institute of Directors (IOD) with the support of SET. This ranking illustrated GGC's capability that focuses on relentlessly developing its governance practices at remarkable levels Good Corporate Governance and Corporate Governance (CG), regard for stakeholders' role that gives investors and stakeholders confidence, and alignment with the sustainable development approach to foster business growth and assure all stakeholders' operations.

December 2021: C level (Awareness Level) assessment of Carbon Disclosure Project (CDP)

GGC was evaluated at the C level (Awareness Level) on Climate Change under the Carbon Disclosure Project (CDP) for 2021. This resulted from the commitment to operating with sustainability as foundation through participation in overcoming problems and easing climate change impacts by transitioning into a low-carbon society under The UN Climate Change Conference in Glasgow, England (COP26) with a goal for Climate Change by way of Net-Zero of Green House Gas (GHG) emission by 2050.

December 2021: The Prime Minister's Industry Award 2021 for Outstanding Achievement in Corporate Social Responsibility

GGC won the Prime Minister's Industry Award 2021 for Outstanding Achievement in Corporate Social Responsibility for its Green Health Project, which connects social responsibility strategic implementation and business in parallel with engagement with communities and society to simultaneously upgrade the quality of life and develop the economy. To elaborate, GGC extended its glycerine product by blending it in the production of healthcare products, such as alcohol gel, alcohol spray, and handwash liquid soap used in the project, which was run with business partners and allied entities to promote good hygienic practices among the people.

1.1.3 Business Overview

Global Green Chemicals Public Company Limited (GGC) engages in the green chemical business. The present core products consist of Methyl Ester, Fatty Alcohols, Refined Glycerine, and Ethylene Oxide products (namely Fatty Alcohol Ethoxylates).

Virtually all sold to domestic customers, Methyl Ester (“B100”) serves as a blending agent in high-speed diesel and the rest is exported for blending into high-speed diesel. Methyl Ester is typically blended with basic diesel fuel to produce high-speed diesel for sell at petro stations. The total nameplate capacity of Plant 1 and Plant 2 is 500,000 tons per year.

GGC is the sole domestic producer of Fatty Alcohols, the core blending component of cosmetics, surfactants, and other pharmaceutical products. The nameplate capacity of the Fatty Alcohols plant is 100,000 tons per year.

GGC also produces Refined Glycerine, which finds widespread application in cosmetics and pharmaceutical products together with several By-Products, including Raw Glycerine, Yellow Glycerine, Potassium Sulfate, Methyl Ester Residue, and Fatty Alcohols Residue. The total nameplate capacity of Plant 1 and Plant 2 is 51,000 tons per year.

Methyl Ester, Fatty Alcohols, and Refined Glycerine are produced by GGC and Thai Fatty Alcohols Company Limited (TFA).

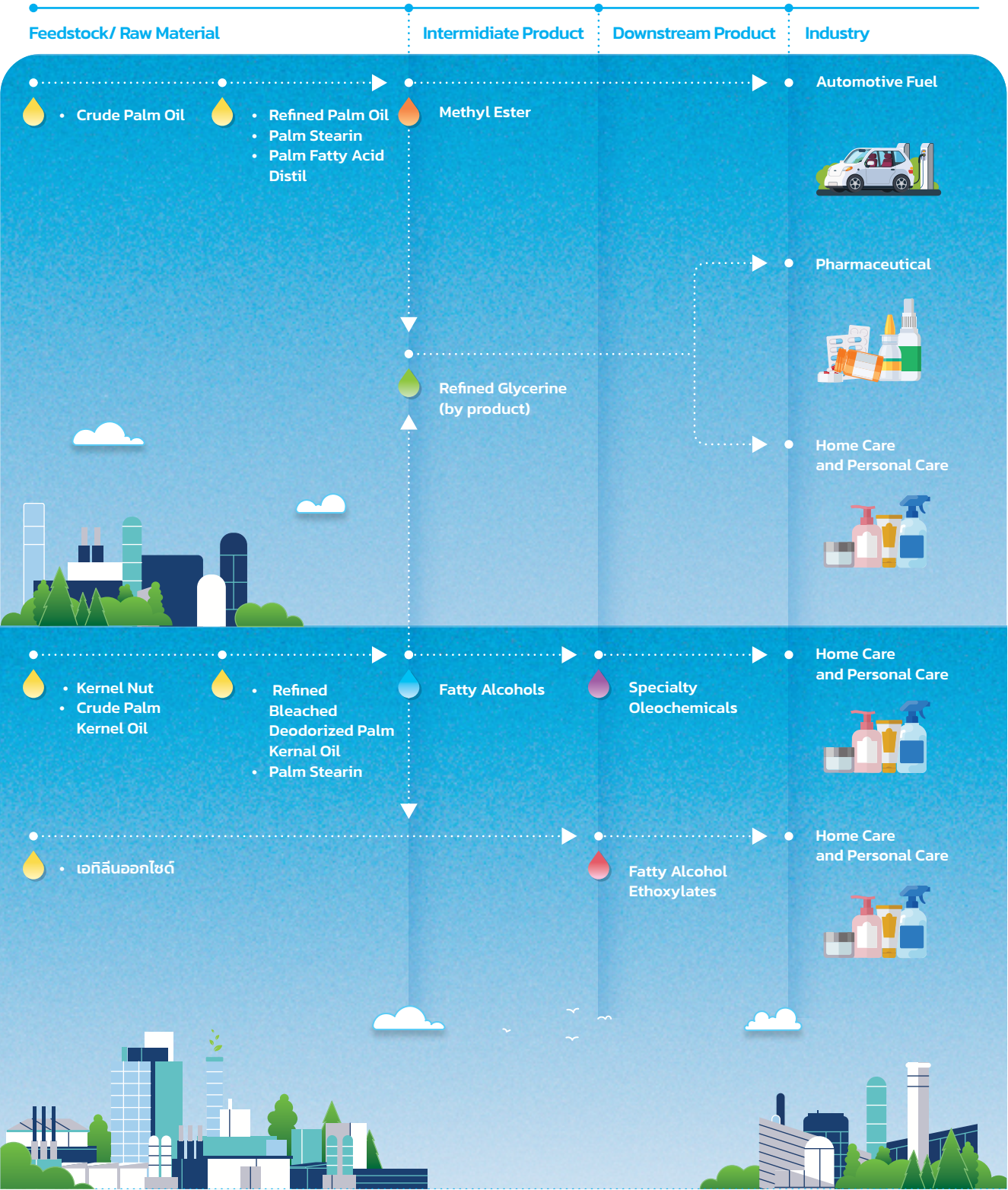
Thai Ethoxylate Company Limited (TEX), equally owned by GGC and joint-venture partner BASF (Thai) Company Limited, is Thailand’s sole producer of Fatty Alcohol Ethoxylates, feedstock for Personal Care and Home Care products. It also finds application as a Scouring Agent in fabric preparation processes as well as a Softener in the final stage of fiber preparation. With a nameplate capacity of 124,000 tons per year of Fatty Alcohol Ethoxylates, TEX is the key domestic customer of GGC’s Fatty Alcohols products.

In other businesses, GGC is a 30 percent shares shareholder of Thai Eastern Top Seeds Oil Company Limited (TETSO), along with Eastern Palm Oil Company Limited (EPO), which engages in palm kernel oil extraction, with a COD in 2018 and a nameplate capacity of 90,000 tons per year of kernels. On December 15, 2021, The Meeting of the Board of Directors has approved the Company’s sale of ordinary shares in Thai Eastern Top Seeds Oil Company Limited, to Eastern Palm Oil Company Limited (EPO), on January 13, 2022.

The company wholly owns GGC Biochemicals Company Limited (GGC Bio), a holding company set up on December 24, 2018, to engage and invest further in the green chemical business.

GGC Bio holds 50 percent of the shares in GGC KTIS Bioindustrial Company Limited (GKBI), a joint venture with KTIS Bioethanol Company Limited (KTBE), formed on January 11, 2019, to engage in the construction and operation of (1) a Sugarcane crushing mill, (2) an Ethanol plant, (3) a Biomass power plant together with options for selling power to operators, and (4) land and facilities, utilities, and other essential infrastructures, expected COD by the first quarter of 2022.

Business Value Chain



GGC Products

TEX Products

Products with Promising Businesses

1.1.4 Investment of Funds Derived from Initial Public Offering (IPO)

GGC's IPO took place on April 20 – 21 and 24, 2017, amounting to 283,666,700 shares at THB 11.20 per share, or roughly 27.71% of all issued and sold shares. The company derived a net sum of about THB 3.056 billion after distribution fees, underwriting fees, and IPO-associated expenses. The spending objectives and investment report as of December 31, 2021, appear below.

Objective	Investment plan (THB million)	Spending period	Investment as of December 31, 2021	Remaining fund as of December 31, 2021
1. Methyl Ester Plant 2	1,150	2017 – 2019	1,150	0
2. Nakhonsawan Biocomplex Project	1,350	2017 – 2022	1,221	129
3. Working capital and investment under 1 and 2 (if necessary) and future projects	556		308	248
Total	3,056		2,679	377

1.1.5 Development of Key Projects

In 2021, GGC's projects in progress and projects under study were as follows:

Joint venture in the Biochemical Industrial Estate Project

(under construction and investment investigation)

In this joint venture in the Biochemical Industrial Estate, GGC participated as a pilot project under Thailand's bio-industry promotional measures spanning in 2018-2027. On December 24, 2018, GGC Biochemicals Company Limited (GGC Bio), a GGC affiliate, signed a joint-venture agreement with KTIS Bioethanol Company Limited (KTBE), an affiliate of Kaset Thai International Sugar Public Company Limited (KTIS), to form a joint-venture project called "Nakhonsawan Biocomplex Project". Subsequently GGC Bio and KTBE formed a 50:50 joint-venture known as GGC KTIS Bioindustrial Company Limited (GKBI), on January 11, 2019. The project is located in Amphoe Ta Khli, Nakhon Sawan. Its development falls into two phases.

Phase 1:

- (1) A sugarcane juice and sugarcane syrup plant with a capacity of 2.4 million tons per year
- (2) An ethanol plant with a nameplate capacity of 186 million liters per year or 600,000 liters per day, whose raw material is processed sugarcane juice or sugarcane syrup
- (3) A biomass power plant with high-pressure steam production, whose nameplate capacities are 85 megawatts (MW) and 475 tons per hour of steam

Phase 2: Extension project for Bioplastics and Biochemicals industries (under appropriate technology and joint-venture partner investigation).

For phase 1 investment, the Board of Directors approved the project investment in March 2019 with a construction budget of THB 7.5 billion; the plant is currently under construction. The groundbreaking ceremony was held on September 30, 2019, and the commercial operation date (COD) is expected in the first quarter of 2022.

GGC believes that this investment will increase the Company's capabilities for future investment in Biochemicals and sugarcane-based Bioplastics. This will bring synergy benefits between Bioindustry and sugarcane industry and foster the well-being of sugarcane farmers in Thailand.

Utility Provider and Infrastructure for Nakhonsawan Biocomplex Phase 2 Project (under construction)

The Utility Provider and Infrastructure for Nakhonsawan Biocomplex Phase 2 Project is an extension to grow the caliber and value of the Nakhonsawan Biocomplex Project. This investment promotes the project's readiness to accommodate investment and create value addition to farm products under various future investment projects to use its public utilities and infrastructures without the need for such investment. In addition, the driving and development of the project to higher capability on a par with other industrial estates together with more Biochemicals project investments address Thailand's development strategy under the Bio-Circular-Green Economic Model (BCG Model) in addition to underlining GGC's leadership in the Green Business.

In 2021, GGC successfully attracted a new investor from the USA with confirmation of joint investment made by NatureWorks LLC ("NatureWorks"), the world's No. 1 producer of Polylactic Acid (PLA). In this company, GC holds 50 percent of the shares, as does Cargill Incorporated (Cargill). For this investment, GGC and the KTIS Group provide public utility and infrastructural support through GKBI's operation with an investment of about THB 1.43 billion, including high-stability power distribution, steam production and distribution, water production and wastewater treatment, and long-term sugar dissolution systems. Project construction and COD is expected to be completed by early 2024. A sales agreement was scheduled for signing between GKBI and NatureWorks on December 15, 2021.

1.2 Nature of Business and Performance

1.2.1 Revenue Structure

Revenue is generated from selling goods consisting of Methyl Ester, Fatty Alcohols and Refined Glycerine as well as By-Products including Crude Glycerine, Yellow Glycerine, Potassium Sulfate, Methyl Ester Residues and Fatty Alcohols Residues and from selling raw materials in some periods.

Revenue generated from individual product each year is described below:

For the year ended December 31						
	2019		2020		2021	
Product	Sales Revenue (THB Million)	Percentage of Total Revenue	Sales Revenue (THB Million)	Percentage of Total Revenue	Sales Revenue (THB Million)	Percentage of Total Revenue
Methyl Ester	8,582.4	65.7%	13,346.5	73.3%	13,924.2	66.5%
Fatty Alcohols	3,706.4	28.4%	3,752.9	20.6%	5,307.7	25.4%
Refined Glycerine	565.9	4.4%	692.2	3.8%	1,304.7	6.2%
Others ⁽¹⁾	200.0	1.5%	410.9	2.3%	386.8	1.8%
Total	13,054.7	100.0%	18,202.5	100.0%	20,923.4	100.0%

Remark:

⁽¹⁾ Mainly including By-Products, e.g., Raw Glycerine, Yellow Glycerine, Potassium Sulfate, Methyl Ester Residue, Residue of Fatty Alcohols, and Other revenues.

Domestic and Export sales revenues are described below.

For the year ended December 31						
Year	2019		2020		2021	
Product	Revenue (THB Million)	Percentage of Total Revenue	Revenue (THB Million)	Percentage of Total Revenue	Revenue (THB Million)	Percentage of Total Revenue
Domestic sales	10,282.0	78.8%	15,557.5	85.5%	16,954.6	81.0%
International sales						
- China & India	1,250.8	9.6%	1,121.8	6.2%	2,258.7	10.8%
- CLMV countries	9.6	0.1%	23.3	0.1%	24.5	0.1%
- Other Asian countries	913.5	7.0%	662.3	3.6%	896.4	4.3%
- Others	598.8	4.5%	837.6	4.6%	789.2	3.8%
Total	13,054.7	100.0%	18,202.5	100.0%	20,923.4	100.0%

1.2.2 Nature of Product

Methyl Ester

(1) Nature of Product

Methyl Ester (also known as B100) is referred as Basic Oleochemicals. It is environmentally friendly enough to be used as a blending agent in basic diesel fuel to produce biodiesel of the European standard (EN 14214). Methyl Ester also enhances diesel fuel performance (combustion efficiency, and engine life). Most important, it contributes to reductions in pollution, for instance the PM2.5 problem or environmental impacts.

(2) Market and Competition

a) Policy and Nature of Market

Methyl Ester is sold to those who produce and blend high-speed diesel, the majority of whom are domestic customers. GGC sells it direct to each customer under an agreed period.

b) Market Overview and Trends

2021 Market Overview

The domestic Methyl Ester demand in 2021 shrank from the previous year to about 1.4 million tons (down by 0.18 million tons or 11% per year), mainly due to the COVID-19 pandemic (Delta strain) that constantly worsened, notably in the third quarter of 2021. The Center for COVID-19 Situation Administration (CCSA) extended the emergency decree to impose lockdowns in Bangkok Metropolis, with stepped-up control to the maximum in several provinces. Imposed was a curfew to curb people's travel along with a ban on provincial travel, and the Government sought cooperation for "Work from Home" by employees. Meanwhile, the public became worried

and cautious about leaving their residences, thus the diminished demand for diesel for tourism, agricultural products transport, and consumption during the period.

Although the public sector had vaccinated numerous people, the vaccination target had not been reached. The impeding of the success of widespread vaccination and the designed curb of infection, Methyl Ester demand, therefore, remained subdued.

Meanwhile, the public policy to encourage the public to turn to the B10 biodiesel as the country's main grade of diesel replacing B7 received lukewarm support. B6, in which biodiesel was further diluted, was issued in October and B7 in December, which resulted in domestic Methyl Ester demand of 4-5 million liters per day, far below the public sector's projected 7 million liters per day.

Competition among producers, notably during the last quarter of 2021, became fiercer with the production startup of a new producer and capacity growth of existing producers, totaling 0.87 million liters per day (270,000 tons per year). Projected that the average capacity of utilization rate of the industry this year would fall to about 50%.

The domestic price of Methyl Ester rose from last year in line with the price of domestic raw palm oil, at THB 46.51 per kilogram (up by THB 9.80 per kilogram or 27%).

2022 Market Trends

In 2022, Methyl Ester demand will exceed from last year's demand, climbing to 1.48 million tons, or about 2% (0.03 million tons) higher, despite the government's proclamation of the B7 policy in January and declaration of high-speed diesel blending ratio reduction to B5 from February 5 to March 31, 2022, relieving people who upset about the rising of energy price. However, the government will continue to drive the greater B10 consumption in support of farmers among the recovery of the COVID -19 pandemic, the success of widespread vaccination in Thailand. As a result, Thailand's overall economy will improve, in turn gradually improving diesel demand for travel and the industrial sector. Still, Methyl Ester market competition in 2022 looks set to become fiercer, as new producers and growth in capacities enter the scene.

In 2022, Methyl Ester prices tend to drop to about THB 41.21 per kilogram (down by THB 6.22 per kilogram or 13%) in line with the decreasing outlook for domestic crude palm oil prices.

(3) Procurement

Crude palm oil is the main feedstock for Methyl Ester production. Procurement is domestic so as to promote farmers and downstream industries.

GGC runs two Methyl Ester plants – Methyl Ester Plant 1 (300,000 tons per year) and Methyl Ester Plant 2 (200,000 tons per year).

2021 Domestic Palm Oil Overview

The palm oil output of 2021 amounted to 16.57 million tons (versus 14.98 million tons in 2020) because the South of Thailand (a traditional palm oil province) received massive volumes of rain from late 2020 in addition to the same story in 2021. Rainfall was also well distributed throughout the region. As a result, the South became fertile for palm oil, particularly in mid-2021, when water supply was adequate and oil cake was fertile.

The output of crude palm oil demand for energy came to 1.15 million tons, down from 1.36 million tons in the previous year, resulting from the government's COVID-19 preventive measure, which slashed diesel demand for the transport and logistics sector. In the meantime, the demand for consumption equaled 1.25 million tons, versus 1.16 million tons in the previous year, as a result of the public sector's relaxed lockdown measures. As for demand of crude palm oil for export this year, it came to 602,826 tons, a surge of 297,917 tons from the previous year as a result of the world market price remaining high, contributing to Thailand's ongoing export ability. These factors also resulted in the 2021 palm oil stock of 172,657 tons, down from 209,328 tons at year-end 2020. Also, due to the moderate level of year-round stock coupled with elevated prices in foreign countries, palm oil prices hover high all year. The average crude palm oil price in 2021 according to the Department of Internal Trade was THB 37.39 per kilogram, against THB 28.11 per kilogram in 2020.

2022 Domestic Palm Oil Trends

GGC expect to see a higher output of domestic palm in 2022 than 2021 because of favorable weather as well as good management during 2020-2021 and the steady rainfall volumes. The Office of Agricultural Economics projected that the output of 2022 would be about 17.39 million tons. Expected that demand for consumption would climb from 2021 due to the public sector's relaxed COVID-19 measures, thus benefiting economic recovery, including the tourism sector and related businesses like restaurants and hotels. Nevertheless, since the big surge in crude palm oil prices since late 2021, the public sector may issue additional measures to control the blending ratio in biodiesel, designed to cut production costs and sales price of high-speed diesel. Meanwhile, the export sector should see a downward trend from 2021 because of the expected decline in world market prices of palm oil. In view of production and demand factors. The palm oil stock would rise in 2022.

Fatty Alcohols

(1) Nature of Product

Fatty Alcohols are Basic Oleochemicals and feedstock most used as ingredients for the personal care sector. Fatty Alcohols are also mainly used in numerous products, including Surfactants, Plasticizers, Solvents, Flavorings, Fragrances, Detergents, Foam Stabilizers, and other industries.

(2) Market and Competition

a) Policy and Nature of Market

Thai Fatty Alcohols Company Limited (TFA) and sells Fatty Alcohols to domestic as well as foreign customers. The major customers are consumer goods manufacturers, Oleochemicals companies, traders and distributors, who supply them to their customers. Domestic customers sell them mostly to Thai Ethoxylates Company Limited (TEX), whereas overseas markets are in Asia, Europe, South Africa, and South America.

b) Market Overview and Trends

2021 Market Overview

Compared with last year, this year's Fatty Alcohols demand is healthier, as last year the COVID-19 pandemic was ravaging the world, prompting buyer countries' shutdowns in America and Europe, including major buyer countries like China and India, to keep the virus under control.

The pandemic caused by the Delta variant improved toward the latter part of 2021 as a result of more widespread vaccination, notably in the USA and Europe, raising prospects of economic recovery in these countries, including China—the market's key customer. Meanwhile, demand for cleansing agents and healthcare goods continued to improve amid the pandemic, supported by the capacity growth of key Antioxidant producers, thus raising market demand as well as the overall purchasing power in the Fatty Alcohols markets.

In 2021, For the supply side is more tightened than the previous year, because producer in Saudi Arabia decided to change Fatty Alcohols production line of 100,000 tons per year to make other products, while several Chinese producers (particularly Jiangsu and Zhejiang provinces, combined 280,000 tons per year) underwent temporary shutdowns from the end of third quarter to fourth quarter of 2021 because the Chinese government exercised control of pollutants and energy prices during such period. These factors shrank the overall supply of Fatty Alcohols.

The price of Fatty Alcohols in 2021 improved over last year to USD 1,976 per ton (up by USD 702 per ton or 55%) in line with the rising prices of crude palm kernel oil.

2022 Market Trends

Demand in 2022 for Natural Fatty Alcohols is expected to rise due to the anticipated easing of COVID-19 pandemic and the end of border shutdowns in Asia and buyer countries in Europe and America. Moreover, the expansion of vaccination service has helped improving global economy, along with market demand rises. Also, consumers' awareness of cleanliness and personal care have been propping up demand for Fatty Alcohols. Yet, their overall supply tend to fall from last year despite easing border shutdowns, which enabled producers to resume normal operations. According to the Saudi Arabian producers' decision to change the Fatty Alcohols production line (100,000 tons per year) to other products since quarter 3 of 2021, lowered market supply.

According to the decreasing of palm kernel oil price, the average price of Fatty Alcohols for 2022 tend to lower from 2021 to USD 1,978 per ton (drop by USD 51 per ton or 3%).

(3) Procurement

GGC and TFA use Crude Palm Kernel Oil (CPKO) as feedstock and procure it mainly from domestic markets in order to support agricultural and industrial sectors. The supply of domestic Crude Palm Kernel Oil may not meet GGC and TFA production volume during certain periods, however, there may be occasional needs to import CPKO from Malaysia and Indonesia; GGC intended to give top priority to domestic feedstock.

GGC is a commercial producer of Fatty Alcohols with a nameplate capacity of 100,000 tons per year.

Refined Glycerine

(1) Nature of Product

Glycerine, a By-Product in the manufacturing process of Methyl Ester and Fatty Alcohols is commonly used as an ingredient in pharmaceutical, food, personal care, and other industries.

(2) Market and Competition

a) Policy and Nature of Market

GGC sells Refined Glycerine to health and personal care product manufacturers and suppliers, both domestic and international, mainly through distributors while some are sold directly to customers, such as Multinational Corporations (MNCs) in the medical supply and domestic hygienic industry as well as major Glycerine-based medicine major producer of South Asia.

b) Market Overview and Trends

2021 Market Overview

The Refined Glycerine market in 2021 has a healthy improvement over last year, with a gradual global supply for Sanitizer Gel and healthcare products to protect the spread of COVID-19. Meanwhile, market supply took a dip with the fall in the Methyl Ester output and Biodiesel demand accompanying measures designed to limit, curb, or close down transport channels and limit travel in several countries. As a result, the average price of Refined Glycerine surged to about USD 1,146 per ton (up by USD 524 per ton or 84%) in line with the remarkable market demand rise.

2022 Market Trends

In 2022, the Refined Glycerine market will continue to accompany intense competition due to the return to normal demand for Sanitizer Gel and healthcare products while the volume of Glycerine from the Methyl Ester process begin its surge because of greater consumption of biodiesel after several countries' relaxed travel restriction measures , and national lockdowns. Also, people are now more aware of measures to control the pandemic. This factor promoted travel and transport of consumer items in line with the intense competition of domestic situation, which rooted from the rising production of Glycerine for Biodiesel consumption and more players in Biodiesel production.

(3) Procurement

Glycerine is a By-Product in the manufacturing process of Methyl Ester and Fatty Alcohols. GGC produces Glycerine with a nameplate capacity of 51,000 tons per year for commercial operation.

Fatty Alcohol Ethoxylates

(1) Nature of Product

Fatty Alcohol Ethoxylates are produced from Ethylene Oxide (EO) and Fatty Alcohols. Thai Ethoxylate Company Limited (TEX) is Thailand's sole manufacturer and distributor of Fatty Alcohol Ethoxylates, which are feedstock for personal care and home care products, called Nonionic Surfactant such as shampoo, dishwashing liquid and detergent. Moreover, Fatty Alcohol Ethoxylates also precursor in the production of many Industrial and Institutional Applications such as Textile industry, in preparation process used as scouring agent and softener. In the paper industry, the Fatty Alcohol Ethoxylates used as Wetting/Dispersing Agent as well as a mixed agent in insecticides and weed killers.

(2) Market and Competition

a) Policy and Nature of Market

TEX has a policy to maintain and increase market share in Fatty Alcohol Ethoxylates in the domestic market while exporting them to overseas markets, Southeast Asia in particular, since this region is a production base for Home and Personal Care. It also aims to grow markets to other regions where competition is low with the lack of regional producers, including South Asia, the Middle East, and Africa.

b) Market Overview and Trends

2021 Market Overview

The Fatty Alcohol Ethoxylates market in 2021 commanded decent recovery from last year due to the COVID-19 pandemic, which catapulted demand for hygienic products despite the slow consumer market in the tourism sector. Yet, the overview is complicated by price competition with other South East Asia producers and impacts of external factors, including exchange rate volatility, transport of imbalanced stocks in each continent, and rising freight rates. These affected export as well as inventory management. Likewise, the volatile prices of natural Fatty Alcohols in late 2021 also affected cost management of the merchandise.

As far as the supply overview of 2021 is concerned, most producers of Fatty Alcohol Ethoxylates still ran their machinery at full steam to satisfy continuing demand all year long although some impacts might have been felt because of short supply of cargo containers and rising freight rates. Customers began to adjust their procurement of Fatty Alcohol Ethoxylates by mainly increasing the proportions of domestic feedstock to lower transport charges as well as risks of supply chain disruption, which caused import delays. Moreover, the demand for green products is still rising.

The price of Fatty Alcohol Ethoxylates this year continued to rise, moving in the USD 1,400-1,780 per ton band in line with the rising prices of feedstock.

2022 Market Trends

The overview market of Fatty Alcohol Ethoxylates are rooted from the demand of Fatty Alcohol Ethoxylates (FAEO) and Sodium Lauryl Ether Sulfate (SLES), major used in Home and Personal Care products. The overall Fatty Alcohol Ethoxylate market in 2022 is expected to grow by 3-4% from last year. Positive factors include the COVID-19 pandemic, underlying the healthy outlook for healthcare, hygiene, and demand for physical and household cleaning products and the opening of countries of extensive vaccination. The outcome is rising demand from the recovering hotel and tourism businesses together with economic recovery, which in turn raises demand for products in the industrial group, including fiber and paper industries. Moreover, the rising demand for natural/renewable feedstock will also drive demand for green products, especially in Home and Personal Care products.

To handle other external factors affecting market uncertainty, including volatile feedstock costs, product logistical problems, and forex fluctuation, GGC focuses on sales strategy modification to fit each customer group to lessen these risks.

(3) Procurement

Ethylene Oxide (EO) and Fatty Alcohols are major feedstock of Fatty Alcohol Ethoxylates. Fatty Alcohols are delivered through a pipeline from TFA's plant that is well connected with TEX's Fatty Alcohol Ethoxylates plant.

TEX partially imports Fatty Alcohols and purchases ethylene oxide from GC Glycol Company Limited, a subsidiary of GC, through a long-term purchase agreement. TEX has a nameplate capacity of 124,000 tons per year of Fatty Alcohol Ethoxylates for commercial operation.

1.2.3 Asset in Business

Key fixed assets of GGC and subsidiaries

As of December 31, 2021 Net Book Value in the company's financial statements is as follows

List of Asset	Type of Ownership	Net book value as of		
		December 31, 2020 (THB)	December 31, 2021 (THB)	Obligation (THB)
Plants, machinery, equipment, and plant apparatus Plants, Machinery, Factory tools and Equipment	Property of the entity	4,053,519,168	3,730,074,364	No Obligation
Buildings and buildings improvement	Property of the entity	360,307,082	320,538,776	No Obligation
Land improvement	Property of the entity	29,335,429	26,595,414	No Obligation
Furnitures, fixtures and office equipment	Property of the entity / leased assets	7,220,347	7,189,836	No Obligation
Vehicles	Property of the entity / leased assets	146,473	2,141,817	No Obligation
Assets under construction	Property of the entity	125,947,347	172,273,596	No Obligation
Total Net Book Value		4,576,475,846	4,258,813,803	

Leasehold

The list of leasehold of GGC and subsidiaries as of December 31, 2021 is as below.

- (1) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 27 rai 3 ngan 13.598 square wa, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (2) Title deed No. 123254 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 9 rai 3 ngan 43.9 square wa, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (3) Title deed No. 126435 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 28.70 square wa, owned by PTT Global Chemical Plc. Lease period of 16 years 7 months 15 days from December 17, 2019, to July 31, 2036. Location of Methyl Ester Plant 1.
- (4) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 27 rai 2 ngan, owned by Thai Eastern Industrial Land Company Limited. Lease period of 30 years from April 1, 2006, to March 31, 2046. Location of Methyl Ester Plant 2.
- (5) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 2 rai 2 ngan, owned by Thai Eastern Industrial Land Company Limited. Lease period of 30 years from March 1, 2018, to February 29, 2048. Location of Refined Glycerine Plant 2.
- (6) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 2 rai 86.402 square wa, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Fatty Alcohols Plant (TFA).

Other lease rights agreement as of December 31, 2021

- (1) One year lease agreement to rent the office building and common areas with Energy Complex Company Limited at No. 555/1 Energy Complex Building A, 4th Floor. The agreement covers 1,070 square metres and is effective from October 1, 2021 to September 30, 2022.
- (2) 3 years lease agreement to rent the office building with GC Estate Company Limited., at No. 888, 3rd Floor, Map Chalut – Laem Son Road, Tambon Huai Pong, Amphoe Mueang Rayong, Rayong. The agreement covers 750 square metres and is effective from September 1, 2020, to August 31, 2023.
- (3) 8 months land lease agreement with Pure Biodieset Company Limited at No.7/4, Pakorn Songkrohrad Road, Maptaphut, Amphoe Mueang Rayong, Rayong. The agreement covers 1 rai 4 ngan and is effective from April 1, 2021, to December 31, 2021.

Right of Use Assets

Right of Use Assets of GGC and subsidiaries as of 31 December 2021 is as follows:

Unit: THB

Right of Use Asset	Net value after cumulative amortization and provision for asset impairment
Land	164,517,872
Building	5,938,174
Plant, Machinery, Factory tools and Equipment	272,462,228
Furnitures, fixtures and office equipment	1,247,193
Vehicles	29,467,646
Total Net Book Value	473,597,113

Intangible Assets

Intangible Assets of GGC and subsidiaries as of 31 December 2021 is as follows:

Unit: THB

Intangible Asset	Net value after cumulative amortization and provision for asset impairment
Production process patent fees	22,700,078
Goodwill	33,527,418
Other intangible assets	10,587,019
Total Net Book Value	66,814,515

Trademarks and Service Marks

As of December 31, 2021, subsidiaries owned key trademarks for products are shown in the table below:

Trademarks/ Service marks	THAIOL	For industrial application of Fatty Alcohols
Country	Period	
Thailand	August 21, 2017 – August 21, 2027	
India	August 22, 2017 – August 22, 2027	
South Africa	September 7, 2017 – September 7, 2027	
Mexico	August 23, 2017 – August 23, 2027	
New Zealand	August 20, 2017 – August 20, 2027	
Indonesia	September 7, 2017 – September 7, 2027	
Malaysia	September 19, 2017 – September 19, 2027	
Venezuela	Under application for trademark renewal	
Chile	February 27, 2018 – February 27, 2028	
Philippines	March 10, 2018 – March 10, 2028	
Columbia	April 30, 2018 – April 30, 2028	
Argentina	Under application for trademark renewal	
Brazil	March 24, 2015 – March 24, 2025	
Canada	March 21, 2016 – March 21, 2025	

Trademarks/ Service marks		For application of Chemical Fertilizer (Potassium Sulfate)
Country	Period	
Thailand	September 23, 2019 – September 22, 2029	

Intellectual Property (IP) Rights

At present, GGC has yet to own intellectual property.

GGC signed a license agreement with UHDE GmbH (Uhde) which came into effect on September 7, 2006. According to the agreement, the Company's Methyl Ester plants will enjoy technology from Agrar Technik. GGC fully paid the license fee as mentioned in the agreement.

GGC signed an agreement with a Germany's leading technology company to license technology for Fatty Alcohols plant. The licensor, however, retains ownership of all inventions developed for related technology under this agreement while GGC has access to advanced production technology. However, these rights are considered as non-transferable and GGC is not the only company that has access to advanced production technology. GGC fully paid the license fee as mentioned in the agreement.

and GGC is not the only company that has access to advanced production technology. GGC fully paid the license fee as mentioned in the agreement.

Promotion Certificate Issuance

The Board of Investment (BOI) has issued promotion certificates to GGC and its subsidiaries and approved new promotional privileges such as a reduction in corporate income tax.

The list of promotion certificates that have been issued for GGC and its subsidiaries as of December 31, 2021 and are still effective is as follows:

No.	Project	Issuance date	Product and Production Capacity	Expiration Date	Noted
1.	Production of Methyl Ester, Fatty Alcohols, Glycerine, and Potassium Sulfate Certificate No. 1547(2)/2549	May 30, 2006	<ul style="list-style-type: none"> • Methyl Ester, about 384,000 tons/year • Fatty Alcohols, about 120,000 tons/year • Glycerine, about 38,400 tons/year • Potassium Sulfate, about 5,400 tons/year 	December 31, 2020	Former name: TOL
2.	Production of Biodiesel Certificate No. 59-1251-1-00-1-0	September 28, 2016	<ul style="list-style-type: none"> • Biodiesel or Methyl Ester, about 346,820,810 liters/year (300,000 tons/year) 	November 17, 2026	
3.	Refined Glycerine, Certificate Certificate No. 60-1232-1-18-1-0	October 10, 2017	<ul style="list-style-type: none"> • Refined Glycerine (99.5% purity or more), about 45,000 tons/year 	November 23, 2033	

No.	Project	Issuance date	Product and Production Capacity	Expiration Date	Noted
4.	Fatty Alcohols, Certificate No. 1068(2)/2550 (other chemicals)	January 31, 2007	<ul style="list-style-type: none"> Fractionated Fatty Alcohols, about 120,000 tons/year By-products (light-ends hydrocarbons, about 1,700 tons/year, and residue, about 1,250 tons/year) 	May 25, 2021	

Policy on investment in subsidiaries

GGC's policy is to invest in subsidiaries and associates that agree with its goals, vision, and strategic plans for its own growth and supports the businesses of downstream companies, or downstream businesses, or those with comparable nature, or those investing in synergistic undertakings with GGC to raise competitiveness and produce sound outcomes as well as long-term. GGC reviews new investments to be made by its subsidiaries and associated companies by probing investment viability as well as capability and investment risks. Such analysis must be made against GGC's investment screening process and secure approval of the Board of Directors or the shareholders, or both (as applicable). Pursuit of approval by these companies must align with the applicable announcements from the Notification of Capital Market Supervisory Board, and the Stock Exchange of Thailand (SET) Board.

For the governance policy of the Subsidiaries and Joint Venture, GGC delegates Executives as Managing Directors of Subsidiaries and Joint Venture companies. GGC Executives, meaning its vice presidents or above, also serve as Managing Directors of Subsidiaries and Joint Venture Companies. Through these actions, GGC takes part in the formulation of policies, proper and watertight internal control systems through oversight under the GGC Way of Conduct approach, has access to data, and periodically monitors these companies' operations as stewardship of GGC's investment funds against GGC's criteria. If any of these companies engages in businesses with significant involvement with GGC, such engagement must secure prior approval from Management Committee meetings or Board of Directors meetings, or both.

As of December 31, 2021, GGC commanded investment in the following table.

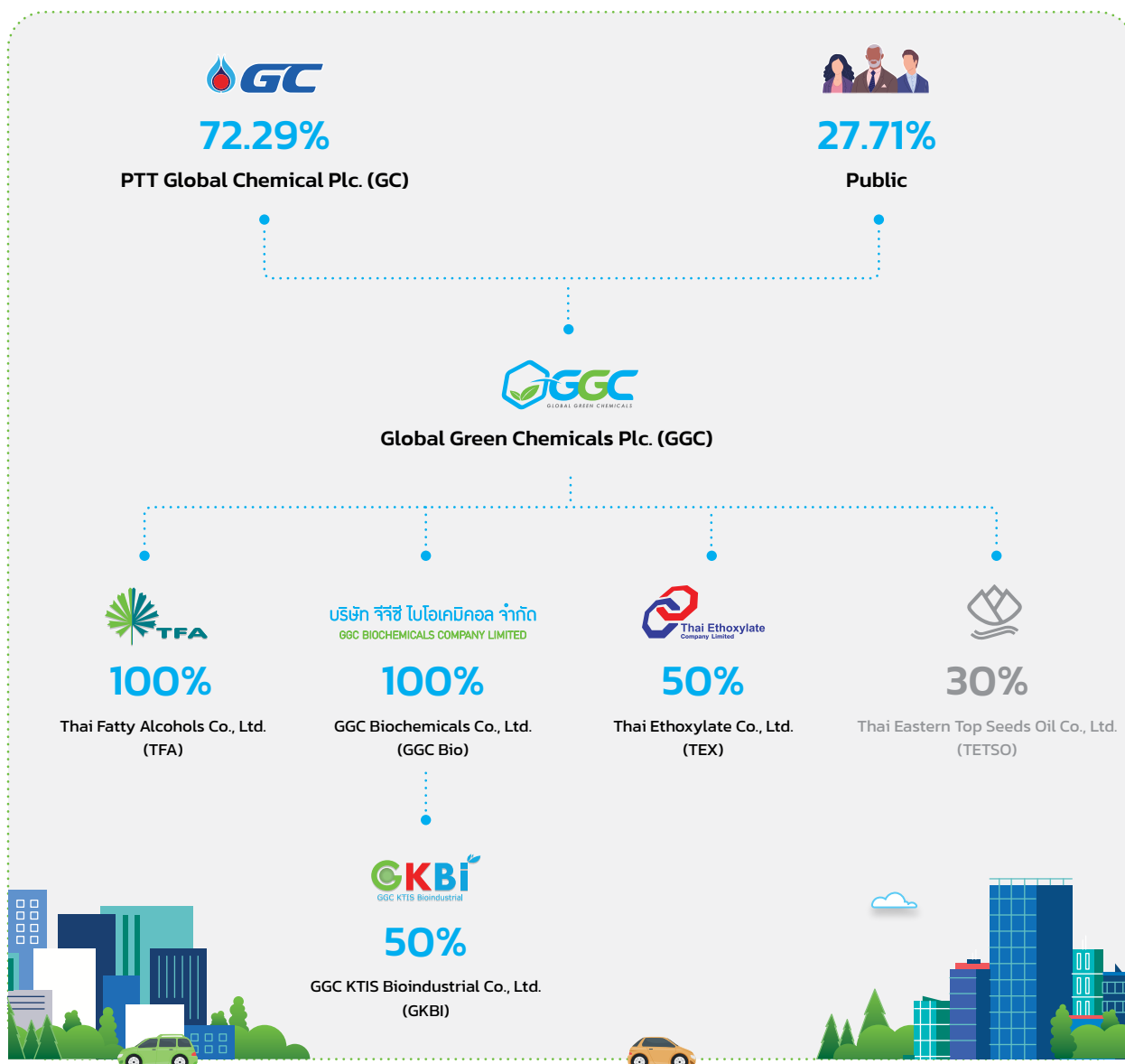
Company	Abbreviation	Business	Registered capital (THB million)	Paid-up capital (THB million)	Percentage of shareholding
Subsidiaries					
1. Thai Fatty Alcohols Company Limited	TFA	Production and sale of Fatty Alcohols products	1,060	1,060	100
2. GGC Biochemicals Company Limited	GGC Bio	Green Chemical Business	1,672.5	1,320.6	100
Associates					
3. Thai Eastern Top Seeds Oil Company Limited ⁽¹⁾	TETSO	Production and sale of palm kernel oil and other vegetable oil	222	222	30
Joint Venture					
4. Thai Ethoxylate Company Limited	TEX	Production and sale of Fatty Alcohol Ethoxylates	420	420	50
Indirect Joint Venture					
5. GGC KTIS Bio Industria Company Limited	GKBI	Chemical and Bioplastic product business	3,315	2,618.3	50 (through GGC Bio)

Remarks:

⁽¹⁾ On December 15, 2021, The Meeting of the Board of Directors has approved the Company's sale of ordinary shares in Thai Eastern Top Seeds Oil Company Limited, to Eastern Palm Oil Company Limited, on January 13, 2022.

1.3 Shareholding Structures of Group Companies

1.3.1 Shareholding Structures of Group Companies and Relationship with Major Shareholders



Note :

Subsidiaries

- Thai Fatty Alcohols Company Limited (TFA)
- GGC Biochemicals Company Limited (GGC Bio)

Joint

- Thai Eastern Top Seeds Oil Company Limited (TETSO)

On December 15, 2021, the Board approved the Company's sale of ordinary shares in Thai Eastern Top Seeds Oil Company Limited to Eastern Palm Oil Company Limited on January 13, 2022.

Joint Venture

- Thai Ethoxylate Company Limited (TEX) represents a joint venture formed by GGC and BASF (Thai) Company Limited

Indirect Joint Venture

- GGC KTIS Bioindustrial Company Limited (GKBI) represent a joint venture formed by GGC Bio and KTIS Bioethanol Company Limited (KTBE)

The chart below shows major relations between the Company and other companies under PTT Group with significant connection to the Company's main businesses as follow:



1.3.2 Shareholders

A list of ten major shareholders at the book closing date on March 1, 2021 is as follow.

No.	Name	Shareholding	Percentage
1.	PTT Global Chemical Plc	739,999,980	72.29
2.	Mr. Samroeng Manoonphol	54,195,900	5.29
3.	Ms. Pensri Ratanasuntrakul	14,199,400	1.39
4.	Mr. Songchai Atcharyahirunchai	8,200,000	0.80
5.	Bangkok Life Assurance Plc	7,306,600	0.71
6.	Thai NVDR Co., Ltd.	6,980,430	0.68
7.	Ms. Pornrat Atcharyahirunchai	4,500,000	0.44
8.	Muang Thai Life Assurance Plc	3,800,000	0.37
9.	Mr. Chavin Tangkaravakun	3,500,000	0.34
10.	Mr. Pairach Ammaruetchote	3,490,000	0.34

- As of March 1, 2021, the major shareholder with significantly influence on the establishment of GGC's policy and strategy is PTT Global Chemical Public Company Limited ("GC") which in total hold 72.29% in GGC.
- Foreign shareholders: As of March 1, 2021, GGC had a total of 22 foreign shareholders with a combined 9,857,200 shares, accounting for 0.96% of the paid-up capital.

1.4 Registered Capital and Paid-up Capital

As of December 31, 2021, GGC's registered capital amounted to THB 9,724,833,650, consisting of 1,023,666,700 ordinary shares at THB 9.50 per share. The paid-up portion amounted to THB 9,724,833,650.

Transfer Restrictions on Shares

GGC has foreign shareholding limitation as specified in the Company's Article of Association No.8 "GGC's shares can be transferred without any restriction, except in the case where the said transfer would result in more than 37% of the Company's total paid-up shares being held by foreigners."

1.5 Dividend Payment Policy

The Company's Dividend Payment Policy

The Board of Directors Meeting No.7/2015 held on September 25, 2015, resolved that the dividend payment policy of the Company is to pay dividend at the rate of no less than 30% of net profit after tax and allocation to all reserve funds of the Company. Such dividend payment however is subject to the investment plans, other necessities and appropriate considerations in the future.

Subsidiaries' Dividend Payment Policy

The dividend payment policy for GGC subsidiaries shall be considered and proposed by the Board of Directors of each subsidiary for approval at the Annual General Meeting (AGM) of each subsidiary. The dividend payment is based on the investment plans and other requirements and considerations, such as the adequacy of existing cash flow of each subsidiary after deducting reserve funds in accordance with the laws.

The record for dividend payment in previous years since being listed on the Stock Exchange of Thailand (SET).

Year	Dividend paid (THB/share)			Percentage of dividend paid to net profit	Net profit per share (THB/share)
	First half-year	Second half-year	Full year		
2017 ⁽¹⁾	0.15	0.20	0.35	69	0.56
2018 ⁽²⁾	-	-	-	-	(1.13)
2019 ⁽³⁾	0.15	0.20	0.35	56 ⁽⁴⁾	0.09
2020 ⁽⁵⁾	-	0.35	0.35	64	0.55
2021 ⁽⁶⁾	-	-	0.35	109	0.32

Remarks:

⁽¹⁾ Board Meeting No. 2/2018 of February 14, 2018, endorsed a proposal for the 2018 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2017 at THB 0.35 per share, to be divided into interim payment for first-half (January-June) performance of 2017 at THB 0.15 per share. This was paid out on September 7, 2017. For the second-half (July-December) performance of the same year, the rate was THB 0.20 per share, and the payment was made on April 25, 2018.

⁽²⁾ Board Meeting No. 3/2019 of February 18, 2019, endorsed a proposal for the 2019 AGM to approve suspension of dividends for the performance of GGC in 2018 due to an inventory incident causing a cumulative loss in its financial statements as of December 31, 2018.

⁽³⁾ Board Meeting No. 2/2020 of February 14, 2020, endorsed a proposal for the 2020 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2019 at THB 0.35 per share, to be divided into interim payment for first-half (January-June) performance of 2019 at THB 0.15 per share. This was paid out on October 9, 2019. For the second-half (July-December) performance of the same year, the rate was THB 0.20 per share, and the payment was made on April 23, 2020.

⁽⁴⁾ Based on the separate financial statements of 2019

⁽⁵⁾ Board Meeting No. 2/2021 of February 10, 2021, endorsed a proposal for the 2021 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2020 at THB 0.35 per share and the payment was made on April 21, 2021.

⁽⁶⁾ Board Meeting No. 2/2022 of February 11, 2022, endorsed a proposal for the 2022 AGM to approve dividend payment for the performance of GGC and subsidiaries in 2021 at THB 0.35 per share. Note that the dividend eligibility here is still uncertain until approval is given by the 2022 AGM.

2. Risk Management

2.1 Risk Policy and Risk Management

Risk Management

In 2021, Global Green Chemicals Public Company Limited (GGC) faced challenges posed by internal as well as external factors with severe socio-economic impacts resulting from the COVID-19 pandemic, which affected employees' safety, business continuity across the supply chain, product demand, market competition, as well as feedstock and product price volatility. However, with our risk management system and monitoring by the Enterprise Risk Management Committee (ERMC) and the Risk Management Committee (RMC), GGC has coped successfully. The COVID-19 Prevention and Control Committee is assigned to monitor the situation and devise preventive measures along with GC Group to suit each wave of infection ravaging our plants, major project construction sites, and Head Office in order to deal with these risks. GGC swiftly managed and coped through the Work from Home measure once COVID-19 returned, communicated measures and essential practices during the infection period, and procured vaccine for all personnel quickly. GGC has continued these measures strictly ever since the first wave for the safety of our employees and their families together with business continuity. The COVID-19 Prevention and Control Committee defined these key measures:

- Requiring production control building areas as a maximum control area
- Lockup measures for production operators to prevent and control infection for those close to production processes
- Measures and guidelines for travel, meeting, activity participation, training, and external contacts
- Proactive screening of employees and contractors for infection
- Strict measures on all employees' self-reporting through the COVID-19 reporting system to monitor their health and travel. GGC required Work from Home survey participation to ensure that employees can efficiently work from their residences.

For the impacts of volatile feedstock and product prices, Methyl Ester demand was dropped due to the COVID-19 situation and other uncertainties, including fierce market competition due to new producers, capacity growth of current producers, occasional feedstock shortages, soaring prices of palm kernel oil and crude palm oil, and the government policy driving public consumption of B10 (biodiesel) as Thailand's main grade replacing B7. In addition, the biodiesel formula was modified to B6 in October and B7 in December this year, resulting in Thailand's overall demand for Methyl Ester to drop to 4-5 million liters per day, well below the public sector's target of 7 million liters per day.

GGC has pursued new business opportunities and new markets, since the COVID-19 pandemic had also raised the demand for Fatty Alcohols in 2021, with rising demand for cleansing agents and hygienic products together with capacity growth of major antioxidant producers, which increase the market demand and the purchasing power in the Fatty Alcohols market.

GGC closely monitored the situation and assessed impacts on our performance weekly. Various measures were defined to lessen risks and potential impacts, including reduction of expenses and production costs, cooperation with GC Group and business partners to maintain market shares, build the customer relationship and satisfaction, review the project investment, adjusted production and sales plans to ward off price and margin risks, revision of the risk management framework for volatility of feedstock and product prices, improved inventory management and improved risk of exchange rate management in line with dynamic market situations. With the cooperation of all executives and employees, GGC efficiently coped with these challenges, illustrating its standard of risk management that had evolved and systematically as well as relentlessly improved across the corporation to lower risks or acquire business opportunities, or both, thus sharpening GGC's competitiveness as well as sustainable business operations.

GGC strives to manage risks and improve internal control in parallel with strategic management to enable business to proceed under the strategies and goals while under acceptable risk. Such management embraces risks concerning quality, security, safety, health, and the environment; compliance with laws, regulations, and operating manuals and anti-corruption as fair response to stakeholders. GGC drive all our employees to value systematic Enterprise Risk Management (ERM) by assessing operating risks in line with annual KPIs and corporate strategic plans. To this end, GGC command regular communication of risk management policies, principles, and guidelines to executives and employees to ensure that GGC can continuously run its businesses and that these tools support the corporation's consideration of potential impacts across the operating chain. To ensure that the risk management process is secure and able to efficiently manage risks, GGC appointed an Enterprise Risk Management Committee (ERMC) at the Board of Directors and at the Managements levels to collectively define responsible units to assess and manage risks. To elaborate and examine business circumstances embracing internal and external factors that could affect GGC's current businesses. Then conduct risk assessment in parallel with the formulation of strategic and investment plans together with business plans to enable business to align with annual short-term goals and long-term goals. Finally, applying mitigation measures to control risks at GGC's risk appetite.

Risk Management Standards

GGC required Enterprise Risk Management (ERM) as a key tool to support and drive GGC's operations toward short-term and long-term goals and require ERM as part of the process to define business strategies and goals by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), or ERM COSO (2017) and the International Organization for Standardization (ISO 31000:2018) including the Thai Corporate Governance Code for Listed Companies – 2017, and guidelines for anti-corruption and commitment to anti-corruption. GGC also secured the CAC membership status. In addition, GGC has linked an integrated ERM to the policies, laws, regulations, and operating standards embracing Governance, Risk Management and internal control, and Compliance (GRC) to prevent, lower the opportunities and ease the impacts of all risk factors across the corporation, thus allowing GGC to achieve its strategic objectives and key goals.

Risk Management Structure

GGC has implemented a risk management structure and divided it into three levels to establish connection in the risk management process. In 2021, GGC further improved this structure for greater capability as follows:

Risk Management Structure	
1. The Board of Directors Level	
Current Action	Additional Action in 2021
<p>The Risk Management Committee (RMC) was appointed to assume the following roles, duties, and responsibility:</p> <ul style="list-style-type: none"> • Represent the Board of Directors in commenting, advising, and reviewing ERM and the risk management framework in line with prevailing goals and situations. • Review the Risk Management Policy for GGC's application as guidelines for controlling and reminding employees to uniformly implement the process. 	<p>RMC Meeting No. 3/2021 of June 4, 2021, recommended driving GGC to group risk assessment for risks affecting short-term and long-term goals to promote clearer and more relevant assessment.</p>
2. Management Level	
Current Action	Additional Action in 2021
<p>Enterprise Risk Management Committee (ERMC) comprises the Managing Director (chairman) and top Executives of all departments, charged with the following roles, duties, and responsibility:</p> <ul style="list-style-type: none"> • Drive and define efficient guidelines for risk management. • Steer and monitor regular risk management actions. 	<p>ERMC meeting endorsed amendment of role and duty definition of risk owners and risk coordinators of Operational Excellence (OE) and Commercial Excellence (CE) for greater clarity and also required each function's risk champion to serve as coordinators jointly with Corporate Strategy and Internal Control.</p>
3. Departmental Level	
Current Action	Additional Action in 2021
<p>GGC took the following actions:</p> <ul style="list-style-type: none"> • Corporate Strategy and Internal Control, a unit under Corporate Strategy, and risk owners/coordinators jointly identified and assessed risks and defined mitigation plans together with key risk indicators. • Submit a monthly report to ERMC under the risk management structure. 	<p>Corporate Strategy and Internal Control encouraged all departments facing extreme risks to present their mitigation plans to ERMC monthly to report progress and continually track mitigation guidelines for individual risk factors which can control and manage corporate risk to be improved.</p>

For specific business risks, GGC decided on setting up the committees for greater flexibility of directly dealing with such risks more closely to track business circumstances, as detailed below:

- **Value Chain Management (VCM):** This panel endorses plans for marketing, feedstock purchasing, product distribution, inventory and company product management, hedging (price and spread), foreign-exchange rate (forex) risks under the RMC-endorsed risk management framework. Also, it monitors impacts of the economy, industries, and market volatility of related products.
- **Investment Committee (IC):** This panel steers and reviews individual investment for GGC Group and comments on the assessment of opportunities and impacts of investment in line with GGC's strategic and growth directions.
- **Other committees:** The Credit Committee manages risks concerning credit in dealing with customers and feedstock sellers, the GC Operation Excellence Committee manages risks concerning production stability and security and ensures compliance with laws, regulations, requirements, together with applicable standards for plants and the Safety, Health and Environment Committee manages pertinent risks.

In 2021, GGC continued to face challenges posed by COVID-19 pandemic that contributed to worldwide economic recession over from last year, together with uncertain energy policies of the public sector, and the policy on promotion of renewable energy, which affected product demand, prompting GGC to constantly improve the performance and mount mitigation plans.

For efficient risk management on these matters, GGC appointed committees to track efforts to cope with prevailing circumstances and enable quicker actions:

- The COVID-19 Prevention and Control Committee closely monitors the pandemic, defines mitigation plans to keep pace with dynamic circumstances, and defines work approaches to enable ongoing business and alignment with each unit's work plans.
- Monitoring of guidelines for handling contingencies requiring lower water consumption for production in industrial zones of Rayong and Chon Buri Provinces: Tracks drought around plants from the Industrial Estate Authority of Thailand (IEAT) or industrial zones and report to executives for strategic plan definition.
- Personal Data Protection Act (PDPA) Taskforce: To alert GGC's employees whose work is related to compilation of personal data of the significance of this law and proper guidance under the defined guidelines under the act, GGC has taken the following actions:
 - 1) Established a manual for employees' operation, namely manuals for Personal Data Protection Act (PDPA), for impact assessment on personal data protection, for management of petitions for exercising the rights of personal data owners, for dealing with infringements, and for leaking of personal data.
 - 2) Instituted a system for collecting personal data of each unit and instituted risk assessment in activities involving personal data collection.
 - 3) Organized knowledge-sharing activities for all together with unit representatives to prepare data related to GGC's personal data collection.

- 4) Required lessons for employees to review their understanding of the Personal Data Protection Act (PDPA) through GGC's channels.

Risk Management Tools and Monitoring

GGC apply assorted risk management tools in analyzing, assessing, and defining risk management frameworks, including defining risk appetite, assessment and ranking risks by means of risk maps, monitoring through mitigation plans, and Key Risk Indicators (KRIs).

GGC relentlessly monitor situations and trends of external risks against the early warning system under the PESTEL Analysis Framework, which could affect business over the short-terms and long-terms, that GGC may prepare proactive risk management measures ahead of business impacts. To this end, GGC analyzed and assessed risks to business from these seven components to come up with guidelines for identifying key risk factors for 2021:

- 1) **External factors:** These arise from monitoring and analysis from opportunity and risk analyses, made up of political, economic, social, technological, environmental, and legal & regulations.
- 2) **Strategic Focus:** GGC defined risk factors that match or pose obstacles to corporate strategies which have secured the Board of Directors's endorsement.
- 3) **Management Concern:** GGC collected risk issues obtained from the Board of Directors during its annual strategy meeting together with key issues valued by management as part of risk factor identification of 2021.
- 4) **Residual Risks of 2020:** GGC adopted these as ongoing key risk factors for 2021, namely price and spread volatility risk, sales volume risk, and plant reliability risk.
- 5) **Stakeholder Expectations:** These are concerns and recommendations emerging from the AGM, voiced by shareholders and investors at the meeting, screened and compiled as part of the risk factors of 2021.
- 6) **Policy/Standard/Regulation Change:** In 2021, GGC faced movements in relevant policies, standards, and regulations that could directly affect its operations:
 - **The government's 30@30 policy to promote EVs:** This refers to the policy of adding to the EV ratio of 30% by 2030 and accepting registration only for EVs by 2035.
 - **Accelerated Experiential Dynamic Psychotherapy (AEDP):** This reviews the plan to promote B10 biodiesel and E20 ethanol in support of the EV Car Policy.
 - Promulgation of the Oil Fund Act in 2024.
 - The Royal Gazette's publication of an act deferring the enforcement of the Personal Data Protection Act (PDPA) to May 2022, since its terms require technological work to systematize such protection.
- 7) **Existing Control Management:** All GGC Managements made their recommendations on the examination of risks related to other aspects of business to promote comprehensive risk assessment and internal control:
 - **Compliance:** GGC should undertake compliance assessment that embraces operating processes and do more to limit/segregate approvers' authority.

- **Project administration:** GGC should encourage definition of guidelines for key project management to embrace the entire operations and report progress updates against the approval of the Board of Directors.
- **Human Resource Development & Management:** GGC should encourage plans under these two aspects in support of current business and business under GGC's plans.

GGC also values emerging risks to prepare for the determination of mitigation plans and also monitors, assesses, and reports risk management outcomes to Enterprise Risk Management Committee (ERMC) monthly and to the Risk Management Committee (RMC) and the Board of Directors quarterly or with each critical event. ERMC and RMC were instruct the taskforces or directly responsible units to recommend mitigation plans if their risks are considered severe and significantly affects operations.

Risk Management Culture

GGC strive to promote Enterprise Risk Management (ERM) as a culture through six components (oversight, leadership, risk management structure, risk management techniques, communication, and enhanced understanding of risk management). To elaborate, GGC provide oversight by defining policies, objectives, acceptable risk, and risk management framework. Our risk management structure is comprehensive, with monitoring and regular reporting of management outcomes to Managements and the Board of Directors. In place are the revision and proper assignment of roles and guidelines for the Risk Management Committee (RMC), senior management, and those related to risk management, as are continual communication and education on assorted risk management practices. To this end, Corporate Risk Management and Internal Control serves as coordinator, communicator, and counsel on risk management guidelines to the risk owners and risk coordinators of each unit to drive the promotion of the risk management culture continuity and report the progress made in the risk assessment process to the ERMC monthly. Below are details of the progress made to date:

- **Risk management principles:** Regularly informed management and employees of the risk management policy, definition of risk management guidelines, and key risk management frameworks.
- **Cultivation of awareness:** Encouraged executives to be Tone from the Top in risk management and regularly stress to all employees awareness of risks in their own units.
- **Risk management tools:** Corporate Risk Management and Internal Control amended forms for reporting risk assessment for more convenience of assessment; grouped existing controls, mitigation plans, and Key Risk Indicators (KRI) for more clarity; and informed all related units about the guidelines for completing these forms for uniform practice.

In addition, we expanded our work on raising the efficiency of risk assessment and internal control by developing Risk and Control Self-Assessment (RCSA). To this end, RCSA training was provided by third-party experts to senior management and related employees. RCSA represents an operating officer's own assessment, in which employees identify and assess risks to the objectives of their work, assesses the sufficiency and suitability of risk management measures to satisfy the risk appetite and defines guidelines for improving the efficiency of internal control and monitoring the success of work plans. RCSA promotes awareness of operating risk management and lowers the likelihood of harmful events or uncertainties that could compromise goal achievement.

2.2 Risk Factors

GGC has determined external and internal factors that could affect business operations, embracing political, economic, social, technology, environment, and law aspects. Below are risks factors that could compromise corporate goals, performance outcomes, and strategies in 2021:

2.2.1 Sales and Marketing Risks

GGC has relentlessly enhanced the competitiveness of current overall business. Under volatile markets due to the COVID-19 pandemic, volatile feedstock prices, and the outlook of the government's EV policy, GGC needs to elevate its business in support of the core business's strength and flexibility simultaneously. To this end, GGC has defined a strategy of growing the domestic markets and sales to target customer groups along with the strategy of market development and extending products to high-value products embracing Biofuels and Biochemicals. Amid product diversity and market competition, GGC assigned the Value Chain Management (VCM) Committee to supervise and define a scope for feedstock purchase prices and product selling prices as well as monitoring the price situations for feedstock and products, surveying demand and supply weekly, and amending guidelines and choices of feedstock in line with production. GGC considered using alternative feedstock with suitable costs in the processes to retain attractive product to feed margins in line with its own production lines. It has also instituted a risk management process for each product line as follows:

1) Methyl Ester (ME)

GGC is likely to face risks of price competition with new players in the market together with lower demand for biodiesel as a result of the government policy to promote B10 is not fully supported, repercussions of the COVID-19 pandemic, and curbs on travel, which impede Methyl Ester consumption. GGC has set sales price for domestic Methyl Ester in line with the weekly announcement of the Energy Policy and Planning Office (EPPO). The price is linked to reference prices of domestic feedstock such as crude palm oil, Refined Bleached Deodorized (RBD) palm oil and palm stearin announced by the Department of Internal Trade (DIT) and is used as a reference price for feedstock pricing negotiation. GGC is thus exposed to risks of volatile feedstock prices.

Mitigation plan on price volatility and ME sales volumes

- VCM supervises and defines price bands for buying feedstock and selling products, monitors price movement of feedstock and products, demand, supply weekly, and considers using alternative feedstock with suitable costs in GGC's processes.
- Negotiate for comprehensive agreements on commercial terms with customers (short term and long term)
- Create value for B100 by growing its market to the green chemical market and pursue opportunities for developing new businesses
- Investigate the viability of exporting B100 when its cost becomes competitive and cooperate with GGC group and GGC's business partners in seeking marketing channels.
- Projection at least one quarter ahead, product sales volumes and monitor the volume of domestic crude palm oil in support of flexible sales administration.

2) Fatty Alcohols (FA)

The risk factors of the FA product line still concern competition with new players in the market as well as socio-economic conditions and events of 2021, as same as in risk factors of ME. To maintain its competitiveness amid market and product sales volatility, GGC defined the following mitigation plan to preserve its competitive edge going forward as seen below:

Mitigation plan for selling price volatility and FA sales volumes

- Engage in long-term FA sales contracts with key customers and raise domestic sales proportions.
- Define FA price control measures by using back-to-back costs to prevent price risks and potential product-to-feed margins (P2F). Also, monitor P2F of FA products against plan and report monthly progress to ERM meeting.
- With Business and Product Development, develop Home and Personal Care platform (HPC platform) to identify opportunities for developing new businesses to continually grow FA product values
- Evolve marketing activities to enhance customer relationship and their confidence.

2.2.2 Supply Chain Management Risks

Volatility in the prices of natural feedstock (palm oil and palm kernel oil) represents key factors significantly affecting our bottom line. GGC also rely on the public sector's announced prices and reference made to the domestic stocks, which are beyond our control. Then there is the climate factor that poses a key risk that could affect feedstock volumes.

Having assessed these risks, GGC defined efficient initial control guidelines for supply chain management, consisting of feedstock management and logistics & warehouse management, described below:

1) Feedstock Management

2.1.1 Feedstock Selection: GGC select process feedstock by defining decision mechanisms with a program that collects data from various agencies in the hope of developing an optimal feedstock selection process.

GGC also prepared a model by studying factors affecting domestic palm oil prices (reference prices of the Department of Internal Trade) and Malaysian Palm Oil Board (MPOB) for our assessment and most appropriate projection to support our planning.

2.1.2 Feedstock purchase: GGC raised the proportion of long-term feedstock purchase contracts with suppliers that provided discounts and had a track record of supplying quality oil. In 2021, GGC received discounts for buying and supplying raw palm oil and refined palm oil under one-year contracts that proved better than spot purchases, GGC also benefited from efficient feedstock management across the entire supply chain and joined GC Group in developing a work process for feedstock procurement and transport timetables by applying automatic programs or systems.

2) Logistics and Warehouse Management

- 2.2.1 Control of feedstock purchase volumes:** GGC apply the SAP system to control these volumes in keeping with the individual ratings of business partners approved by the Credit Committee.
- 2.2.2 Logistics Management:** GGC plan to develop a new, suitable logistics plan in 2023 after conclusion of the tank leasing and transport tanker contracts; GGC will also modify the use of tanks in our plants to reduce the rent of outside tanks.
- 2.2.3 Warehouse Management:** With GC Logistics Company Limited, GGC collaborated under the Map Ta Phut (MTP) Integration Project to improve the internal warehouse and reduce the use of external warehouses by studying the use of automation to give our processes higher efficiency.

To maintain competitiveness, sufficient supply of feedstock at reasonable prices is crucial for the Company, so it has outlined the following plan to deal with feedstock price and volume risks, as detailed below:

Mitigation plan for volatility of feedstock prices and volumes

- Report the inventory framework to Risk Management Committee (RMC) quarterly and seek its endorsement of improvement in line with the current situation if GGC is to face risks arising from the inventory, which would in turn affect its performance.
- Appoint Value Chain Management (VCM) Committee to oversee raw material prices, feedstock procurement, and inventory management together with close monitoring of economic and industrial volatility under the risk management framework approved by RMC.
- Revise the inventory risk management framework embracing feedstock and product volumes in line with sales plans, lower inventory volumes, and require monitoring of outcomes as well as revising such framework in line with current circumstances.
- Develop long-term contracts for trading palm oil and palm kernel oil to cushion the risk of feedstock price volatility.

2.2.3 Operating Efficiency and Reliability and Machinery Operation Risks

GGC continually maintain plant reliability by implementing the Plant Reliability Master Plan in developing and improving processes to maximize our process stability and efficiency while paying attention to quality products and engaging in operational excellence under GC Group's guidelines. GGC also apply Process Safety Management at our sites and strictly complied with our safety, security, health, and environment policy to ensure that process operation can proceed uninterrupted, most efficiently, and most safely. In addition, GGC has defined an additional mitigation plan to ward off risk severity potentially facing GGC as detailed below:

Mitigation plan to lower severity during machinery operation

- **Require Reliability & Asset Management (RAI):** Develop the employees skills and define a development plan for maintenance teams to become maintenance experts and review machinery importance as well as machinery maintenance plans to lower the likelihood of key equipment damage from operation. Define plans and prepare equipment and spare parts to fit their application, define key process machinery, and install backup power generators. Schedule equipment or machinery maintenance to prevent key

equipment from damage before time. Finally, define emergency procedures for the key equipment and process units.

- **Process Efficiency Control:** Control production costs for competitiveness and introduce digital technology and data analytics in the analysis of machine operation for more efficient process control.
- **Cultivation of Safety Awareness:** GGC still cultivates safety awareness and continually strengthens the management of essential standard systems for all process personnel. These consist of Process Safety Management (PSM), definition of plans to reduce process energy consumption, promotion of safe work discipline, and waste reduction planning.

2.2.4 Safety Risks

GGC values operation and safety across its chain of operation. It applies the Operational Excellence Management System (OEMS), which focuses on Process Safety Management (PSM), as standards for operation in its plants together with compliance with the policy on safety, security, health and environment. It cultivates awareness of the safety culture among employees and contractors. It also requires various tools to constantly drive the cultivation of the culture, including 5S activities, Safety Committee meetings to report safety progress made monthly, reports on accident risks, regular Safety Walk Operation activities, and definition of safety standards and processes.

Still, accidents or incidents could happen anytime, with the tendency of severity potentially hurting GGC's image and safety goals. GGC therefore defines the following mitigation plan:

Mitigation plan to lower unsafe incidents

- Require Operational Discipline training to educate employees and contractors before their entry to sites
- Develop the One Supervisor One Project to promote the B-CAREs Project, which aligns with GC Group's guidelines
- Promote additional cultivation of the safety culture by ensuring process safety awareness through Field Risk Assessment (FRA) to help operators identify anomalies or deviations from design standards to in turn help GGC prevent severe accidents more comprehensively.

2.2.5 Exchange Rate Risks

Apart from risks on sale and marketing and those on managing inventory and logistics, exchange rate risks represent another key risk to GGC's performance, since GGC still exports its products that need reference for trading in USD, thus exposing GGC to risks of exchange rate and THB currency volatility. GGC therefore defines a mitigation plan to lower impacts and the likelihood of facing such volatility:

Mitigation plan to lower forex risk severity

- Enter contracts by using financial tools of commercial banks, including Forward Contracts or Options to manage exchange rate in 2021 at rates no less than the budget rate or tolerance rate.
- Manage income and expenses in the form of natural hedge in the USD currency, to establish natural hedge.

- Search for commercial banks' tools to ward off exchange rate risks.
- Sell USD currency invoices forward to obtain higher exchange rates by entering into the sell USD currency in advance at a higher exchange rate in the statement. To reduce the impact of foreign exchange in the profit/loss statement of the company.
- Track market situations closely to anticipate exchange rate trends for engagement in timely hedging.

Besides, GGC requires reporting on risk management for exchange rate to Risk Management Committee (RMC) regularly or, during highly volatile times, reporting to seek approval of risk management frameworks of exchange rates that suit GGC's operations.

2.2.6 Risks of COVID-19 pandemic impacts

These risks arose from the COVID-19 pandemic and its impacts on worldwide economies since 2020. GGC's operations consist of process activities together with imports and exports of feedstock and products, and its key project implementation calls for foreign expertise. Employees or coordinators could get infected with the virus, thus causing business disruptions. To cope with such impacts, GGC has laid down the plan below.

Mitigation plan for business continuity

- Formed a Business Continuity Plan (BCP) taskforce and appointed the COVID-19 Prevention and Control committee to define preventive measures, track situations, and modify work processes for plan execution; communicated for compliance across the organization.
- GGC implemented the BCP measures to prevent the spread of the virus, covering three periods (1) Before the event or normal period (2) Criteria for BCP rollout and (3) During the event. To address the incident and lower business impacts. Disease prevention and control have continually followed GC Group's measures.
- Defined Lock Up measures to guide avoidance of infection for those serving in process areas and production control rooms; appropriately divided the workforce into those working at the office and those Work from Home.
- Screened employees and contractors serving at its Rayong and Chon Buri plants by using the Rapid Test method. Those testing positive for COVID-19 were retested with the RT-PCR method.
- Defined guidelines for re-entering risky sites for returning to business under the Ministry of Public Health's or GGC's measures by sanitizing infected areas under standards. Then GGC can confirm production and sales plans with customers and business partners together with plans for delivery of goods and communication with internal and external stakeholders to reaffirm GGC's readiness to resume business.

Mitigation plan to lower COVID-19 infection for the employees

- During periods of extremely severe infection Work from Home without affecting GGC's business and required the workforce to strictly comply with anti-infection guidelines.
- Supplied essential protective equipment, including hygienic masks, alcohol spray, sanitizer gel, and thermometers to all employees for daily temperature reports. Distributed Antigen Test Kits (ATK) so that

they may detect infection by themselves. GGC required online reporting on the first and the 16th of each month.

- In case of GGC's emergency, managed employee groups by level and likelihood of contacts by GGC Group's criterion, including preparation for manpower and critical equipment to handle emergencies.
- Constantly communicated policies, regulations, and best practices to employees; set efficient preventive measures for those coming into contact with GGC, including customers, business partners, and contractors.
- Stressed to employees avoidance of meeting others and supported online activities for risk prevention if they rely on attendance by many.

2.2.7 Risks of Cyber Attacks and Data Security

During the months and years of the COVID-19 pandemic, one encountered a rising number of users of technology and operation support tools, which was also the dawn of risks for theft and cyber threats. In addition, internationally the frequency of data theft is on the rise.

In view of such increasing frequency, GGC has defined Information and Communication Technology (ICT) as part of its corporate governance approach. Employees are responsible for safeguarding and ensuring that the information system and key data of GGC Group are not compromised among unrelated parties. To this end, GGC has assessed risks from such threats through every channel to control and prevent leaks of key data.

1) Mitigation plan for Risks of Cyber Attacks

- Educate managements and employees on Cybersecurity through GGC IT News
- Organize Cybersecurity Online training for managements and employees, monitoring training attendance and stressing the preparation of Cybersecurity understanding assessment to cover the entire company
- Assess understanding of Cybersecurity for the first year through preparation of Phishing Test assessment; GGC required that employees pass the 70% criterion
- Inform managements and employees to push the Phishing button through assorted channels, including company Email, LINE application, and meetings of the HR and corporate support units that are responsible for the stewardship of GGC's Cybersecurity system.
- Link Cybersecurity awareness among executives and other employees to GGC's core culture through communication from Culture Change Agents of each unit.
- Cooperate with GC Group in developing an IT security management system of international standard; track measures of the public sector, laws, and applicable regulations; stage drills on cyber-threats and retrieval of information systems; and regularly assess the efficiency of the cyber-threat security system.

2) Mitigation plan for Risk of Data Security

- Appoint a taskforce under the Personal Data Protection Act (PDPA) to develop plans, guidelines, and approaches for proceeding with GGC's personal data work in line with the act.

- Communicate, train, and educate employees on their preparedness to comply with GGC's manual, guidelines, and plans to accommodate the act.
- Audit the process and store compliance data.
- Develop an IT security system to restrict users and assign those with data access.
- Appoint an officer in charge of personal data protection as required by the law and report on compliance to management

2.2.8 Risks of Implementing Projects

Following the definition of goals and long-term strategies, of which GGC sought endorsement from the Board of Directors at the 2021 strategy meeting, the Home and Personal Care platform (HPC) business development represents a critical strategy for the extension of Fatty Alcohol to downstream household products. Also, in extending to the biochemicals business under the Bio-Succinic Acid (BSA) Project, whereby GGC commands a strategic plan to grow the business into BSA biochemicals, a key feedstock for bioplastics, GGC may face obstacles to the implementation of the plan as seen below:

1) Risks facing extension of Fatty Alcohol to Home and Personal Care platform (HPC)

In 2021, GGC analyzed various factors on market data and business models to enter the HPC market and define an initial mitigation plan to ward off risks and obstacles, which consist of:

- 1) Require information exchange embracing marketing and technical aspects between GGC, GC Group, and third-party experts
- 2) Pursue data on high-potential business partners from various channels containing accurate and credible data; the choice is to be made on those with aligned strategies and HPC growth
- 3) Organize knowledge sharing for the HPC team with the support of experts under GC Group

To give risk prevention even higher efficiency, GGC jointly defined a mitigation plan to lower the likelihood of failure to achieve the project goals:

Mitigation plan for risk of the ability to develop the HPC Project

- Monitor and manage project implementation with cooperation among GGC's taskforce and GC Group, including hiring third-party consultants and experts
- Appoint a capable taskforce to coordinate and resolve problems faster and jointly develop products extending GGC's business toward the HPC market
- Conduct an in-depth market study through pre-marketing to obtain detailed data from customers before future commercial sale
- Pursue additional data on business partners by hiring experts or consultants; coordinate with GC Group to shortlist capable business partners, hire consultants to identify M&A opportunities, and choose technologies in support of more investment

- Compile knowledge from third-party experts outside GC Group on sale, marketing, and business development and consider hiring specialized consultants annually to support GGC.

2) Risks facing business extension to Biochemicals under the Bio-Succinic Acid (BSA) Project

In proceeding with the BSA Project, which represents growth in a new business, GGC may face risk factors on technological preparedness, thus mismatching customers' needs, as well as risks of growing product volumes amid commercial production expansion. GGC therefore defined an initial control process by acquiring data on in-depth properties of BSA along with various requirements to serve as bench-scale test data to produce BSA matching customers' needs. In addition, GGC has defined a mitigation plan to reduce obstacles to uninterrupted operations as detailed below:

Mitigation plan for risk concerning the ability to develop the BSA Project

- Proceed with Bench-Scale process testing, whereby the obtained samples must undergo property testing by customers and can lead to standard products
- Leverage process data from plants where similar products are made to complement GGC's investigation of capacity growth
- Organize workshop with technology developers and GC Group to look at technology options, investment models, and other matters dealing with the project
- Study restrictions under laws and regulations concerning preparation if licenses are needed.

2.2.9 Emerging Risk

1) Risk of EV Technology

At present, the earth is continually facing climate change resulting from Carbon Dioxide (CO₂) emissions accompanying booming technologies and industries worldwide, with unescapable impacts on lives and the environment. Superpowers worldwide have now become alert for this problem and now set Net-Zero Emission goals by 2050. They have collectively defined guidelines for restructuring global energy consumption to serve as a mitigation plan for this problem.

In the meantime, Thailand has announced its intention to elevate solution to this problem for Carbon Neutrality by 2050 and the Net-Zero Carbon status by 2065. The EV Board has defined a policy to promote EVs under the 30@30 policy of manufacturing Zero-Emission Vehicles (ZEVs) accounting for at least 30% of all automotive manufacturing by 2030, regarded as a tool for Thailand's approach to a future Low-Carbon Society. It is projected that during 2027-2032, EVs will expand in the Thai market, thus depressing consumption of diesel and gasoline. GGC has closely monitored the plan to promote and develop alternative energy to adjust its plans to align with the national EV policy from the former plan (AEDP 2018), under which Ethanol demand was to be 7.5 million liters per day and B100 demand, 8 million liters per day by 2037.

In the face of these challenges, future replacement by EVs will zero in on light-duty and medium-duty vehicles, including passenger cars and pickup vans, but exclude those used for long-distance hauls, which call for Internal Combustion Engines (ICEs) and, as a rule, B7, B10, and B20 fuels, including Heavy-Duty Vehicles. This is

due to limitations of the EV Technology that prohibit longer work lives of charged electricity per charging. It also represents an opportunity for GGC to develop and extend to today's Biochemical products, turning them into more energy transition to in turn serve as a key to future reduction of greenhouse gas emissions in the transport sector. Still, to proceed with business uninterrupted while staying poised for Business Disruption due to Energy Transition and faster advent of the EV Technology, GGC has defined an additional mitigation plan for this period of change in energy consumption:

Mitigation plan for risks of oil demand amid EV industrial development

- Closely monitor the Alternative Energy Development Plan (AEDP) for amendment to align with the national EV policy from AEDP 2018 (2018-2037)
- Join hands with business partners in studying and developing the domestic market to sustain future investment and identify suitable technology for project investment in advanced biofuels, including Bio-Hydrogenated Diesel (BHD), Bio-Jet, and Bio-Naphtha
- Study marketing data in conjunction with GC Group to identify marketing opportunities and seek suitable technology for the project on extension of ethanol's value, including Bio-Ethylene and Pharma-grade Ethanol—and extension to Food & Nutraceutical products
- Jointly investigate with business partners and technology licensors the expansion to Bioplastics based on Biochemical feedstock
- Study and extend the Oleochemical business toward downstream products via the higher-value Home and Personal Care (HPC) product group.

Besides risk management and mitigation plan formulation to align with these key risk factors, GGC complies with the recommendations of Thai Private Sector Collective Action Coalition against Corruption (CAC), of which it has secured membership renewal, by driving agencies coordinating with GGC or related to its activities with the public sector to review existing control efficiency, assess corruption risks, and define additional mitigation plans for higher risks. These activities include application for licenses, application for investment promotion privileges, Environmental Impact Assessment (EIA), and contact with the Customs Department for product export.

GGC's belief that implementation under these guidelines for risk management and mitigation plans will ease various risks while enhancing business opportunities for sustainable growth. GGC also would achieve goals as envisaged by its business directions and strategic plans.

3. Driving Business toward Sustainability

3.1 Sustainability Policies and Targets

Sustainability Management Policy

GGC is committed to operating its business under sustainable development guidelines to become a Leading Green Flagship Company in the Biochemicals business by building trust among stakeholders through operational excellence, transparency, fairness, and continuous innovation development. Through its sustainability management framework,

the guidelines align GGC Group with international standards. GGC's operating policies are as follows:

1. To comply with applicable laws and regulations of each country in which it operates and respect international practices.
2. To maintain economic, social, environmental balance together with the expectations of all stakeholders in operating for sustainable growth.
3. To raise awareness of GGC Group's sustainability management policies among partners, customers, and consumers and promote application of sustainable practices to enhance and reduce the impact of operations throughout the value chain.
4. To continually promote the development of innovative production processes and products for sustainable benefit to society and the environment.
5. To adhere to the principles of being a good corporate citizen and rely on the knowledge, expertise, and experience of GGC Group to participate in enhancing the quality of life of society.
6. To transparently disclose policies, management approaches, and operation outcomes, and be a role model in creating behaviors that lead to a sustainable business culture.

The executives and all employees of GGC Group are to support, drive and comply with the established sustainability policies and framework.

Sustainability Development Strategy

As a Leading Green Chemical Company, GGC has driven its organization to achieve its vision of Sustainability Development (SD), which is in line with the United Nations Sustainable Development Goals (UN SDGs), covering Economic, Social, and Environmental Aspects. The goal is to foster confidence in sustainable business growth, create value, and raise business standards to be accepted both domestically and internationally.

GGC has established Sustainability Development Strategy in 4 ways as below:

1. To be a model for holistic economic development in three dimensions. (BCG Role Model)
2. To engage in non-carbonizing energy consumption. (Decarbonization Pathway)
3. To adjust GGC's Corporate Social Responsibility (CSR) operation model to create business balance within the organization by developing sustainable social responsibility activities and projects. (CSV & SE Model)
4. To be a Sustainable Company.

Corporate Social Responsibility Strategy (CSR Strategy) GGC has a corporate social responsibility management strategy, namely the “3 Big Moves Strategy”, which focuses on expanding operational awareness to stakeholders, expanding corporate social responsibility ability, as well as fostering confidence in corporate social responsibility implementation among all stakeholders. GGC has appointed a committee to supervise the implementation of sustainable development, responsible for directing policies, strategies and action plans for sustainability covering the implementation of corporate social responsibility in line with the international sustainability standard guidelines, both local and international, as well as the Company's development plans.



Corporate Social Responsibility Strategy (CSR Strategy)



3.2 Supply Chain Management

3.2.1 Supply Chain Management

Running a sustainable business requires efficient supply chain management, which takes into account of Environmental, Social and Governance aspects to reduce risks that may occur throughout the supply chain, such as feedstock shortages, fluctuating feedstock prices, changes in customer behavior and demand for products and services. Therefore, GGC is committed to supply chain management. Supply chain covers upstream activities, including managing suppliers and business partners, to downstream activities including service, product delivery, and creating customer satisfaction to achieve GGC’s goals, which are to be transparent and fair in managing suppliers and business partners and to make a difference in products and services to efficiently meet customers’ needs in a relevant way.

Main Stakeholder	Actions to Response to Stakeholder's Requirements	Performance Targets
 Supplier / Business Partner	<ul style="list-style-type: none"> • Select, Register, Manage, and Follow up suppliers' performance results in a transparent and fair manner. • Apply the ESG criteria to select suppliers and business partners. • Communicate GGC's Code of Conduct to suppliers and business partners. 	<ul style="list-style-type: none"> • There must be an ESG audit for 1st Tier Suppliers. • Critical suppliers must comply with GGC's Code of Conduct.
 Customer	<ul style="list-style-type: none"> • Evaluate customers' expectations and satisfaction. • Develop and improve products and services to meet customers' needs. • Communicate GGC's Code of Conduct to customers. 	<ul style="list-style-type: none"> • Ensure sufficient product quality and 100% correct specifications according to their requirements • Ensure product deliveries to be 100% on time.

3.2.2 Supplier Management

GGC manages suppliers in an efficient, transparent, and systematic manner. To this end, GGC has established a Value Chain Management (VCM) Committee, whose main duty is to evaluate and screen business partners, as well as purchase, procure feedstock, and sell products for fairness and equality in order distributions to different trading partners. Furthermore, GGC holds weekly Value Chain Meetings to discuss operations and analyze its performances and problems as well as factors affecting customer satisfaction. GGC adheres to the Business Code of Conduct Handbook as the basis for selecting partners and evaluating the performance of suppliers to ensure that the operations of suppliers comply with our code of conduct.

Business Partner Selection and Registration

GGC Credit Rating Committee is required to select and register business partners by taking into account their operations in terms of technical operations, quality, occupational health & safety, environment, finance, and social responsibility. The selected partners enter the Vendor Master system and will continue to be registered on the Approved Vendor List. GGC divides suppliers into three groups: Feedstock suppliers, Non-feedstock suppliers, and Other service suppliers.

In addition to select and register business partners, GGC also conducts annual performance assessments of suppliers to monitor their operational efficiency of trading partner using five criterias of evaluation: (1) Ability to deliver feedstock and services, (2) Industry Situation, (3) Flexibility and Bargaining power, (4) Competitiveness, and (5) Aspect of accounting, finance, and others.

GGC has continued to support the Round Table for Sustainable Palm Oil (RSPO) to meet the customers' needs who have realized the importance of purchasing raw materials with social, economic and environmental responsibility.

3.3 Sustainability Management in Environmental Dimension

The Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy

GGC strives to be a leader in the chemical industry as well as an innovative and community and socially responsible organization. GGC mission is to develop the effectiveness of Quality, Security, Safety, Occupational Health, Environment, and Business continuity (QSHEB) as the following:

- Compliance with laws and regulations concerning Quality, Security, Safety, Occupational Health, Environment, and Business continuity as well as applicable standards, rules, and requirements.
- Managing quality throughout the organization by applying quality and knowledge management tools and productivity tools to meet customers' needs and develop environmentally friendly innovations.
- Managing risk to prevent threats, occupational illnesses, accidental losses, injuries, property damage, and building the B-CAREs safety culture along with Process Safety Management (PSM) to secure everyone's safety.
- Awareness of security threats and define emergency management plans to preserve lives, properties, and business continuity.
- Paying attention to occupational health and good work environment to promote well-being and happiness workplace.
- Assessing and preventing impacts on the environment and ecosystem, as well as maintaining biodiversity by managing integration of environment, namely energy, air and waste management, and efficient, sustainable resource consumption (Circular Economy) as well as maintaining efficiency of GHG reduction and ability to adapt to climate change. Also, GGC is keen on promoting an environmental culture by supporting all employees' and stakeholders' awareness and participation in the corporate environmental culture.

All Managements are responsible to drive the business to meet corporate target achievements as well as being as role models in developing and maintaining GGC's quality, security, safety, occupational health, environment, and business continuity system by providing sufficient resources for all employees to participate in policy implementation. GGC is also responsible for communicating QSHEB results to all related stakeholders.

Safety, Health, and Environmental Management (SHE Management)

GGC has set a policy for managing Safety, Occupational Health, and Environment (SHE) through the Operational Excellence Management System (OEMS) to develop personal safety and process safety comprehensively and continuously, along with forging confidence among stakeholders in our performance.

In addition, GGC has formulated a SHE 5-year Plan (2020 - 2024) that integrated operations with international safety standards. It focuses on occupational health and safety in three areas, including personal safety, process safety, and off the job safety.

Moreover, GGC also supports employees to be trained by Knowledge Sharing courses; Safety Orientation for new comer course, Refresh SHE Procedure course, and Basis fire fighting course, etc. Also, GGC keeps operating under the International Organization for Standardization (ISO 14001).

Safety, Occupational, Health, and Environment (SHE) Strategy



Moreover, GGC has established a SHE Steering Committee to supervise the Safety, Health and Environment (SHE) standards of our operations in order to meet international standards and achieve the goal of being a Zero-Accident Organization.

The Duties of the SHE Steering Committee

The Duties of the SHE Steering Committee

- | | | |
|---|--|--|
|  |  |  |
| <p>1. Define and review policies, targets, and plans of SHE</p> | <p>2. Supervise, support, and monitor SHE performance of related divisions in order to operate in accordance with international standards and our policy</p> | <p>3. Consider, approve and announce the SHE guideline and processes related to our operations</p> |
|  |  |  |
| <p>4. Arrange meetings at least 6 times a year</p> | <p>5. Participate at least half of the committees</p> | <p>6. Appoint a subcommittee of working group</p> |

Personal Safety

GGC aims to foster a culture of safety to raise awareness of personal safety, covering employees, contractors, and related parties through various projects such as the Safety Walk Observation (SWO) and the Understand Risk Project.

Safety Walk Observation (SWO) Project

GGC has continued running the SWO project since 2013 to create a culture of safety within the organization by encouraging vice presidents to lead a team to observe the behaviors of all employees and contractors in the production process with an observation walk to explore risky activities and behaviors, which includes different machinery and equipment safety at plant for five days a week for 15 minutes each day. The team records information and joins in the discussion of behaviors that may cause risk within the work area. The survey team may pay compliments when a safe environment is found or provide warnings for unsafe acts. The teams are to provide monthly reports during the meetings of the Safety Committee.

Understand Risk Project

GGC has established the Understand Risk Project to promote knowledge and understanding of work safety and risks for operators and contractors through discussions of their understanding and ability to identify risks associated with their operations and to explain and identify correct and incorrect steps that prevent those risks when it found that the operators have insufficient knowledge and understanding of identifying risks and prevention, GGC will continue to provide additional training on how to prevent risks appropriately. Through the implementation of the project, it was found that employees had been aware of work risks and safety.

One Supervisor One BCAREs Project

GGC has established the One Supervisor One BCAREs Project to promote participation in providing a safe work environment among operators themselves, who are more aware of their own needs and problems on safety and are able to create a Safety in Line Responsibility culture. Employees and contractors are encouraged to submit their work safety improvement projects to participate in a contest. This project aims to build a strong safety culture, raise safety awareness, and develop improvement of ideas for work safety for operators.

Process Safety

GGC has continued with the Process Safety Management (PSM) plan for the fourth consecutive year, while allowing external auditors to audit such management and strengthen process safety in our operations through notable projects in 2021 on process safety, such as the Field Risk Assessment (FRA) Project and Operational Discipline (OD) Project

Field Risk Assessment (FRA) Project

GGC has continued to implement the project for the third consecutive year to raise awareness while promoting knowledge and understanding of production process flaw detection through the training of employees within the work area by assigning employees in the field with knowledge and expertise to share their knowledge and experience in operating various equipment and machines. This allows employees to practice their skills on correctly observing and identifying unusual acts within the production process and promote knowledge of danger or risk prevention while operating. In addition, senior workers also have the duty to inquire, discuss, and record abnormalities with

operators on the job site, and to assess risks, establish corrective measures, and report performance results at the meeting of the Safety Committee (CDC) every month.

Operational Discipline (OD) Project

GGC has continued to implement the Operational Discipline (OD) Project to enhance employee discipline and promote the observation of on-site risks in the processes by promoting knowledge and understanding among supervisors of the concept and discipline in performing basic tasks effectively, which include finding solutions in cases of emergency within each process. This created a good safety culture for employees.

Environmental Management

GGC manages the environment systematically. It has policies for quality, security, safety, occupational health, environment, and business continuity as well as for complying with national and international laws, regulations and standards. It is an important principle of operation. GGC aims to operate in a way that maximizes the use of resources while affecting the environment, community, and society as little as possible.

Energy Efficiency and Climate Change

GGC manages energy under the ISO 50001 standards and implements energy-saving projects to mitigate the impacts of climate change and demonstrate contribution to the implementation of the UN Climate Change Conference 26 (COP26) through a variety of energy and climate initiatives have been implemented such as a project to reduce the use of steam in the Methanol Purification process and the B100 Steam Saving Project etc.

Reduce Steam in Methanol Purification Project

GGC has implemented a project to reduce the use of steam in the Methanol Purification process, which was completed in 2020, by modifying the filter arrangement in the distillation tower of the Methanol Purification column from the levelized spherical tray type (Tray Structure) to a cylindrical structured packing type (Pack Structure), which resulted in a reduction of reflux and a reduction in steam energy consumption by 1.30 tons per hour.

B100 Steam Saving Project

Due to the COVID-19 pandemic, demand for Methyl Ester has fallen, and therefore GGC has adjusted its processes to reduce steam and electricity consumption in the Methyl Ester (B100) purification process. As a result, GGC has reduced the use of high-pressured steam by 0.92 tons per hour and reduced electricity consumption by 28.5 kWh.

Greenhouse Gas Emission Performance

Greenhouse Gas Reduction Performance Profile	2018	2019	2020	2021	2021 Goal
Greenhouse Gas Emissions Scope 1 (Tons CO ₂ Equivalent)	6,415	4,128	33,333	30,708	N/A
Greenhouse Gas Emissions Scope 2 (Tons CO ₂ Equivalent)	66,747	61,382	59,481	57,481	N/A
Greenhouse Gas Emissions Scope 1 and 2 (Tons CO ₂ Equivalent)	73,162	65,511	92,814	88,189	110,320
Greenhouse Gas Emissions Intensity Scope 1 and 2 (Tons CO ₂ Equivalent per Ton of Product)	0.148	0.166	0.178	0.201	0.173

Waste Management

GGC has managed waste derived from operations by applying the concept of 3Rs to control the amount of waste, which includes Reduce, Reuse and Recycle as well as reducing environmental impacts and waste disposal costs. GGC has this year continued its goal of Zero-Waste to Landfill with the following outstanding projects:

Spent Bleaching Clay Project

GGC has applied the principle of waste recycling by mixing used bleached soil, which was the waste from the crude palm oil bleaching process, with other fuels to generate electricity. As a result, GGC has saved costs for waste disposal.

Water Resource Management

GGC has managed its water resources by applying the concept of 3Rs: Reduce, Reuse and Recycle. In addition, our water resource management is in line with the requirements of Map Ta Phut Industrial Estate, Rayong, to reduce impacts on communities in the Eastern Region. In 2021 GGC has implemented water resource management projects as follows:

Reduce Water Usage and Wastewater in Condensate Project

GGC has studied the use of Wastewater in place of raw water to reduce foaming and odor in condensate or hotwells, which is pumped back into the pre-treatment process. The benefit derived from the project included a reduction in the usage of quality water and a reduction in wastewater generated by changing the type of water at the spray head to recycled water.

Reverse Osmosis Installation Project for Circulating Water for the Cooling System

GGC has studied guidelines for reusing wastewater in the cooling system and the steam generation system by taking wastewater through Reverse Osmosis (RO) and recirculating it for the cooling system. This reduced the amount of water drawn from the outside by approximately 12 cubic meters per hour.

Water Resource Management Performance

In 2021, water resource management performance at 517,071 cubic meters, whereas the water consumption per cubic meter of GGC's products came to 5.53 cubic meter.

3.4 Sustainability Management in Social Dimension

3.4.1 Policies and Guidelines in Social Dimension

GGC strives to create corporate shared value along with development of communities' quality of life, economic, social, and environmental well-being by participating in community activities and including stakeholders in CSR projects, which have helped develop the country economically and socially as a whole. In 2021 GGC applied the Trust strategy, which striving to create shared value in three dimensions: Economic, Social, and Environmental. GGC has also continued running last year's CSR projects as well as creating new projects to build community and society's trust and sustainable growth.

3.4.2 Social Performance

Challenges and Responsive Performance

- Expanding CSR projects and activities and initiating new CSR projects that aid society with company products.
- Keeping good relations with surrounding communities and continuing building trust.

Responsive Performance

- Performing health care projects that have met social and community needs, as stated in the Growth strategy.
- Expanding the capability of CSR projects to solve social problems or meet social needs, such as the Green Health Project, ThinkCycle Bank Project, Care the Bear Project, and Health and Personal Care Project in the future.
- Performing CSR projects that aims to develop the quality of life and improve the community's economy and environment, to meet community needs.

CSR Projects and Activities

GGC's performed CSR projects and activities to create shared value between GGC and the community. In 2021, GGC developed and expanded CSR projects by expanding performance capability and aiding society with company's products. The example projects were as the following

Green Health Project

GGC has operated the Green Health Project by using "Glycerine" product, which is 99.5% food and pharmaceutical grade, used as an ingredient of hygienic products such as alcohol gel, alcohol spray, and liquid hand soap to promote good hygiene of communities and society.

GGC has piloted the production of liquid hand soap for handwashing to promote hygiene. The product was distributed to children and youths in rural areas as part of the youth development project, a project under the initiative of Her Royal Highness Princess Maha Chakri Sirindhorn Siam Boromrajakuma, founded toward the end of 2017. GGC has been part of the project for the third consecutive year. This year GGC has collaborated with Original Equipment Manufacturer (OEM) to produce Home and Personal Care products, such as hand sanitizer and alcohol spray to promote public hygiene and prevent the spread of COVID-19. It is a product that is gentle on the skin and helps kill germs at the same time. Since the product contains Glycerine, the alcohol gel and hand soap can add and retain moisture to the skin, increasing the tenacity of the skin's moisture barrier, and helps prevent the skin from being irritated by environmental pollution. The product protects the skin and reduces the risk of infection.

Throughout 2021, GGC has distributed alcohol gel, alcohol spray, and liquid hand soap to communities in Rayong province, government agencies, and various private companies. It has also expanded cooperation with external organizations, such as the Thai Red Cross Society as a social service, providing alcohol gel for survival bags, distributed to help people nationwide.

Health & Personal Care Project

The Health & Personal Care Project is a subproject under the Green Health Project, in which GGC is preparing to create a prototype whereby the project aims to take care of the community, health, and the environment. A pilot project at Koh Kok community in Rayong province has been conducted, driving the use of raw materials within the community to be further developed into business products, which will be implemented in 2022.

ThinkCycle Bank Project

GGC, together with PTT Global Chemical Public Company Limited, has implemented the "ThinkCycle Bank Project, circular disposal to change the world," for the second consecutive year by applying the concept of circular economy to the construction of a school waste management system in an area for which GGC is responsible.

In 2021, GGC continued to implement the project to promote knowledge on waste sorting among the teachers and students at Ban Phayun School, Rayong province, and Ban Khao Sok School, Chon Buri province, as well as establishing a Recycle Waste Bank to generate additional income for students participating in the project. In addition, GGC has provided scholarships to students as incentives, contributing THB 5,000 per school to students within the project that regularly participate in recording the amount of garbage deposited into the system. GGC has also encouraged waste buyers and enterprises in the community to pick up waste collected from the project to be resold to generate income, which aided in distributing income within the community and raising the quality of life for the community in a sustainable way.

Community Satisfaction Performance and Targets in 2021

In 2021, GGC has no complaints from the community regarding our operations. This resulted in a community satisfaction rating of 91.27%, in line with our Corporate Social Responsibility Management Strategy.

Human Rights Practices

GGC commands Human Rights guidelines for the Board of Directors, Managements, and Employees to strictly abide by. In 2021, a Human Rights policy has been established by GGC Group, in Thai and English, to promote and respect Human Rights as well as cultures, traditions, and values of our employees and stakeholders. In addition, GGC has developed a Business Code of Conduct Handbook, which is in accordance with GGC Group's corporate governance principles. The handbook covers Business Ethics, Human Rights, and Quality, Security, Occupational Health and Safety, Environment, and Business Continuity.

4. Management Discussion and Analysis (MD&A)

4.1 Management Discussion and Analysis

Executive Summary

As for performance in FY2021, Global Green Chemicals Public Company Limited (“the Company”) recorded the total revenue of THB 20,923 million, rose by 15% from FY2020 and Adjusted EBITDA of THB 1,121 million, rose by 3% from the previous year. In addition, the Company had a Stock Gain & NRV of THB 403 million, as a result, the Company posted the net profit before extra item of THB 774 million improved by THB 214 million or 38% from FY2020.

In addition, Reference is made to the information disclosed by the Company regarding the Civil case’s judgment on January 28, 2022 the Court of Appeals has withheld the Civil Court’s judgement and ruled that the Company shall pay damages of approximately THB 289.56 million, plus 15% per annum interest and the attorney fees for the appeal proceedings of THB 300,000 to such company. However, the Company is currently considering petitioning the Supreme Court for review within the period stipulated by law. As aforementioned, the Company has set the provision of contingent liabilities from the case for such damage THB 444 million resulting in the net profit after extra item of THB 330 million (or profit per share of THB 0.32), dropped by THB 230 million or 41% from FY2020.

In FY2021, the Company had Methyl Ester (ME) sales volume decreased by 19% compared to FY2020, stood at 323,462 tons, caused by the COVID-19 outbreak in Thailand from Delta variant become more severe, the Center for COVID-19 Situation Administration (CCSA) announced that they would extend the period of the Emergency Decree using lockdown measure Bangkok and elevate the control area as well as asking for cooperation from the private and government sectors to “Work From Home”. In addition, the Committee on Energy Policy Administration (CEPA) has a resolution for adjusting the proportion of biodiesel mandatory and the spread of retail fuel price of the gas stations during the last quarter of 2021 causing the diesel consumption to decline from travel and transportation. In term of the average Methyl Ester selling price considerably escalated, followed CPO price owing to the CPO stock dropped from FY2020 at the level of 209,328 tons to 172,657 tons at the end of FY2021. Even though the output production was improved but the exports volume increased by 158% compared to FY2020. However, the Company’s revenue of Methyl Ester increased by 7% compared to the prior year.

For the Fatty Alcohols business in FY2021, the sales volume of Fatty Alcohols decreased by 10% from FY2020 due to the longer shut down period of the Fatty Alcohols plant for catalyst changing and maintenance than usual in FY2021 causing the production not to be able to reach its full capacity during that time. Meanwhile, an average price of Fatty Alcohols rose by 54%, followed by raw material price due to the international CPKO stock being dropped from the previous year, which affected by the COVID-19 pandemic, causing labor shortage to harvest and less output production. As a result, the Company’s revenue of Fatty Alcohols rose by 43% compared to the previous year.

As of December 31, 2021, the Company has total assets in the amount of THB 13,517 million which comprised of cash and short-term investment amounting to THB 1,791 million, with total liabilities of THB 3,547 million and total equities of THB 9,970 million.

Operating Performance

Exhibit 1: Consolidated Company's Performance comparison of FY2021 vs. FY2020

UNIT: THB Million

	FY2021	FY2020	% YoY
Sales Revenue	20,923	18,203	15%
EBITDA	1,524	1,228	24%
EBITDA Margin (%)	7.3%	6.7%	0.6%
Stock Gain/(Loss) & NRV	403	136	196%
Adjusted EBITDA(1)	1,121	1,092	3%
Adjusted EBITDA Margin (%)	5.4%	6.0%	-0.6%
Net Profit	774	560	38%
Extra item	-444	-	n.a.
Net Profit after extra item ⁽²⁾	330	560	-41%
EPS (Baht/Share)	0.32	0.55	-42%

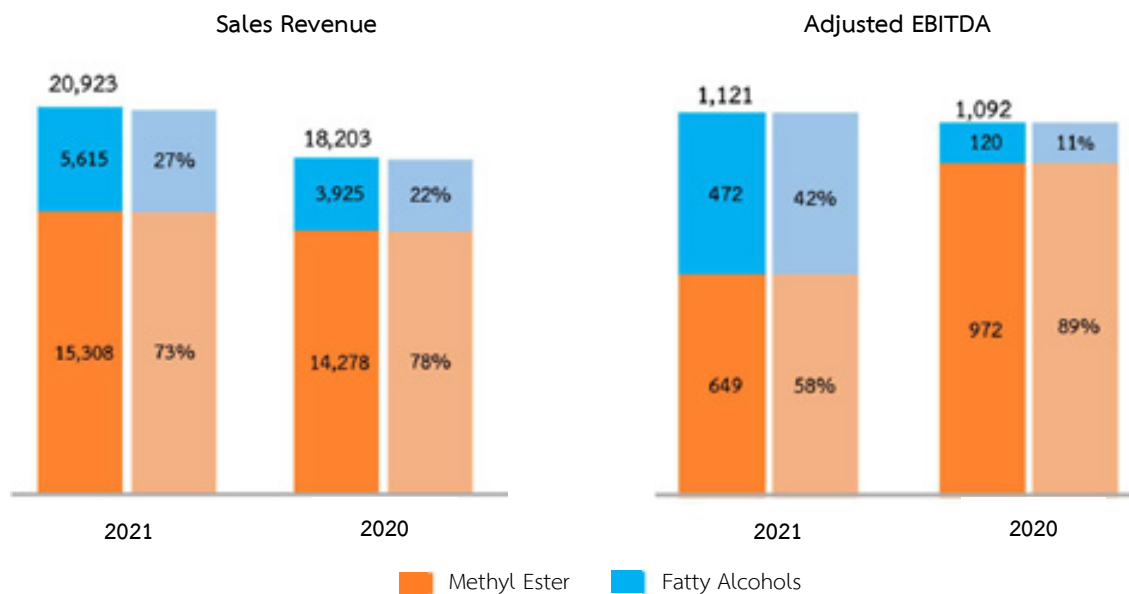
Note:

(1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV

(2) Extra Item from the provision of contingent liabilities from lawsuit

Exhibit 2 : Sales Revenue and Adjusted EBITDA breakdown by business unit comparison of FY2021 vs. FY2020

(million THB)



Operating Performance by Business Unit

Methyl Ester (Biodiesel) Business Unit

Exhibit 3: Product and Feedstock Price

Average Price	FY2021	FY2020	% YoY
Methyl Ester (B100) (Baht/litre) ⁽¹⁾	41.00	31.81	29%
Methyl Ester (B100) (Baht/kg) ⁽²⁾	47.39	36.76	29%
Crude Palm Oil (CPO) (Baht/kg) ⁽³⁾	37.99	28.11	35%
EPPO P2F (Baht/kg) ⁽⁴⁾	3.11	3.11	0%
	1 January 2020 – 30 September 2021		: B7/B10/B20
	11 – 31 October 2021		: B6
Biodiesel Mandate	1 – 30 November 2021		: B7/B10
	1 – 31 December 2021		: B7

Note:

(1) Reference Price of EPPO

(2) Conversion ratio: 0.865 Tons = 1,000 Liters

(3) Reference Price of DIT

(4) ME Price - Mixed Feedstock and MeOH price according to EPPO's B100 formula)

Overview of the CPO price in Thailand with the prices reference announced by the Department of Internal Trade (CPO-DIT) during FY2021 increased from FY2020 to 37.99 Baht/kg., rose by 9.88 Baht/kg. or 35% owing to the lower CPO domestic stocks. The stock volume at the end of FY2021 was at 172,657 tons, while at the end of FY2020 was 209,328 tons. Although the output production was increased, but CPO export volume increased by 158% compared to FY2020, resulting in the government announcing the policy to reduce the use of biodiesel (B100) in the energy sector for a limited time to avoid affecting vegetable oil consumption in the country in the midst of the COVID-19 outbreak.

On Methyl Ester demand side in FY2021, it has still affected by the COVID-19 epidemic situation especially the Delta variant became more severe. Although the government has already distributed the COVID-19 vaccination to the public more widely, but the situation has still became more severe due to the 4th wave, the Center for COVID-19 Situation Administration (CCSA) announced that they would extend the period of the Emergency Decree using lockdown measures in Bangkok and elevate the control area with a time limit on leaving dwelling places and refrain from traveling across provinces as well as asking for cooperation from the private and government sectors to "Work from Home", which resulted in lower demand for biodiesel consumption as well.

In addition, the Committee on Energy Policy Administration (CEPA) has a resolution for adjusting the proportion of biodiesel mandatory and the spread of retail fuel price affecting to the economy and alleviating people's suffering during the rising energy prices especially during the last quarter of FY2021 with the following measures:

- 1) October: Adjusted the biodiesel mandatory from B10 and B7 to B6.
- 2) November: Adjusted the biodiesel mandatory back to B10 and B7, but reduced the spread retail prices at the gas stations, with B20 at -0.25 Baht/litre from B7 and B10 at -0.15 Baht/litre from B7.
- 3) December: Adjusted the biodiesel mandatory from B7, B10 and B20 to B7 only.

As a result of the aforementioned measures, the demand for Methyl Ester in the country was decreased. Meanwhile, the domestic production capacity has increased since September 2021 due to the expansion of the existing manufacturer's installed capacity and the start operation of new manufacturer.

In this regard, Methyl Ester price in FY2021 has grew up from FY2020 corresponding to an upward CPO price to 47.39 Baht/kg., an increase of 10.63 Baht/kg. or 29%.

Exhibit 4: Keys Operating Performance of ME Business Unit

Methyl Ester Business	FY2021	FY2020	% YoY
Utilization (%)	64%	78%	-14%
Sales Volume (ton)	323,462	400,715	-19%
Sales Volume (million litre) ⁽¹⁾	374	463	-19%
Sales Revenue (Million Baht)	15,308	14,278	7%
EBITDA (million baht)	739	1,006	-27%
EBITDA margin (%)	4.8%	7.0%	-2.2%
Stock Gain/(Loss) & NRV (Million Baht)	90	34	165%
Adjusted EBITDA (Million Baht) ⁽²⁾	649	972	-33%
Adjusted EBITDA Margin (%)	4.2%	6.8%	-2.6%

Note :

(1) Conversion ratio: 0.865 Tons = 1,000 Liters

(2) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV.

Operating Performance comparison between FY2021 vs. FY2020

In FY2021, the Company posted Methyl Ester business sales revenue of THB 15,308 million, an increase of THB 1,030 million or 7% from FY2020, mainly from the rising of Methyl Ester selling price in relation to upward CPO price up to 29%, while Methyl Ester sales volume decreased by 19% in comparison with the same period in the prior year. Despite, the government announced of shifting of biodiesel from B7 to B10 as the mandatory diesel, Methyl Ester demand could not reach the expectation. In addition, the impact of a new wave of COVID-19 outbreak in Thailand especially 4th wave (Delta) resulting in a declining in diesel consumption. In addition, the policy to reduce the biodiesel mandatory and the expansion of the existing manufacturer's installed capacity and a new manufacturer entering the market resulting to the higher competition in biodiesel

business as aforementioned. Nevertheless, the Company recorded the increasing of sales revenue from Refined Glycerine from selling price and sale volume which escalated following the demand of Home and Personal Care products.

However, the considerable volatility of CPO prices in FY2021 impacted on the Company's Stock Gain & NRV of THB 90 million which is a result of Company's attempt to try to minimize the inventory volume to prevent the impact from the volatility of CPO domestic price coupled with the CPO price was increased during the 4Q2021. In FY2021, the Company recorded EBITDA of THB 739 million, decreased from the same period of prior year by 27%. When deducting the effect of Stock Gain & NRV as aforementioned, the Company reported Adjusted EBITDA of THB 649 million, a decrease of THB 323 million or 33% and Adjusted EBITDA Margin of 4.2%.

Fatty Alcohols (FA) Business Unit

Exhibit 5: Products and Feedstock's prices

(USD per ton)

Average Price	FY2021	FY2020	% YoY
Fatty Alcohols ⁽¹⁾			
- Short Chain	2,434	2,024	20%
- Mid Cut	2,021	1,217	66%
- Long Chain	1,631	1,148	42%
Average Fatty Alcohols ⁽²⁾	1,937	1,254	54%
Crude Palm Kernel Oil (CPKO) ⁽³⁾	1,362	773	76%
Market P2F of Fatty Alcohols	275	310	-11%

Note:

(1) Reference Price of ICIS

(2) Average price of Fatty Alcohols with production proportion: Short Chain 7% Mid Cut 64% and Long Chain 29%

(3) Reference Price of Malaysian Palm Oil Board (MPOB)

An average CPKO-MPOB price in FY2021 was at 1,362 USD/ton, rose by 589 USD/ton or 76% from FY2020, mainly due to the decrease in CPKO stock in the international market, which stood at 284,534 tons in FY2021, down from 413,799 tons in FY2020. This was because the Malaysian government has not allowed labors to return to work in the country due to the epidemic situation of COVID-19, resulting in a labor shortage to harvest. As a result, CPKO's price in FY2021 was higher than the previous year due to less output production against the increasing demand

For the demand side, natural Fatty Alcohols in FY2021 have improved from prior year. Even though, international shipping situation still has problems, including tight shipping container, sea freight booking and the rising of transportation service rates, as well as the new wave of COVID-19 from Delta variant become more severe in many areas. Conversely, buyers in China who stockpiling goods due to concerns about the limited of shipping containers and the supply in countries affected by the Chinese government's Dual Control Policy, increased overall demand for Fatty Alcohols products in 2H2021.

On the supply side, the supply of Fatty Alcohols in FY2021 was tight due to a manufacturer in Malaysia still shutting down plant to repair the wastewater storage tank since May 2021 until last quarter in 2021 and a manufacturer in Saudi Arabia switching the production line to produce other products since 3Q2021. Many manufacturers in China, especially in Jiangsu and Zhejiang provinces, have temporarily suspended production according to the measurement to control pollution and energy costs during the National Day by the Chinese government until 4Q2021, which resulted in a decrease overall supply in FY2021.

The average of Fatty Alcohols price has risen compared to the previous year due to higher demand and feedstock prices. The Mid Cut Fatty Alcohols price rose to 2,021 USD/ton, an increase of 804 USD/ton or 66%, while the Long Chain Fatty Alcohols price rose to 1,631 USD/ton, an increase of 483 USD/ton or 42%, and Short Chain Fatty Alcohols price rose to 2,434 USD/ton, an increase of 410 USD/ton or 20%.

Exhibit 6: Keys Operating Performance of FA Business Unit

Fatty Alcohols Business	FY2021	FY2020	% YoY
Utilization (%)	81%	100%	-19%
Sales Volume (Ton)	86,213	95,415	-10%
Revenue from Sales (Million Baht)	5,615	3,925	43%
EBITDA (Million Baht)	785	222	254%
EBITDA margin (%)	14.0%	5.7%	8.3%
Stock Gain/(Loss) & NRV	313	102	207%
Adjusted EBITDA (Million Baht) ⁽¹⁾	472	120	293%
Adjusted EBITDA Margin (%)	8.4%	3.1%	5.3%

Note:

(1) Adjusted EBITDA refers to EBITDA excluding impact of Stock Gain/(Loss) and NRV

Operating Performance comparison between FY2021 vs. FY2020

In FY2021, Fatty Alcohols business recorded sales revenue of THB 5,615 million, increased from FY2020 by THB 1,690 million or 43%, mainly due to an average of Fatty Alcohols price increase of 54%, even though the Fatty Alcohols sales volume decreased by 10% to stood at 86,213 tons due to the longer shutdown period of the Fatty Alcohols plant for catalyst changing and maintenance than usual in FY2021 causing the production not to be able to reach full capacity during that time. However, the profitability of Fatty Alcohols was improved when compared to the previous year because the Company had a higher discount rate for the raw materials.

As aforementioned, the Company recorded EBITDA of THB 785 million, increased from FY2020 by 254%. When deducting impact from Stock Gain & NRV of THB 313 million in FY2021, Adjusted EBITDA was recorded at THB 472 million and Adjusted EBITDA Margin at 8.4%

4.2 Financial Statement

Statements of Profit or Loss

STATEMENTS OF PROFIT OR LOSS						
FOR THE YEAR ENDED DECEMBER 31						
	2019		2020		2021	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
Revenues from sales	13,054.7	100.0	18,202.5	100.0	20,923.4	100.0
Cost of sales	(12,296.9)	(94.2)	(16,860.0)	(92.6)	(19,378.7)	(92.6)
Gross Profit	757.8	5.8	1,342.5	7.4	1,544.6	7.4
Interest income and dividend income	50.0	0.4	19.1	0.1	6.4	0.0
Other income	67.5	0.5	40.2	0.2	65.5	0.3
Selling and distribution expenses	(387.2)	(3.0)	(346.7)	(1.9)	(337.8)	(1.6)
Administrative expenses	(451.6)	(3.5)	(481.4)	(2.6)	(456.1)	(2.2)
Provision of contingent liabilities from lawsuit	-	-	-	-	(443.6)	(2.1)
Reversal of expense from raw materials derogation	232.5	1.8	-	-	-	-
Loss from impairment of investment	-	-	(9.5)	(0.1)	-	-
Net foreign exchange gain (loss)	(20.0)	(0.2)	8.9	0.0	73.5	0.4
Net derivatives gain (loss)	16.7	0.1	8.4	0.0	(68.1)	(0.3)
Finance costs	(68.0)	(0.5)	(69.0)	(0.4)	(49.5)	(0.2)
Share of loss of investments in an associate and joint ventures	29.5	0.2	62.5	0.3	86.4	0.4
Profit before income tax income (expense)	227.2	1.7	575.0	3.2	421.4	2.0
Income tax income (expense)	(133.2)	(1.0)	(14.9)	(0.1)	(91.2)	(0.4)
PROFIT FOR THE YEAR	94.0	0.7	560.1	3.1	330.2	1.6
PROFIT ATTRIBUTABLE TO:						
Owners of the parent	94.0	0.7	560.1	3.1	330.2	1.6
PROFIT FOR THE YEAR	94.0	0.7	560.1	3.1	330.2	1.6
BASIC EARNINGS PER SHARE (BAHT)	0.09		0.55		0.32	

Statements of Financial Position

STATEMENTS OF FINANCIAL POSITION						
FOR THE YEAR ENDED DECEMBER 31						
	2019		2020		2021	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
ASSETS						
CURRENT ASSETS						
Cash and cash equivalents	2,310.8	17.9	1,742.5	13.2	1,511.0	11.2
Temporary investments	1,000.0	7.7	-	-	-	-
Current investments in financial assets	-	-	400.0	3.0	280.0	2.07
Trade receivables	1,425.9	11.0	1,637.0	12.4	2,381.4	17.6
Other receivables	286.7	2.2	286.5	2.2	306.3	2.3
Value-added tax receivable	12.1	0.1	25.5	0.2	108.1	0.8
Inventories	1,596.2	12.3	2,002.7	15.1	2,024.1	15.0
Other current assets	80.2	0.6	32.9	0.2	35.8	0.3
Total Current Assets	6,711.9	51.9	6,127.2	46.3	6,646.7	49.2
NON-CURRENT ASSETS						
Investments in joint ventures	1,087.3	8.4	1,623.0	12.3	1,880.7	13.9
Investments in an associate	28.2	0.2	-	-	-	-
Plant and equipment	4,764.0	36.8	4,576.5	34.6	4,258.8	31.5
Right-of-use assets	-	-	589.1	4.4	473.6	3.5
Intangible assets	69.2	0.5	68.7	0.5	66.8	0.5
Deferred tax assets	243.6	1.9	228.3	1.7	181.0	1.3
Other non-current assets	27.1	0.2	26.4	0.2	8.8	0.1
Total Non-current Assets	6,219.4	48.1	7,112.0	53.7	6,869.8	50.8
TOTAL ASSETS	12,931.3	100.0	13,239.2	100.0	13,516.5	100.0

STATEMENTS OF FINANCIAL POSITION						
FOR THE YEAR ENDED DECEMBER 31						
	2019		2020		2021	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
LIABILITIES AND SHAREHOLDERS' EQUITY						
<i>CURRENT LIABILITIES</i>						
Trade payables	953.4	7.4	813.7	6.1	1,226.4	9.1
Other payables	343.8	2.7	262.5	2.0	398.3	2.9
Payables to contractors	106.0	0.8	111.0	0.8	61.2	0.5
Current portion of long-term borrowings from financial institutions	439.8	3.4	565.8	4.3	764.0	5.7
Current portion of lease liabilities	5.7	0.0	133.4	1.0	120.4	0.9
Income tax payable	-	-	-	-	29.8	0.2
Short-term provision	-	-	-	-	443.6	3.3
Total Current Liabilities	1,848.7	14.3	1,886.4	14.2	3,043.6	22.6
<i>NON-CURRENT LIABILITIES</i>						
Long-term borrowings from financial institutions	1,329.8	10.3	764.0	5.8	-	-
Lease liabilities	14.3	0.1	482.8	3.6	382.0	2.8
Provision for employee benefits	89.5	0.7	112.9	0.9	120.5	0.9
Other non-current liabilities	0.9	0.0	-	-	-	-
Total Non-current Liabilities	1,434.5	11.1	1,359.7	10.3	502.5	3.7
TOTAL LIABILITIES	3,283.2	25.4	3,246.1	24.5	3,546.1	26.2

STATEMENTS OF FINANCIAL POSITION						
FOR THE YEAR ENDED DECEMBER 31						
	2019		2020		2021	
	(Million Baht)	%	(Million Baht)	%	(Million Baht)	%
SHAREHOLDERS' EQUITY						
SHARE CAPITAL						
Authorized share capital	9,724.8	75.2	9,724.8	73.5	9,724.8	71.9
Issued and paid-up share capital	9,724.8	75.2	9,724.8	73.5	9,724.8	71.9
Share premium	89.2	0.7	89.2	0.7	89.2	0.7
Difference arising from business combination under common control	(4.1)	(0.0)	(4.1)	(0.0)	(4.1)	(0.0)
RETAINED EARNINGS (DEFICIT)						
Appropriated						
Legal reserve	32.0	0.2	49.8	0.4	61.0	0.5
Unappropriated (Accumulated deficit)	(193.8)	(1.5)	133.4	1.0	99.4	0.7
TOTAL SHAREHOLDERS' EQUITY	9,648.1	74.6	9,993.1	75.5	9,970.4	73.8
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	12,931.3	100.0	13,239.2	100.0	13,516.5	100.0

Exhibit 9: Consolidated Financial Position as of December 31, 2021 and as of December 31, 2020



Assets

As of December 31, 2021, the Company had total assets of THB 13,517 million, an increase of THB 278 million compared to December 31, 2020 in which key changes are described as follow:

1. Current assets increased by THB 520 million mainly from:
 - 1.1 A decrease in cash and cash equivalent THB 351 million mainly due to the payment for investments in GGC KTIS Bioindustrial Company Limited (GKBI) including dividend payment and repayment of long-term loans from financial institutions.
 - 1.2 Accounts receivable and other accounts receivables increased by THB 764 million caused by the increasing of sales volume of Methyl Ester and the selling price both of Methyl Ester and Fatty Alcohols compared to the end of 2020.
 - 1.3 An increase in inventory of THB 21 million owing to an increase in CPO prices, as a result, selling price was rose in relation to an increase in inventory.
2. Non-current assets decreased by THB 242 million mainly from:
 - 2.1 The right of use (ROU) asset decreased by THB 116 million.
 - 2.2 PP&E decreased by THB 318 million mainly due to occurring the depreciation amount of THB 498 million, an disposal amount of THB 4 million and an additional investment for Refined Glycerine plant 2 project of THB 184 million.
 - 2.3 Investments in joint ventures increased by THB 258 million primarily due to increasing of investment in GGC KTIS Bioindustrial Company Limited (GKBI) amounted of THB 263 million including the dividend and share of profit from investment in joint ventures amounted of THB 91 million and THB 86 million respectively.

Liabilities

As of December 31, 2021, the Company had total liabilities of THB 3,547 million, an increase of THB 301 million or 9% compared to December 31, 2020, mainly attributed to

- 1) Accounts payable increased by THB 413 million due to the selling price of Methyl Ester and Fatty Alcohols were increased significantly compared to the end of 2020.
- 2) Other accounts payable increased by THB 136 million.
- 3) Provision of contingent liabilities from lawsuit THB 444 million.
- 4) Accounts payable to contractors decreased by THB 50 million.
- 5) Repayment of the long-term for THB 567 million.
- 6) Lease liabilities decreased by THB 114 million.
- 7) Corporate tax payable increased by THB 30 million.

Shareholders' Equity

As of December 31, 2021, the Company had total shareholders' equity of THB 9,970 million, a decrease of THB 23 million compared to December 31, 2020. This was the net profit of THB 330 million for the year 2021 and the dividend payment of THB 358 million as the approval of the Annual General Shareholders' Meeting on April 2, 2021 and other comprehensive income THB 5 million.

Credit Polic

As for the credit policy, the Company has the credit policy which performed by the standard regulations with considering the appropriate credit lines and credit terms to customers and suppliers. The policy was taking into consideration risks of the Company, business liquidities and credit terms to customers. In addition, the payment terms to suppliers must be in the standard level of market.

Furthermore, the Company usually reviews credit lines and credit terms to customers and suppliers in concurrence with the Company's risk policy.

Statements of Cash Flows

STATEMENTS OF CASH FLOWS FOR THE YEAR ENDED DECEMBER 31			
	2019	2020	2021
	(Million Baht)		
Cash Flow			
Net cash received (used in) operating activities	624.7	391.7	1,115.4
Net cash received (used in) investing activities	(143.5)	(152.3)	(267.9)
Net cash received (used in) financing activities	(563.0)	(806.8)	(1,083.5)
Effect of exchange rate changes on balances held in foreign currencies	5.6	(0.9)	4.5
Net increase (decrease) in cash and cash equivalents	(76.2)	(568.3)	(231.5)
Cash and cash equivalents as at 1 January	2,387.0	2,310.8	1,742.5
Cash and cash equivalents as at 31 December	2,310.8	1,742.5	1,511.0

As for the statement of cash flows of FY2021, the Company had cash received from operating activities of THB 1,115 million which comprised of cash from the net profit of THB 330 million, the adjustment for non-cash items, an increase in account receivable, other account receivables and inventories and an increase in account payables, other account payables.

The Company had cash used in investing activities of THB 268 million primarily due the payment for investments in GGC KTIS Bioindustrial Company Limited (GKBI) amounted of THB 263 million and spending for PP&E amounted of THB 220 million, mainly from investment in Refined Glycerine plant 2 project while the cash receiving from deposits with financial institution was declined THB 120 million and dividend of THB 91 million.

The Company had cash flow spending for financial activities of THB 1,083 million, which was spent for dividend payment of THB 358 million, repayment long-term of THB 567 million, repayment financial lease of THB 126 million and interest paid of THB 32 million.

As the activities above, the Company had a decrease in cash and cash equivalents in the amount of THB 231 million which the beginning cash and cash equivalents as of January 1, 2021 was in the amount of THB 1,742 million. As a result, as of December 31, 2021 the Company had cash and cash equivalents of THB 1,511 million.

4.3 Key Financial Ratio

	FOR THE YEAR ENDED DECEMBER 31		
	2019	2020	2021
Liquidity Ratio			
Current Ratio (x)	3.6	3.2	2.2
Quick Ratio (x)	2.6	2.0	1.4
Cash Ratio (x)	0.4	0.2	0.5
Receivables Turnover Ratio (x)	9.8	11.9	10.4
Average Receivable Collection Period (Day)	37.4	30.7	35.1
Inventory Turnover (x)	18.3	21.1	22.1
Average Inventory Processing Period (Day)	20.0	17.3	16.5
Payables Turnover Ratio (x)	14.5	19.1	19.0
Average Payable Period (Day)	25.1	19.1	19.2
Cash Conversion Cycle (Day)	32.2	28.9	32.4
Profitability Ratio			
Gross Profit Margin (%)	5.8	7.4	7.4
Operating Profit Margin (%)	2.3	3.5	2.3
Other Income to Total Income Ratio (%)	0.9	0.3	0.3
Operating Cash Flow to Operating Profit Ratio (%)	211.6	60.8	236.9
Net Profit Margin (%)	0.7	3.1	1.6
Return on Equity (%)	1.0	5.7	3.3
Efficiency Ratio			
Return on Asset (%)	0.7	4.3	2.5
Return on Fixed Asset (%)	11.0	22.1	18.6
Total Asset Turnover (x)	1.0	1.4	1.6
Financial Policy Ratio			
Debt to Equity (x)	0.3	0.3	0.4
Interest Coverage Ratio (x)	10.2	6.7	23.8
Cash Basis (x)	1.4	0.7	1.9
Dividend Payout Ratio (%)	163.3	36.6	108.5
Per Share Data			
Earning per Share Ratio (Baht)	0.09	0.55	0.32
Book Value per Share Ratio (Baht)	9.4	9.8	9.7

4.4 Impacts from the COVID-19 Pandemic

According to the situation of Coronavirus 2019 (COVID-19) pandemic, it has affected on worldwide economies and society as well as on general business operations. GGC would like to report the impact of the COVID-19 pandemic to the business and the mitigation plan as follows.

1. Business operations

1.1 Impacts on Business Operations

In 2021, GGC still operate the business as usual, whether in production or in sales distribution, despite several waves of COVID-19 infection, which lowered domestic diesel demand due to measures restricting travel by the public, businesses, and industries. The Fatty Alcohols business witnessed rising demand in the world market in keeping with the demand for Home and Personal Care products, coupled with the capacity growth by a major antioxidant producer and market entry by new players. In the meantime, Malaysia still maintained border lockdown for foreign labor due to COVID-19, resulting in labor shortage for palm harvesting and tight supply of palm in the market, which ran against high demand for crude palm kernel oil in the market which effected to the year's fluctuating market and product prices.

1.2 Mitigation plan

For Methyl Ester, GGC formed a committee to steer and decide scopes of feedstock prices and selling prices, track current situations closely, and assess situations in advance for feedstock and products price, as well as the demand and supply every week. GGC also imported alternative feedstock with suitable costs and quality. The committee along with our customers reviewed commercial terms, specifically short-term and long-term contracts. GGC also pursued opportunities for developing new businesses and scaling up products for values as well as market expansion.

For Fatty Alcohols, GGC closely worked with our current customers while pursuing new ones (domestic and abroad) and organizing marketing activities to forge relations and confidence among customers to grow the likelihood of our product distribution.

GGC also commanded efficient feedstock management across the supply chains. The Company and GC Group together developed business processes for feedstock supply and procurement. The Company evaluated our business partners and suppliers and engaged in commercial agreements with those with good ratings. The Company planned reserve stocks and reviewed the risk management framework for our inventory of feedstock and products to ensure alignment with current sales plans so as not to affect production.

2. Investment projects

2.1 Project Progress

As previously reported, the Nakhonsawan Biocomplex Project (NBC) Phase 1 was postponed commercial operations to the first quarter of 2022 due to the COVID-19 situation, which had continued since 2020 and prompted all countries to shut down their borders. Machinery manufacturers for the project in Europe and Asia were unable to export machinery for the project as planned.

Nonetheless, after GGC's assessment of the situation, plan modification, and periodic remedial actions, the project successfully will start commercial operations in the first quarter of 2022 as planned.

GGC continued to closely monitor and assess sugarcane seasonal situations, as sugarcane is the project's key feedstock. We also selected alternative feedstock to avoid disruption to the project.

3. Impacts on Capital Sources and Liquidity

GGC has found from our review that the COVID-19 pandemic has had no financial effect on our asset values, estimates of liabilities, and potential liabilities. While GGC may have incurred expenses from preventing COVID-19 transmission, such expenses have had no significant impacts on our operating profit. Today, GGC still commands adequate liquidity for business and adequate cash flow for planned project investment. GGC will continue, however, to regularly track the situation.

4. Operating measures during the COVID-19 Pandemic

GGC cooperated with the public policy designed to minimize risks of COVID-19 transmission by devising measures and forming a COVID-19 prevention and control committee to oversee and define corresponding measures for efficient implementation, preparedness, and proactive plan modification. These moves included arrangement for Work from Home or doing so in a suitable number without affecting company business, support of essential protective for employees and repeated communication of policies and rules. Continual situation summaries and updates were provided.

In addition, GGC executed Business Continuity Plans (BCP) for COVID-19 prevention and control over three periods. First, before incidents or during normal operations. Second, criteria for rolling out BCP. And third, during incidents so as to cope with them and ease business impacts. GGC continually executed GC Group's measures to prevent and control COVID-19. GGC also devised Lock Up measures to guide avoidance of risks of contacting the virus for operators serving in vulnerable areas in production areas of the Methyl Ester Plants 1 and 2 in Rayong and Chon Buri Provinces. To elaborate, GGC screened such employees and contracts for infection and grouped them to appropriately work at the office and from home.

Besides fostering confidence in uninterrupted business in all circumstances as well as stewardship of employees, GGC played a part in social assistance through its "Green Health Project", a pilot project in which GGC's products were instrumental in aiding society. For instance, Refined Glycerine (a process By-Product) served as a blending agent in hand gel, hand-sanitizing spray, and liquid soap, which gives moisture to the hand, apart from keeping hands sterile and hygienic. GGC supplied this product to hospitals, the public and private sectors, multiple communities, and employees.

4.5 GGC and Sustainable Business

To foster confidence in GGC's sustainable growth, GGC strive to drive the company toward achievement of the vision on sustainable development, which matches UN SDGs embracing economic, social, and environmental aspects, to pursue green chemical leadership through Methyl Ester (B100) and various investment projects, including the NBC Project, an energy efficiency project with reduced steam consumption for methanol purification process, and a water quality improvement project for steam production.

One of the key goals of GGC's actions in support of sustainable development goals is to advocate a national policy on approaching sustainable production and consumption. One way is to support innovation and formulate a plan for product value addition in line with the BCG Model of the public sector, including a Bioeconomy development policy behind the push for Thailand to become ASEAN's bio hub to enhance the competitiveness of the Biofuel and Green Chemical industries, both here and abroad. Another is the application of the Circular Economy by leveraging innovation and technology in GGC's processes for its optimized resource consumption and release of pollutants and waste from operations, thus preserving the environment and society. Finally, implementation of the green economy, which focuses on domestic and foreign investment for Biofuel production and on adding value to agricultural produce to scale up to Bioplastics and Biochemicals.

This key goal for sustainability is our major mission that not only matches corporate strategies, but also agrees with the public sector's Circular Economy and BCG Model for integrated national development in economic, social, and environmental aspects. GGC stands ready to form part of the collaboration and extend outcomes by conveying the concept to all sectors so that all parties may achieve this common goal together.

5. General Information and Other Key Information

5.1 General Information and Other Key Information

Company name	Global Green Chemicals Plc
Ticker symbol	GGC
Website	www.ggcplc.com
Company registration number	0107559000044
Registered capital	As of December 31, 2021, THB 9,724,833,650, made of 1,023,666,700 shares at par value THB 9.50 per share. Paid-up capital was THB 9,724,833,650.
Company registration date	July 28, 2005
Public company listing date	February 18, 2016
First trading date on SET	May 2, 2017
Core businesses	Methyl Ester products Fatty alcohol products Services and others business
Personnel headcount	268 as of December 31, 2021

Contacts

Investor Relations	Tel. +66 (0) 558-7345, +66 (0) 558-7395 Email: ir@ggcplc.com
Corporate Affairs & Corporate Secretary	Tel. +66 (0) 558-7310, +66 (0) 558-7392 Email: Corporategovernance@ggcplc.com
Head Office	555/1 Energy Complex Building A, 4 th Floor, Vibhavadi-Rangsit Road, Chatuchak, Bangkok 10900 Tel. +66 (0) 558-7300 Fax +66 (0) 558-7301
Branch 1	Rayong Branch 888, 3 rd Floor, Map Chalut-Laem Chabang Road Tambon Huai Pong, Mueang Rayong, Rayong 21150 Tel. +66 (0) 3899-4000

Branch 2**Methyl Ester Plant 1**

8 I-8 Road, Map Ta Phut Industrial Estate
Map Ta Phut, Mueang Rayong, Rayong 21000
Tel. +66 (0) 3899-4000

Branch 3**Methyl Ester Plant 2**

199/1 Moo 2, Tambon Khao Sok, Amphoe Nong Yai
Chon Buri 20190
Tel. +66 (0) 3897-1000

References**Security Registrar****Thailand Securities Depository Company Limited**

93 Ratchadaphisek Road, Din Daeng, Din Daeng, Bangkok 10400
Tel. +66 (0) 009-9000 Call Center: +66 (0) 009-9999
Fax. +66 (0) 2 009-9991
Website: www.set.or.th/tsd

Auditor

- 1) Mr. Mongkol Somphol, CPA Reg. No.8444
- 2) Mr. Supamit Techamontrikul, CPA Reg. No.3356
- 3) Mr. Suwatchai Mekha-amnuaychai, CPA Reg. No.6638
- 4) Mr. Chawala Thianprasertkit, CPA Reg. No.4301

Deloitte Touche Tohmatsu Jaiyos Company Limited

AIA Sathorn Tower, 23rd-27th Floor
11/1 South Sathon Road, Yannawa, Sathon, Bangkok 10120
Tel. +66 (0) 2 034-0000 Fax. +66 (0) 2 034-0100
Website: www.deloitte.com/th

Legal advisors**Sukit Charoensuk Law Office**

11th Floor, Unit 11B, Gypsum Metropolitan Tower
539/2 Si Ayutthaya Road, Phayathai, Ratchatevee, Bangkok 10400
Tel. +66 (0) 2 642-7673 Fax. +66 (0) 2 245-3940
Website: www.sukijlaw.com

Dherakupt Law Office Company Limited

15th Floor, Univest Complex, 546 Ratchadaphisek Road
Chandrakasem, Chatuchak, Bangkok 10900
Tel. +66 (0) 2 511-1512 Fax. +66 (0) 2 938-1957
Website: www.dherakupt-law.co.th

Chandler MHM Limited

36th Floor, Sathorn Square Office Tower
98 North Sathorn Road, Silom, Bangrak
Bangkok 10500, Thailand
Tel. +66 (0) 2 009-0050 Fax. +66 (0) 2 009-5080
Website: www.chandlermhm.com

Weerawong, Chinnavat & Partners, Ltd.

22nd Floor, Mercury Tower
540 Phloen Chit Road, Lumpini, Pathumwan, Bangkok 10330
Tel. +66 (0) 2 264-8000 Fax. +66 (0) 2 657-2222
Website: www.weerawongcp.com

Baker McKenzie Company Limited

25th Floor, Abdulrahim Place
990 Rama IV Road, Silom, Bang Rak, Bangkok 10500
Tel. +66 (0) 2 666-2824 Fax. +66 (0) 2 666-2924
Website: www.bakermckenzie.com

Siam Premier International Law Office Limited

26th Floor, The Offices at CentralWorld,
999/9 Rama I Road, Pathumwan, Pathumwan, Bangkok 10330
Tel. +66 (0) 2 646-1888 Fax. +66 (0) 2 646-1919
Website: www.siampremier.com

Domnern, Somgiat & Boonma Company Limited

719 Si Phraya Road, Bang Rak, Bangkok 10500
Tel. +66 (0) 2 639-1955 Fax. +66 (0) 2 639-1956-8
Website: www.dsb.co.th

5.2 Litigation

As of December 31, 2021, GGC and subsidiaries were involved in the following ongoing litigation that could significantly affect their operations as detailed below:

1) The Case of Asia Capital Group Public Company Limited

On August 20, 2018, Asia Capital Group Public Company Limited, as the plaintiff, filed a lawsuit in the Civil Court against Thai Bio Innovation Company Limited (formerly Anatta Green Company Limited) as the first defendant and the Company as the second defendant in the Civil Court. The plaintiff claimed that the Company was in breach of an agreement related to a letter of consent to assignment, for which the first defendant has transferred right to collect payment for crude palm oil and crude palm kernel oil to the plaintiff. This causes damage to the plaintiff in the amount of THB 324.65 million plus 15 percent per annum interest from the date immediately after the filing date to the date when payment is fully made to the plaintiff. The Company was of the view that it was not in default as claimed and therefore submitted an answer to defend the case.

On June 10, 2020, the Civil Court rendered judgment ordering the Company to pay the plaintiff an amount of THB 289.56 million plus 15 percent per annum interest from the date of default. The court also ordered the Company and the first defendant to jointly pay the court fee including a lawyer fee of THB 1 million. Subsequently on 25 November 2020, the Company appealed such Civil Court's judgement and on January 20, 2022, the Court of Appeals has withheld the Civil Court's judgement and ruled that the Company shall pay the attorney fees for the appeal proceedings of THB 300,000 to such company. However, the Company is currently considering petitioning the Supreme Court for review within the period stipulated by law.

2) The Case of Thai Bio Innovation Company Limited (1)

On April 8, 2020, Thai Bio Invention Company Limited, as the plaintiff, filed a lawsuit in the Civil Court against the Company as a defendant. The plaintiff claimed that the Company was in default and breach of contract over the purchase and sale of crude palm oil and crude palm kernel oil, causing damage to the plaintiff, who therefore demanded a compensation of Baht 595.10 million together with 7.5 percent interest per annum from the date immediately after the filing date to the completion of payment to the plaintiff. The Company believes that it did not breach the contract as claimed and will therefore submit an answer to defend the claim.

3) The Case of Thai Bio Innovation Company Limited (2)

On June 24, 2020, Thai Bio Innovation Company Limited, as a plaintiff, filed a lawsuit in the Civil Court against the Company as the first defendant and two other companies. The plaintiff claimed that the defendants were in breach of a contract regarding the purchase and sale of crude palm oil and crude palm kernel oil, causing damages to the plaintiff in the amount of THB 109.42 million with interest at the rate of 7.5 percent per annum. The Company believes that it was not obliged to plead guilty as charged, so it would provide testimony to contest the case in court. The litigation was under the consideration of the Civil Court.

4) The Case of Thai Bio Innovation Company Limited (3)

On September 3, 2020, Thai Bio Innovation Company Limited, as a plaintiff, filed a lawsuit in the Civil Court against a company as the first defendant and the Company as the second defendant. The plaintiff claimed that the Company was in default and in breach of a contract regarding the purchase and sale of crude palm kernel oil, causing damages to the plaintiff in the amount of THB 364.71 million with interest at the rate of 7.5 percent per annum. The Company believes that it was not obliged to plead guilty as charged, so it would provide testimony to contest the case in court. The litigation was under the consideration of the Civil Court.

5) The Case of Global Inter Company Limited

On June 18, 2021, Global Inter Company Limited, sued the Company in the Civil Court, accusing the Company was in default and in breach a contract for using storage tanks for products and demanding compensation in the amount of THB 449.77 million along with interest at the rate of 7.5 percent per annum. This case was identical to the Company's litigation against this company. The Company believes that it was not obliged to plead guilty as charged, so it would provide testimony to contest the case in court. The litigation was under the consideration of the Civil Court.

6) The Case of Criminal case

This refers to the case where the Company made a complaint against former Executives and related business partners to the Inquiry Official of the Economic Crime Suppression Division (ECD) in the third quarter of 2018. The inquiry official has now investigated and gathered evidence to against the accused. The investigation records have been submitted to the prosecutor.



Section

02

Corporate
Governance



The Board of Directors



Mr. Kongkrapan Intarajang

Chairman

Prof. Dr. Kumchai Jongjakapun

Chairman of Independent Directors /
Chairman of the Audit Committee

Mrs. Kannika Ngamsopee

Independent Director /
Director to Risk Management
Committee /
Director of the Audit Committee



Mr. Jarun Wiwatjesadawut

Independent Director /
Director to Risk Management
Committee

Mr. Suphit Suwagul

Independent Director /
Director to Corporate Governance
and Sustainable Development
Committee

Maj. Gen. Titawat Satiantip

Independent Director /
Director to Nomination
and Remuneration Committee /
Director to Corporate Governance
and Sustainable Development Committee



ACM Songtam Chokkanapitag

Independent Director /
Chairman of the Nomination
and Remuneration Committee



Pol. Gen. Suchart Theerasawat

Independent Director /
Chairman of the Corporate Governance
and Sustainable Development
Committee



Mr. Sarawut Benjakul

Independent Director /
Director to Audit Committee



Mr. Patiparn Sukorndhaman

Director /
Director to Nomination
and Remuneration Committee /
Director to Risk Management
Committee

(Resigned effective from 1 January 2022)



Mr. Varit Namwong

Director /
Director to Nomination
and Remuneration Committee /
Director to Risk Management
Committee

(Effect from January 19, 2022)



Mr. Piroj Samutthananont

Director /
Director to Risk Management
Committee /
Managing Director

Corporate Governance

6. Corporate Governance Policy

The Board of Directors of Global Green Chemicals Public Company Limited (“GGC”) highly values business operations with sustainability and emphasizes compliance with Business Code of Conduct of GGC Group, Best Practices for Board of Directors of Listed Companies, relevant rules, regulations, and guidelines of the Stock Exchange of Thailand (SET), and the Securities and Exchange Commission (SEC) and is determined to elevate its Corporate Governance (CG) to international standards. GGC is committed to making GGC Group an efficient organization in business operations with Good Corporate Governance, management excellence, responsibility, ethics, fairness, transparency, and accountability. GGC also intends to create maximum benefits for the shareholders and consider all relevant stakeholders to build mutual trust and sustainable growth.

6.1 Overview of CG Policy and Guidelines

6.1.1 Policy and Guidelines related to the Board of Directors

1) Board of Directors

The Board of Directors (“The Board”) constitutes the core of Corporate Governance. The management of GGC Group’s business operations, as stipulated by laws, raises with the Board, and business conduct must be under the laws, objectives and GGC’s Articles of Association, as well as the resolutions of the shareholders’ meeting. The Board is appointed by the shareholders at their Annual General Meeting (AGM). All Directors are fully qualified and do not have prohibited characteristics stipulated by law and related rules and regulations. GGC has defined a policy of diversity of the Board and considers it part of its nomination and selection process to ensure that the composition of the Board is suitable, diverse, and consistent with GGC’s Corporate Governance and Business Code of Conduct Handbook. The considerations of the candidates are based on their credentials, knowledge, abilities, and experience in a variety of fields that are beneficial to GGC (Board Skills Matrix) such as engineering, industry, economics and finance, business administration, accounting, law, national security, sustainability, and information technology, etc., including gender diversity, regardless of race, nationality, color, ethnicity, or religion, in order to combine knowledge, abilities and diverse perspectives essential to the Company’s business strategy.

At present, the Board consists of 11 directors, of whom 1 is executive director and 10 are non-executive directors, and 8 are independent directors. Each director has the roles, duties, and responsibilities, based on laws, rules, and GGC’s Articles of Association, resolutions of the shareholders’ meeting, and Good Corporate Governance. The roles, duties, and responsibilities of the Board have been clearly defined. The Chairman is responsible for ensuring that the functioning of the Board is efficient and independent from the management. The details are in the report under the topic entitled “Board of Directors.”

2) Subcommittees

In order to ensure the prudent and efficient screening of significant operations under the Good Corporate Governance, the Board has established 4 subcommittees namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainable Development Committee, and the Risk Management Committee. Each of these subcommittees has been assigned the duty to peruse and screen specific important implementation with prudence and efficiency before submitting its recommendations or suggestions to the Board. The charter of each subcommittee has been defined in written form. The details of the name list, duties, responsibilities, and number of meetings appear in the report entitled “Subcommittees.”

3) Nomination and Appointment of Directors, Independent Directors, and Top Executives

The nomination and appointment of GGC's directors is undertaken through the consideration process of the Nomination and Remuneration Committee and the Board. The Nomination and Remuneration Committee is responsible for considering the nomination of suitable candidates as the Company's directors with sufficient background information for decisions to be made under GGC's criteria. The Board Skills Matrix is used, taking into account the candidates' full qualifications, with no prohibited characteristics stipulated by law and related regulations, independence, no conflict of interest, as well as the Board diversity namely the proportion of female directors (gender diversity), independent directors, racial and nationality diversity, skill diversity covering knowledge, abilities, expertise, and experience as well as specific qualifications that are useful and consistent with GGC's business strategy, regardless of gender, race, nationality, color, ethnicity, or religion. It is to ensure that the composition of the Board is diverse, appropriate, and consistent with the policy on variety for appointment at the shareholders' meeting under GGC's Articles of Association. The Board will also appoint new directors to replace those who have resigned before the end of their terms. The details of the results of the nomination, the development, and the assessment of the directors and subcommittees in the past year appear in the report titled “Nomination, Development, and Assessment of the Board of Directors”.

4) Board Meetings

The Board determines the meeting plan in advance every year. It schedules its meeting in advance, held monthly, so that directors can plan their schedules without affecting their full-time jobs. Additional meetings may also be scheduled as appropriate and necessary. The Board will receive a meeting invitation letter, draft meeting minutes, and meeting agendas and relevant information at least seven days before the meeting, which are sent by GGC via the D-Join (Digital Join Application) system to all directors for convenience, speed, less use of paper, with a data security system. In 2021, the Board held in total 13 meetings.

The Chairman of the Board presides over the meetings by according all directors the opportunity to participate and express their opinions freely. The number of directors in attendance must not be less than two-thirds of the total number of the Board to constitute a quorum, which will be maintained until the resolutions are reached by the majority of the votes. One director carries one vote. If the number of votes is equal, the Chairman will have the final casting vote. The Board highly values the management of conflicts of interest among the stakeholders with prudence, fairness, and transparency through full disclosure of information on such matters. If a director has a stake and interest in the matter under consideration, he/she will not be allowed to take part in the decision-making on that issue.

At the end of the meeting, the Corporate Secretary is responsible for preparing the minutes of the meeting for submission to the Board for consideration within 14 days from the date of the meeting, for approval at the next meeting, and for the Chairman's signature provided to certify the correctness. The approved minutes of the meetings together with supporting documents for various meeting agendas will be systematically stored electronically under the levels of GGC's confidentiality to facilitate search and reference. Moreover, to comply with the Good Corporate Governance, the Board has scheduled the meetings of the non-executive directors to share opinions and guidelines for managing GGC's business operation as well as the meetings of the independent directors to exchange views and review their roles and duties on an annual basis. In 2021, there were one meeting of the non-executive directors (on December 15, 2021) and another of the independent directors (on September 8, 2021). The minutes of the meetings were also submitted to the Managing Director.

5) Remuneration of Directors and Management

Directors

The Board has prescribed the policy of remuneration to GGC's directors fairly and reasonably under the Good Corporate Governance. The Nomination and Remuneration Committee is responsible for reviewing the appropriateness and consistency with the Company's performance and comparing the current economic situation of related businesses, the obligations and responsibility of the Board, the criteria approved by the shareholders' meeting, the dedication of time, the annual performance assessment of the Board, as well as the pattern and rates of remuneration of directors of other listed companies in the same business group and of similar size. The remuneration paid to directors must be approved by the shareholders' meeting. It is divided into monthly remuneration and meeting allowance for attendance in each subcommittee.

Management

GGC evaluates management performance annually, based on KPIs, including financial performance, implementation of long-term strategic objectives, management performance, corporate performance, comparison of practices with other SET-listed companies in the same industry of a similar size, and in proportion with the duties, responsibility, management development, and the overall economic conditions. The remuneration of the Managing Director is appropriately determined under clear, transparent, fair, and reasonable criteria, considering the duties, responsibilities, and performance. The Nomination and Remuneration Committee will determine the remuneration of the Managing Director and submit it to the Board for approval. The Managing Director is entitled to other remuneration and benefits as the top executive in addition to those received as a director. The details appear in the report under the topic entitled "Executives".

6) Development of Directors and Management

The Board determines the development policy of directors and management to enhance/develop their knowledge, understanding, and skills, both in the nature of the Company's business and other courses that are beneficial to the continued performance of duties by defining the models and methods of such development from the orientation, reception of news, information, and knowledge essential to the performance of duties, including internal and external training held for GGC's newly appointed and current directors, management appointed as directors of GGC Group and those involved in the Company's Corporate Governance system, namely the secretaries to the subcommittees, the Corporate Secretary, and personnel responsible for investor relations. The details appear under the schedule of development and training of directors.

7) Board Performance Assessment

The Board conducts its annual self-assessment, entire board assessment, and cross-assessment as the framework to inspect the performance of the Board, and consider and review work performance, problems, and obstacles occurred during the past year. It is an opportunity to consider the dedication of time to perform the duties, as well as improving the relationship between the Board and management. The Board may consider commissioning external consultants to assist in setting guidelines and proposing recommendations to assess the Board's performance as necessary and appropriate.

Furthermore, all subcommittees conduct the annual self-assessment and the entire subcommittee assessment. The result of the annual performance assessment of the Board and the subcommittees will be submitted to the Board's meeting to provide useful suggestions for the improvement and development of the subcommittees' performance, establish a benchmark which will be methodically used to compare the performance, and disclose it in the form "56-1 One Report". The Nomination and Remuneration Committee will use it as part of determining the annual remuneration of directors, in addition to GGC's performance. The detail appears in the report entitled "Nomination, Development, and Assessment of the Board of Directors' Performance."

6.1.2 Policies and Guidelines of Corporate Governance

The Board defines the Corporate Governance Policy to ensure that GGC's directors, management, and employees adhere to the guidelines as follows:

- 1) Adhere to the international guidelines and be determined to continuously develop corporate governance under international standards, namely taking into account the rights of shareholders, equitable treatment of shareholders, importance of the role of stakeholders, information disclosure and transparency, and the responsibility of the Board.
- 2) All directors, management, and employees are committed to applying the key code of Corporate Governance, namely "Creation of Long-Term Value, Responsibility, Equitable Treatment, Accountability, Transparency, and Ethics (C R E A T E)" as guidelines, as well as strictly performing the duties under applicable laws and regulations in all countries where GGC is conducting its business.
- 3) The Board sets up a management structure with relations between the Board of Directors, management, and shareholders based on fairness. It also plays a significant role in defining the vision, strategies, policies and plans, with a system to track/measure the performance, effective risk management, independence, and responsibility for the outcomes of the performance of their duties under the Good Corporate Governance. The Board and management will assume leadership in ethics in compliance with GGC's Corporate Governance Policy and Business Code of Conduct, as well as promotion of the Corporate Governance culture. They will also take care of stakeholders, encourage business practices and operation by taking into account the principles of human rights, consumer rights, and fair use of labor as well as providing a system of monitoring, assessment, and review to ensure all employees' complete and sustainable adherence and compliance with the Corporate Governance Policy.

GGC provides a structure and process of relations between the Board, management, employees, and shareholders to enhance their competitiveness, leading to the organization's sustainable growth and adding value to the shareholders in the long run, taking into account other stakeholders and adhering to the key principles of Corporate Governance.

Key Principles of Corporate Governance (C R E A T E)

1. A vision to create long-term value added to the organization (Creation of Long-Term Value)
2. Responsibility for performing duties with sufficient capacity, efficiency, and dedication (Responsibility)
3. Equitable and fair treatment of stakeholders (Equitable Treatment)
4. Accountability for one's own decisions/actions, with the ability to provide the accompanying clarification and explanation (Accountability)
5. Transparency in operation which is accountable, and accurate, complete, and timely disclosure of information to relevant parties, and equally through appropriate channels (Transparency)
6. Morals and ethics in the conduct of business (Ethics).

Prevention of the Use of Inside Information

GGC has established a policy to ensure equitability and fairness to the relevant stakeholders, including all shareholders. The information or news that is material to changes in securities prices, not yet disclosed to the public, is considered the inside information used in business operations and is considered GGC Group's confidential information. If disclosed, it could affect GGC Group, especially its stock value, as well as its image. Therefore, directors, management, and employees at all levels of GGC Group must keep it confidential. They must not use the inside information obtained from their duties to inform others or to use it to seek their own gain from unlawful securities trading or to cause GGC Group's loss of benefits, whether directly or indirectly. Thus, GGC has formulated the following guidelines:

1. The Board and management, as defined by the SEC, are responsible for reporting changes in the Company's securities holdings to the Corporate Secretary at least one day in advance of the transaction under the Good Corporate Governance, reporting to the SEC via the electronic system within three business days from the date of purchase or transfer of such securities, under the rules prescribed by the SEC, to allow the Corporate Secretary to prepare the summary report and submit it to the Board's meeting and disclose it in the form 56-1 One Report.
2. The Board and management, under the SEC's definition, should refrain from trading in GGC's securities at least 30 days before the announcement of the financial statement to the SET and at least 24 hours after.
3. All employees and related parties are prohibited from using inside information for their own benefit in trading or persuading others to buy or sell or offer to buy or sell GGC's shares, either in person or through a broker while still in possession of GGC Group's information not yet disclosed to the public, including providing such inside information to other persons for the benefit of trading in GGC's shares. SET considers this action speculative trading or creating an undue advantage.

Anti-Corruption

The Board dearly values anti-corruption by declaring in writing an anti-corruption policy on February 14, 2018, to support, encourage, and raise awareness of all personnel in countering all forms of corruption. GGC has joined the Thai Private Sector Collective Action Project against Corruption (CAC) since 2017. Its membership was renewed for the first time on March 31, 2021. The next renewal will be due on March 30, 2024. The detail of the operation

appears in the report entitled “Monitoring to ensure compliance with Corporate Governance policies and practices.”

Prevention of Conflicts of Interest

The Board determines a policy and guidelines to consider transactions that have or may involve conflicts of interest between the shareholders, GGC’s directors, and other persons both directly and indirectly in case of related party transactions, under the shareholders’ power of approval, to be screened by the Audit Committee. This is to ensure that such transaction is fair, appropriate, and beneficial to the shareholders, and under the law and the SEC requirements. Moreover, the Board also ensures that the procedures are followed with due care within the precept of reason and independence. The transparent process is put in place for approval to enter the transaction, taking into account the best interests of GGC based on completeness and correctness, under the rules of the SEC.

The stakeholders will not take part in the decision to consider engaging in the transaction. In every Board meeting, the Chairman will request the cooperation of GGC’s directors to follow the policy in considering items that may involve conflicts of interest by allowing them to notify the meeting to abstain from voting, or giving viewpoints, or leaving the meeting altogether during the relevant agenda or having a stake, as well as supervising the accurate and complete disclosure of information regarding such transactions.

In addition, GGC has established measures to prevent conflicts of interest by requiring directors, management, and all employees to report conflicts of interest annually, or when such transaction occurs, which must be immediately reported to GGC by using the Company’s conflict of interest report form (for the directors) or by the conflict of interest reporting system via the intranet (for executives and employees) for the acknowledgment of their supervisors.

6.2 Business Code of Conduct

The Business Code of Conduct of GGC Group consists of best practices in various fields which define a scope of standard conduct in adherence to good ethics, integrity, and honesty with an aim that directors and management will take the lead in instructing and promoting understanding of their personnel to strictly perform Business Code of Conduct. GGC has defined a myriad of ethical guidelines covering best practices and treatment towards all stakeholders, published them in the CG Handbook, and distributed the handbook to the directors, management, and employees, including those of its subsidiaries and affiliates, for their acknowledgment, understanding, and signature as a commitment to adhere to such principles in their operations. The Corporate Governance and Business Code of Conduct is also made available on GGC’s website www.ggcplc.com under the “Corporate Governance” for easy access of shareholders, investors, and interested parties.

In addition, the Managing Director has sent letters to GGC’s business partners and customers to acknowledge GGC’s Business Code of Conduct. These business partners and customers have signed a document acknowledging GGC’s intention and agreeing to conduct the business in the same direction as the Company.

6.2.1 Corporate Compliance

GGC recognizes that compliance with the law or applicable standards will lead to sustainable development. Therefore, it takes seriously operation under the law and relevant rules, both domestically and internationally. GGC has taken several actions as follows:

1. GGC's regulations are improved to ensure more comprehensiveness and completeness such as the requirements for the procurement and distribution of raw materials, feedstock, products, and services. It issued a handbook on related party transactions and a manual of delegated authorities (MODA) in line with the changing organizational structure, as well as prescribing a policy and handbook for the provision of legal services. It is to inform service users of the scope of the Company's legal guidelines and procedures and to disseminate them to GGC Group to use as guidelines for their legal work.
2. The Corporate Governance policy is communicated and disseminated to ensure all employees' concrete and effective compliance with laws, rules, and regulations via email, training, and publications.
3. The "GGC Way of Conduct" is established for legal and compliance work in order to determine the guidelines of legal and compliance work for GGC Group and the "GGC Way of Conduct" is communicated to the Group for acknowledgment.

6.2.2 Communication of Good Corporate Governance

In 2021, GGC established a Corporate Governance Roadmap that enhances knowledge and understanding to contribute to the implementation of the Corporate Governance policy and CG Handbook with guidelines for communicating to directors, management, and all employees through activities. The vision was established to create long-term value added to the organization (Creation of Long-Term Value), responsibility for performing duties (Responsibility), equitable and fair treatment to all stakeholders (Equitable Treatment), accountability for decision-making and explanation of the action (Accountability), transparency, accountability, and accurate, complete, and timely disclosure of information through appropriate channels equally (Transparency), and ethics and Business Code of Conduct (Ethics) for all employees' acknowledgment from the first day of work to adhere to and comply with, by consistently instilling and reminding through training, seminars, and various activities:

1. Compulsory training course on the GGC CG E-Learning system was held for management and employees to give their signatures for acknowledgment, and a survey was conducted to gauge the understanding of the code of Corporate Governance and Business Code of Conduct.
2. Every orientation session for directors, management, and new employees was required to include "Corporate Governance and Business Code of Conduct" as a main topic.
3. The "Governance and Compliance Roadshow of the Year 2021" was organized twice. It was a compulsory course to raise awareness among all management and employees to comply with GGC's Corporate Governance and Business Code of Conduct as well as applicable laws, rules, and regulations of GGC Group.
4. Communication and distribution of Corporate Governance and Business Code of Conduct Handbook to all directors, management, and employees, including business partners and customers who were required to sign on the acknowledgment and conformity form consenting to adopt the CG principles, policy, and ethics in their operations.
5. Communication with employees after communicating with management at the Management Committee meeting on CG best practices via email, GGC CG News, and LINE application on the average twice a month to serve as easy access and convenient communication channels.
6. Communication and understanding of the Business Code of Conduct through GGC's Microsoft Stream and Green System to increase the channels of access and provide more convenience for the employees.

7. Communication and understanding of anti-corruption under the topic of the roles of the executives and employees in anti-corruption as lectured by the Thai Private Sector Coalition of Collective Action against Corruption (CAC).
8. Assessment on compliance with criteria set by external supervisory authorities such as Office of the Securities and Exchange Commission (SEC), Stock Exchange of Thailand (SET), Thai Institute of Directors Association (IOD), and Thai Investors Association (TIA) to measure the efficiency of the implementation under the CG code and to elevate GGC's CG to international standards.
9. GRC Health Check survey was conducted to assess the perception and understanding before organizing integrated training for executives and employees to measure the level of their basic knowledge of Corporate Governance under the risk management and compliance processes. It would help drive the organization to develop its good Corporate Governance as well as the efficiency of work planning, monitoring, and assessment of performance within the framework of sufficient internal control to completely achieve the objectives, goals and strategies, set by GGC. Under the survey, most employees had remarkable understanding of internal control, anti-corruption, and communication of the Good Corporate Governance, including rules, regulations, and requirements. GGC would use the feedback to further improve and communicate the principles of GRC to the employees later.

6.3 Significant Changes and Developments in the Policies, Practices, and Corporate Governance System in 2021

6.3.1 Setting the Goals, Strategies, and Organizational Culture

The goal was set to reduce greenhouse gas (GHG) emissions to zero by 2050 under the global trend and to demonstrate leadership in sustainability in the industry.

The strategy with a focus on the current personnel development to enhance knowledge, abilities, and skills under the organization's direction, organization restructuring, strong corporate culture, as well as more efficient GRC and internal control.

6.3.2 Strengthening Board Effectiveness

- The guidelines and process of nomination and appointment of GGC's directors were improved, covering the related rules and criteria, as stipulated in the Corporate Governance and Business Code of Conduct Handbook, as well as under the performance of the Nomination and Remuneration Committee.
- Review of the Charter of the subcommittees. In 2021, the Charters of the Audit Committee and the Risk Management Committee were revised for consistency with the standards of the regulatory agencies and best practices in the Corporate Governance and Business Code of Conduct Handbook ("CG Handbook") as well as performance of duties as assigned by the Board.
- The performance assessment format for both the Board and the subcommittees was made online to increase the efficiency of data storage and processing.

6.3.3 Risk and Control Self Assessment (RCSA)

The assessment in-process level throughout the organization was implemented to conduct the risk analysis and determine internal control to upgrade GGC's internal control, enabling GGC to flexibly achieve its objectives. The operation in six main processes was under review, namely (1) Procurement of raw materials (2) Inventory management of raw materials, products in process, and finished goods (3) Revenue and debtors (4) Production process (5) Business development project preparation, and (6) Project implementation process. The work process from start to finish was documented, resulting in integrated operation, with greater linkage in each process.

6.3.4 Improvement of GGC's Policies, Regulations, and Guidelines

- The contents and guidelines in the Corporate Governance and Business Code of Conduct were updated in line with GGC's strategy and operation, including closing additional gaps under the assessment criteria of Corporate Governance, both domestically and internationally.
- In the process of preparing and promulgating the policy on the use of electronic signatures (E-Signature) as the framework for overseeing electronic transactions, both within and outside the organization.
- The human rights policy, covering all aspects, was developed by focusing on the development of sustainability operation in the social context of the assessment and the ranking under the Dow Jones Sustainability Indices

(DJSI), as well as to ensure that GGC's sustainability operation was suitable for the current situation, and under the provisions under Thai and international laws, including various internationally accepted rules.

- GGC's anti-corruption policy and guidelines were improved in line with the self-assessment form, the revised 4.0 version of the Thai Private Sector Collective Action against Corruption (CAC).
- The Related-Party Transaction (RPT) Manual was improved in line with the current operation.

6.3.5 Supervision of GCC Group

GGC prepared the GGC Way of Conduct under the GC Way of Conduct 2020 by following the hierarchical governance framework, based on the Apply & Explain principle, to establish a standard of consistent operation across the Group. The Group was urged to consider establishing individual Ways of Conduct. The GGC Way of Conduct was communicated to its subsidiary, Thai Ethoxylate Company Limited, as the first company.

6.3.6 Employee Management and Development

- The assessment model of employees' four core behaviors was improved, from the one-dimensional supervisor's perspective to the 360-degree model to reflect employees' behaviors more accurately.
- The health, safety, occupational health, and work environment of the employees were taken care of, during normalcy and during the outbreak of the Covid-19 pandemic.

6.3.7 Company's Responsibility toward Stakeholders

Customers/Business partners

- A sales service system was developed in the salesforce to support the management of the voices of customers more systematically.
- The privacy notice and the consent form were prepared for the collection, use, and disclosure of personal information, including evaluation of business partners on the implementation of the Personal Data Protection Act.
- A customer relationship management (CRM) system was developed to cover the work of all departments, enhance the capability to support sales and service, and listen to the voices of customers.
- A customer rating system was developed to select customers/business partners for the procurement of raw materials, feedstock, and product distribution to ensure proper standards and accountability.
- During the Covid-19 pandemic, GGC expressed concerns and distributed CHOB alcohol hand gel to its customers to reduce the spread and promote good hygiene of the customers and related agencies.

Community and Society

- Visit to communities under the plant's responsible areas. Due to the Covid-19 pandemic, the channel to maintain good relations with the community was increased by communicating through phone calls to listen to the opinions and problems of the communities.

Investors

- Online platform technology was applied in organizing meetings, Analyst Meetings, the Opportunity Day, and Roadshows to meet both domestic and international investors to maintain the consistency and quality of uninterrupted communication with investors and analysts during the Covid-19 pandemic. It drew substantial interest and was positively received.
- Apart from GGC's performance, disclosure of all facets of information, including financial, environmental, and social aspects, and corporate governance or ESG was done through the website or investor kits.

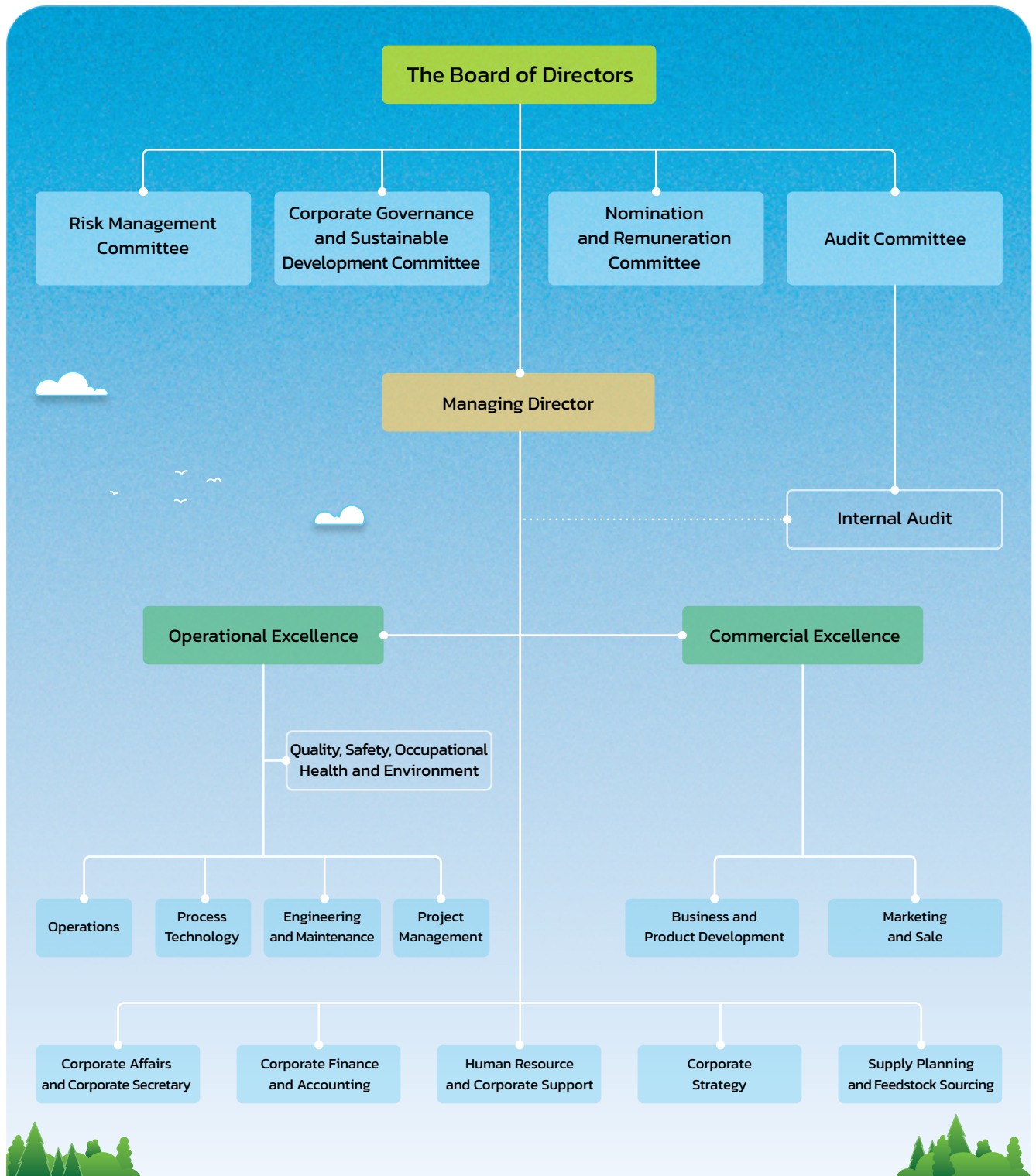
Employees

- The organizational structure, manpower, and business operations in 2021 were prepared to support commercial projects.
- The contract for using some shared services was cancelled and the transfer of shared services was accepted to manage the plant's self-maintenance. As the maintenance work in the first plant required specialized personnel, transfer of employees to work was accepted, and the management plan of engineering and maintenance units duly adjusted. The operation was completed in the third quarter of 2021.
- For employee development, GGC focused on the employees' self-learning through a new system entitled "Green" with a variety of courses, such as a leadership development program and skills development courses in line with the duties and responsibility set forth for each position (Functional Competency Development) to ensure that employees could learn even when working from homes to reduce the risk of contracting the Covid-19 and to provide continuous employee development.

7. Governance Structure and Key Information on the Board of Directors, Sub-Committees, Management, Employees, etc.

7.1 Governance Structure

(As of January 1, 2022)



7.2 The Board of Directors

As of February 16, 2022, the Board of Directors is as follows:

Name	Position	Date of Appointment
1. Mr. Kongkrapan Intarajang	Chairman	November 6, 2019
2. Prof. Dr. Kumchai Jongjakapun	Chairman of Independent Directors / Chairman of the Audit Committee	February 17, 2016
3. Mrs. Kannika Ngamsopee	Independent Director / Chairman of the Risk Management Committee / Director to the Audit Committee	February 17, 2016
4. ACM Songtam Chokkanapitag	Independent Director / Chairman of the Nomination and Remuneration Committee	February 17, 2016
5. Pol. Gen. Suchart Theerasawat ⁽¹⁾	Independent Director / Chairman of the Corporate Governance and Sustainable Development Committee	December 23, 2020
6. Mr. Sarawut Benjakul ⁽²⁾	Independent Director / Director to Audit Committee	April 2, 2021
7. Mr. Jarun Wiwatjesadawut ⁽³⁾	Independent Director / Director to Risk Management Committee	April 2, 2021
8. Mr. Suphit Suwagul	Independent Director / Director to Corporate Governance and Sustainable Development Committee	January 1, 2018
9. Maj. Gen. Titawat Satiantip	Independent Director / Director to Nomination and Remuneration Committee / Director to Corporate Governance and Sustainable Development Committee	September 11, 2019
10. Mr. Varit Namwong ⁽⁴⁾	Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee	January 19, 2022
11. Mr. Piroj Samutthananont ⁽⁵⁾	Director / Director to Risk Management Committee	May 1, 2021

Remarks:

⁽¹⁾ Pol. Gen. Suchart Theerasawat, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director and Chairman of the Corporate Governance and Sustainable Development Committee, replacing Mr. Payungsak Chatsutipol, with effect from April 28, 2021.

⁽²⁾ Mr. Sarawut Benjakul, at the 2021 AGM on April 2, 2021, was appointed as a director, replacing Mr. Apichart Jongskul, who completed his term, and at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director to Audit Committee, replacing Mr. Apichart Jongskul, with effect from April 28, 2021.

⁽³⁾ Mr. Jarun Wiwatjesadawut, at the 2021 AGM on April 2, 2021, was appointed as a director, replacing Mr. Payungsak Chatsutipol, who completed his term and at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director to Risk Management Committee with effect from April 28, 2021.

⁽⁴⁾ Mr. Varit Namwong, at the Board Meeting No.1/2021 on January 19, 2021, was appointed as a director, replacing Mr. Patiparn Sukorndhaman, who resigned, with effect from January 19, 2021.

⁽⁵⁾ Mr. Piroj Samutthananont, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director, director to Risk Management committee, replacing Mr. Suwat Kamolpanus, who resigned, with effect from May 1, 2021

Change in Directors in 2021

Directors who completed the term during the year

Name	Position	Time in Office
1. Mr. Payungsak Chartsutipol	Independent Director / Chairman of the Corporate Governance and Sustainable Development Committee	Jan. 6, 2017 – Apr. 2, 2021
2. Mr. Apichart Jongskul	Independent Director / Director to Audit Committee	Jan. 6, 2017 – Apr. 2, 2021

Directors who resigned during the year

Name	Position	Time in Office
1. Mr. Patiparn Sukorndhaman	Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee	Feb. 17, 2016 – Dec. 31, 2021
2. Mr. Suwat Kamolpanus	Director / Director to Risk Management Committee	Aug. 1, 2020 – Apr. 29, 2021

The Board consists of 11 directors, 10 of whom are non-executive directors, and 8 are independent directors. The Chairman of the Board is not an independent director but is independent of management in compliance with the good practices of the CG Code and is not involved in the Company's day-to-day operations. The roles and duties of the Chairman and Managing Director appear in "Scope of Authority of Chairman and Managing Directors".

The contact address of the directors and management is 555/1 Energy Complex Building A, 4th Floor, Vibhavadi Rangsit Road, Chatuchak District, Bangkok 10900.

Securities held in the name of Directors, their spouses or cohabiting partners and minor children

Securities Holder*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of January 1, 2021	As of December 31, 2021	
1. Mr. Kongkrapan Intarajang	- None -	- None -	No Change
2. Prof. Dr. Kumchai Jongjakapun	15,000 (Spouse)	15,000 (Spouse)	No Change
3. Mrs. Kannika Ngamsopee	20,000 (Spouse)	20,000 (Spouse)	No Change
4. ACM Songtam Chokkanapitag	- None -	- None -	No Change
5. Pol. Gen. Suchart Theerasawat	- None -	- None -	No Change
6. Mr. Sarawut Benjakul ⁽¹⁾	N/A	- None -	N/A
7. Mr. Jarun Wiwatjesadawut ⁽²⁾	N/A	- None -	N/A
8. Mr. Suphit Suwagul	- None -	- None -	No Change
9. Maj. Gen. Titawat Satiantip	- None -	- None -	No Change
10. Mr. Patiparn Sukorndhaman	23,000	23,000	No Change
11. Mr. Varit Namwong ⁽³⁾	N/A	N/A	N/A
12. Mr. Piroj Samutthananont ⁽⁴⁾	N/A	- None -	N/A

Directors who completed terms in 2021

Securities Holder*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of January 1, 2021	As of April 2, 2021	
1. Mr. Payungsak Chartsutipol	50,000	50,000	No Change
2. Mr. Apichart Jongskul	- None -	- None -	No Change

Directors who resigned in 2021

Securities Holder*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of January 1, 2021	As of April 29, 2021	
1. Mr. Suwat Kamolpanus	- None -	- None -	No Change

Remarks: In compliance with SEC's notification No. TorChor 17/2551 on Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities, Clause 2 (16)

* Including shares held by the Directors' spouses or cohabiting partners and minor children

⁽¹⁾ Mr. Sarawut Benjakul, at the 2021 AGM on April 2, 2021 was appointed as a director, replacing Mr. Apichart Jongskul, who completed his term

⁽²⁾ Mr. Jarun Wiwatjesadawut, at the 2021 AGM on April 2, 2021 was appointed as a director, replacing Mr. Payungsak Chartsutipol, who completed his term

⁽³⁾ Mr. Varit Namwong, at the Board meeting No. 1/2022 on January 19, 2022 was appointed as a director replacing Mr. Patiparn Sukorndhaman, with effect from January 19, 2022

⁽⁴⁾ Mr. Piroj Samutthananont, at the Board meeting No. 4/2021 on April 28, 2021 was appointed as a director, replacing Mr. Suwat Kamolpanus who resigned, with effect from May 1, 2021

7.2.1 Authorized Signatory

GGC's duly authorized signatories, according to GGC's articles of association and Certificate of Incorporation from the Department of Business Development, Ministry of Commerce, dated January 19, 2022, are two of the three directors, namely Mr. Kongkrapan Intarajang, Mr. Varit Namwong and Mr. Piroj Samutthanant, jointly signing with the company seal affixed.

7.2.2 Composition of the Board

The Company regulation and Corporate Governance and Business Code of Conduct conducted by the Board of Directors consists of no fewer than 5 but no more than 11 directors, appointed or dismissed by the shareholders' meeting, each for a three-year term. One-third or at least three of them must be independent directors and at least half of the entire Board must have residency in the Kingdom of Thailand. In addition, all directors must possess required qualifications and no prohibited characteristics stipulated by laws, and must not be older than 70 years old. The Board shall nominate one director as Chairman and may appoint vice chairman as appropriate.

The composition and qualifications of the Board are in line with the GGC's Articles of Association, Corporate Governance and Business Code of Conduct and applicable laws without gender or other discrimination. The Board must consist of directors with diverse knowledge, expertise and experience which are useful in GGC's operations. Members of the Board should not hold more than five directorships in listed companies, and not more than three state enterprises or juristics entities which have state enterprise as shareholder according to the resolution of the Cabinet. The current Board of Directors comprises 11 members, an appropriate number which suits the size and business of GGC, as follows:

- (1) Ten non-executive directors (or 90.91% of the entire Board)
- (2) One executive director (the Managing Director)
- (3) Eight independent directors, or 72.73% of the entire Board, which exceeds half of the Board.
- (4) One female director, or 9.09% of the entire Board.

7.2.3 Authority, Duties, and Responsibilities of the Board

The Board takes a proactive role in carrying out its duties in decision-making or in defining corporate directions and compliance to ensure efficiency of CG monitoring and GGC's best interests as follows:

1. Perform its duties and ensure that GGC's operations are conducted in strict compliance with the laws, GGC's objectives and Articles of Association, and resolutions of shareholders' meetings in adherence to the Stock Exchange of Thailand's Corporate Governance of Listed Companies;
2. Dedicate their time and value the defining of GGC's vision, mission, directions and strategies. The meeting attendance of each director should not be less than 75% of the total meetings scheduled in advance for each year, excluding the meetings calls after setting the year's schedule. The Board should freely express their views and seek information which will be useful in defining GGC's direction;
3. Review and approve important policies and strategies, including the Company's objectives, major plans and financial objectives and goals, promote innovation and technology and apply them to the Company's operations, ensure that management conducts business in line with the defined direction and strategy and effectively drives the set vision, direction and strategy into practice, and is able to promptly respond to changing situations;
4. Define a Corporate Governance policy and Business Code of Conduct, which shall consist of principles and good practices for directors, management and employees, with an aim for raising awareness among them in performing the duties with responsibility and in strict compliance with these practices as well as GGC's rules and regulations, taking into account equitable treatment for all stakeholders;
5. Delegate approving authority, besides those already made under the Articles of Association, to the Managing Director, for example, authority to approve the investment budget, implementations of projects of the Company, and the entry into contract of significance, including the authority to appoint directors to replace those retired during the year, appoint subcommittee, designate authorized signatories, set the date of the Annual General Meeting of Shareholders and interim dividend payment;
6. Ensure that GGC commands an effective and reliable accounting system, financial reporting and internal audit, and effective and efficient internal control and internal audit assessment process;
7. Consider potential risk and define comprehensive risk management guidelines and ensure that management is equipped with efficient risk management system or process, and seek business opportunities from such risk, and institute adequate and efficient internal control system;
8. Oversee and supervise issues regarding potential conflicts of interest and related-party transactions with emphasis on key transactions to ensure the best interests of shareholders and stakeholders;
9. Ensure suitable communicating channels with each group of shareholders and stakeholders, and oversee information disclosure to ensure its accuracy, clarity, transparency, reliability and of high standard;
10. Assess and review the performance of the Board and the Managing Director regularly;
11. Ensure a suitable compensation system or mechanism for senior management which correspond to their performance, to induce short-term and long-term motivation;
12. Express leadership and be a role model of corporate governance in line with GGC's CG Policy;

13. Ensure that the assessment on compliance with Corporate Governance Policy and Business Code of Conduct is carried out at least once a year;
14. Ensure that a recruitment system is in place and that GGC has qualified personnel to fill important positions appropriately under the transparent and fair procedures. Appointment of GGC's high executives from Vice President to Managing Director requires majority votes from the Board;
15. Report the Company his or her vested interests as well as those of related persons related to the management of the Company;
16. Attend every meeting of the Board and of the Meeting of Shareholders, or if, under any circumstance, attendance is impossible, the Chairman of the Board must be notified;
17. Emphasis on conducting business in a social and environmentally responsible manner, promote the sustainable well-being of society, starting from improving and elevating the livelihood of people in the communities surrounding GGC's facilities for sustainable co-existence;
18. Support implementation of anti-corruption of all forms for sustainable growth and prosperity.

In addition, the businesses of the Board that require approval from shareholders' meetings are as follows:

- Engagement in a related transaction, or acquisition or sale of major assets of GGC as stipulated by the laws and SEC;
- Selling or transferring GGC's business, either in its entirety or partially, to another party;
- Acquiring or accepting the transfer of another party's business;
- The drawing up, amendment, or revocation of contracts related to a full or partial lease of GGC's business, the appointment of a proxy to act on behalf of GGC, or the merging of the business with another party to share profits;
- Addition to or amendment of the memorandum of association or Articles of Association;
- Increasing or decreasing GGC's authorized capital.
- Debenture issuance offered to the public;
- Company dissolution or a merger with another company;
- Announcement on dividend payment; and
- Other matters which are required to have the approval of the shareholders' meeting as defined under the laws and GGC's Articles of Association.

7.2.4 Appointment and Removal of Directors

The appointment, dismissal and removal of directors are defined in GGC's Articles of Association, which can be summarized as follows:

(a) Appointment of Directors

1. Shareholders at a shareholders' meeting shall elect director(s) through majority voting according to the following rules and procedures:
 - (1) Each shareholder shall have one vote per share held;
 - (2) In the event that the number of candidates for the election does not exceed the number of vacant positions, shareholders shall vote on these eligible candidates. Each shareholder exercises all votes applicable under (1) in electing one or more persons as directors, provided that no vote is divisible.
 - (3) In the event that the number of candidates exceeds the number of vacant positions, the meeting then can elect directors individually. In the voting, shareholders with voting rights will cast all of their votes applicable under (1) to one candidate or more persons as directors, provided that no vote is divisible. The candidates with the most votes are to be appointed directors up to the number open at the meeting. If more candidates receive equal votes than the number of directors required, the Chairman of the meeting must cast a deciding vote.
2. In the event a director's position is vacant due to other reasons besides term completion, the Board may elect a qualified person without the prohibited characteristics under the laws to fill the vacancy at the next shareholders' meeting, except if the remaining term of the previous director is less than two months. The acting director must secure at least three-quarters of the votes by the remaining directors. The elected director can stay in office only for the remaining term of the predecessor.
3. In the event of failure to achieve quorum due to the Board's composition, the remaining directors will perform their duties on behalf of the Board only in calling a Shareholders' Meeting to appoint directors to fill all the vacancies within one month from the date the number of directors become insufficient to constitute a quorum. The elected director can stay in office only for the remaining term of the predecessor.

(b) Dismissal or Removal of Directors

1. In every Annual General Meeting (AGM), one-third of the directors must retire. If this number is not a multiple of three, then the number nearest to one-third applies.

The directors to retire during the first and second year after the Company was registered are on a voluntary basis. If the number of directors to be retired still exceeds the positions, then the retiring directors are to be drawn by lots. For subsequent years, those with the longest terms must retire. The retired directors can be re-elected.

2. Other than term completion, a director may retire upon death, resignation, lack of qualifications, possession of prohibited characteristics specified under the laws, resolution of the shareholders' meeting or court order.

3. Any director who wishes to resign from directorship must tender his or her resignation to GGC. Such resignation will take effect from the date the resignation letter reaches GGC, and he or she may notify the Registrar of his/her resignation.
4. In voting to remove any director from directorship before the completion of his term, a three-quarter (3/4) vote of eligible shareholders present at the meeting is required. The number of shares represented by the three-quarter votes of at least half of the total number of shares represented by the eligible shareholders present at the meeting is also required.

7.2.5 Independent Directors

According to GGC's Corporate Governance and Business Code of Conduct Handbook, at least one-third and no fewer than three directors on the entire Board must be independent directors and each director may serve up to three consecutive terms or nine years from the date of appointment. The re-appointment of independent directors will be considered based on the necessity and appropriateness. The independent directors must possess knowledge as well as competency, and be legally independent as specified in SEC's notification.

The independent directors must be able to express their own points of view freely at the meetings, regularly attend the meetings and have access to financial and other business data to support their independent views to protect interests of those involved and prevent potential conflicts of interest between GGC and top executives, directors, major shareholders or other companies which has the same group of directors, executives or major shareholders. Furthermore, independent directors shall self-verify their independence upon their appointment and report such information, as well as any change to it, to the Company annually to be disclosed in the 56-1 One Report Form, and report if there is any change.

Thus, GGC's independent directors must command the qualifications under SEC's regulations as follows:

1. Must not hold more than 0.5% of the voting shares of GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person of GGC, including the shares held by persons related to the independent director.
2. Must not be or have been an executive director, an employee, a member of staff, salaried consultant, or controlling person of GGC, its parent company, subsidiary, associated company, sister company, major shareholder, or controlling person, unless such status has ceased for at least two years. However, the prohibited roles do not include cases where the independent director used to be a government official or an adviser in government agencies that are major shareholders or controlling persons of GGC.
3. Must not be a related family member or by legal registration as the father, mother, spouse, sibling, or offspring, or spouse of the offspring of any other director, executive, major shareholder, controlling person, or any person who is to be nominated as a director, executive, or controlling person of the GGC or its subsidiary.
4. Must not have or have had any business relationship with GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person in the manner that may obstruct the exercise of independent judgment of the director, and must not be or have been a key shareholder or an authorized controlling person of a person with business relationship with GGC, its parent company, subsidiary,

associated company, major shareholder, or controlling persons, unless such status has ceased for at least two years.

The mentioned “business relationship” shall include conducting ordinary business transactions, offering or taking on leases of any immovable properties, conducting transactions relating to assets or services, or granting or accepting any financial support by way of offering or taking on loans, guarantees, asset-based collaterals, including other similar actions, which result in the Company or the counterparty being indebted to the other party in the amount of 3% or more of the net tangible assets of the Company or Baht 20 million or more, whichever is lesser, based on the calculation of the related transaction value under the notification of the Securities and Exchange Commission (SEC), where the consideration of such indebtedness shall include any indebtedness taking place during a period of one year before the commencement date of the business relationship with such person.

5. Must not be or have been the auditor of GGC, its parent company, subsidiary, associated company, major shareholder, or controlling persons, must not be a key shareholder (holding more than 10% of the voting shares of GGC, including the shares held by persons related to the independent director), and must not be a shareholder who may be perceived to have authorization or a partner of an auditing firm in shareholder who may be perceived to have authorization or is a partner of an auditing firm of which the auditor is attached to GGC, its parent company, subsidiary, associated company, major shareholder, or controlling persons, unless such status has ceased for at least two years.
6. Must not be or have been a provider of any professional services, including providing legal services or financial services with service fees of more than Baht 2 million a year from GGC, its parent company, subsidiary, associated company, major shareholder, or controlling person, and must not be a key shareholder, a controlling person, or a partner of such professional services provider, unless such status has ceased for at least two years.
7. Must not be a director appointed to represent GGC, a major shareholder, or a shareholder connected to a major shareholder.
8. Must not engage or involve in a business of the same nature as and in significant competition with the business of GGC or its subsidiaries, and must not be a key partner in a partnership, an executive director, an employee, a staff member, or salaried consultant, or hold more than 1% of the voting shares of a company that engages in the business of the same nature as and in significant competition with GGC or its subsidiaries.
9. Must not have any other characteristics that may hinder expression of independent views on GGC’s operations.

After being appointed as an independent director, such independent director may be assigned by the Board to make a decision on the business operations of the Company, its parent company, subsidiary, associated company, sister company, major shareholder or controlling person, provided that such decision shall be a collective decision and such independent director shall not be regarded as an executive director.

GGC’s current Board comprises eight independent directors, more than one-third of the entire Board and more than stipulated by laws and exceeds half of the entire Board. In addition, independent

directors have prepared “Independent Directors’ Charter” to ensure clear and concrete performance of independent directors. The charter must be reviewed annually.

7.2.6 Scope of Authority of the Chairman

It is the duty of the Chairman of the Board to support management’s business execution. While he is not an independent director, he plays no part in day-to-day business management. The Chairman oversees the Board’s efficiency and independence from management. Defining meeting agenda in collaboration with the Managing Director in line with the Board’s responsibility and efficiently presiding over Board and shareholders’ meetings, he encourages all directors to participate in these meetings. The Chairman plays a key role in encouraging directors to abide by their scope of authority and legal responsibility, GGC’s Corporate Governance and Business of Conduct, along with responsibility for shareholders and related stakeholders.

7.2.7 Authority and Duties of the Managing Director

The Board appointed Mr. Piroj Samutthanont as Managing Director with effect from May 1, 2021. Duties and responsibilities of the Managing Director, as defined by the Board and as the top management, are to manage the Company under the policy, business plans and budget approved by the Board. The Managing Director performs under the objectives and Articles of Association of the Company, the resolutions of the Board, and GGC’s regulations. Authority and duties of the Managing Director assigned by the Board is based on GGC’s four regulations approved by the Board:

- (1) Regulation on finance, accounting and budget;
- (2) Regulation on supplies;
- (3) Regulation on HR management; and
- (4) Regulation on marketing, procurement and product distributing and services.

7.3 Subcommittees

In compliance with the Good Corporate Governance principles, the Board, at Meeting No. 1/2016 held on February 26, 2016, approved the establishment of two subcommittees, namely the Audit Committee and the Nomination and Remuneration Committee, and at Meeting No. 1/2017 on January 13, 2017, approved the establishment of two more subcommittees, namely the Corporate Governance and Sustainable Development Committee and the Risk Management Committee, with a three-year term, or a term ending with the director status, or by resignation or dismissal. Directors appointed to the Subcommittees who have completed their terms may be re-elected by the Board.

All member of the subcommittees possess the required diverse knowledge and expertise to perform their duties in screening key specific implementation as assigned. The qualifications, term of office and scope of duties and responsibilities are prudently and effectively defined in the charter of each subcommittee. Performance of the subcommittees will be regularly presented to the Board meetings for acknowledgement and the performance of the past year will be reported to the shareholders' meeting in the 56-1 One Report Form. The names of the directors and the role, duties and responsibilities of each subcommittee are as follows:

7.3.1 Audit Committee

Name	Position	Date of Appointment
1. Prof. Dr. Kumchai Jongjakapun	Chairman of Audit Committee (Independent Director)	January 1, 2018
2. Mrs. Kannika Ngamsopee ⁽¹⁾	Director to Audit Committee (Independent Director)	February 26, 2016
3. Mr. Sarawut Benjakul ⁽²⁾	Director to Audit Committee (Independent Director)	April 28, 2021

Remarks:

⁽¹⁾ Mrs. Kannika Ngamsopee possesses knowledge and experiences in finance and accounting to review the creditability of the financial statements.

⁽²⁾ Mr. Sarawut Benjakul, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a member of the Audit Committee, replacing Mr. Apichart Jongskul (a member of the Audit Committee from January 13, 2017 – April 2, 2021), who retired at the 2021 Annual General Meeting of Shareholders on April 2, 2021.

Mrs. Kunakorn Witthayapaisarn, Vice President, Internal Audit, acts as Secretary to the Audit Committee.

GGC's Audit Committee comprises all independent directors who are knowledgeable with diverse experience to support their performing duties with great efficiency, such as in law and business management. Mrs. Kannika Ngamsopee, member of the Audit Committee, graduated in finance and accounting with vast and adequate knowledge and experience to perform the auditing on the reliability of GGC's financial statements. The composition and qualifications of the Audit Committee comply with SEC's and SET's notifications. Furthermore, members of the Audit Committee regularly enhance their knowledge about their duties. The Chairman of the Audit Committee is not a member of any subcommittees.

The Audit Committee performed its duties with dependence as assigned by the Board and under the Audit Committee Charter to ensure accuracy and reliability of GGC's financial reports of financial reporting standards and as required by the laws and relevant regulations, with adequate disclosure of information

beneficial to the users. The Audit Committee also considered, selected, nominated and determined remuneration for auditors who are reliable, experienced and independent, audit the internal control of the organization under the auditing project and internal auditing plans designed based on each different risk, and reviewed the procedures and progress of corporate risk management.

In addition, the Audit Committee monitored complaint procedures to ensure its efficiency and effectiveness, promoted transfer of CG guidelines to its affiliates, an important role of the Committee under its scope of duties and responsibilities and in compliance with CG principles to foster confidence of all stakeholders, provided opinions on the entry into related transactions or transactions of potential conflicts of interest, if needed, in compliance with the law, SET's notifications and related regulatory agencies, to ensure that they are reasonable and for the utmost benefits of the Company, and with complete information disclosure, and that GGC has appropriate independent and effective internal control system in place and the internal control unit follows the International Standards for the Professional Practice of Internal Auditing.

The Board approved the Audit Committee Charter, which specified the composition, qualifications, office terms, the scope of authority and responsibilities of the Audit Committee, based on CG principles, as a framework to ensure performance in compliance with laws, and related regulations. The Charter was published in GGC's CG Handbook and disclosed on the Company's website. The Charter will be reviewed annually.

In 2021, the Audit Committee, in performing its duties within the scope of duties and responsibilities stated in the Audit Committee Charter and as assigned by the Board, held 13 meetings in total, planned as well as special ones to consider urgent matters, including one special meeting with the auditor and one with the Managing Director, and prepared the Report of the Audit Committee to submit to the Board quarterly as well as the annual executive summary to be published in the Company's 56-1 One Report.

Details of the performance of the Audit Committee for 2021 are as shown under "Report of the Audit Committee 2021".

7.3.2 Nomination and Remuneration Committee

Name	Position	Date of Appointment
1. ACM Songtam Chokkanapitag	Chairman of Nomination and Remuneration Committee (Independent Committee)	February 26, 2016
2. Mr. Varit Namwong ⁽¹⁾	Director to Nomination and Remuneration Committee	January 19, 2022
3. Maj. Gen. Titawat Satiantip	Director to Nomination and Remuneration Committee (Independent Committee)	September 11, 2019

Remark:

⁽¹⁾ The Board, at Meeting No. 1/2022 on January 19, 2022, appointed Mr. Varit Namwong as a member of the Nomination and Remuneration Committee, replacing Mr. Patiparn Sukorndhaman (a director to the Nomination and Remuneration Committee from February 26, 2016 - December 31, 2021), who retired.

Mrs. Uramanee Puttong, Vice President, Corporate Affairs and Corporate Secretary, acted as Secretary to the Nomination and Remuneration Committee from January 1 to September 30, 2021, and Mrs. Boonsada Seema, Vice President, Corporate Affairs and Corporate Secretary, acts as Secretary to the Committee from October 1, 2021 onwards.

The Nomination and Remuneration Committee consists of at least three directors and at least one of them must be an independent director. The Chairman must also be an independent director.

The Nomination and Remuneration Committee is responsible for nominating qualified candidates as directors to the Board and the subcommittees, including the recruitment of the Managing Director, in accordance with the systematic and transparent selection criteria and process. The Nomination and Remuneration Committee also reviews the guidelines for the determination of remuneration for the directors and the Managing Director, taking into consideration GGC's current economic situation and related businesses and the Board's duties and responsibilities.

The Nomination and Remuneration Committee, in the recruitment and nomination of director, will consider the candidates' experience, profession, variety of skills and specific qualifications essential to GGC's business conduct under the Board Skill Matrix to ensure balance of technical knowledge for the utmost benefit of the Company. Moreover, The Nomination and Remuneration Committee also plays a part in defining assessment indices and assesses the performance of the Managing Director as well as reviewing the Board Skill Matrix as appropriate, based on the Directors' Pool of recognized organizations before submitting it to the Board and/or the Annual General Meeting of Shareholders for approval and further appointment.

In 2021, The Board approved the Charter of the Nomination and Remuneration Committee, which outlines the composition, qualifications, term of office and scope of authority and responsibilities in accordance with the Corporate Governance principles, and disclosed it in the CG Handbook and on the Company's website. The charter must be reviewed annually.

This year, in performing its duties under the Charter and as assigned by the Board, The Nomination and Remuneration Committee held a total of five meetings and submitted the report on its performance to the shareholders in the annual report.

Details of the performance of The Nomination and Remuneration Committee for 2021 are as shown under "Report of the Nomination and Remuneration Committee for 2021".

7.3.3 Corporate Governance and Sustainable Development Committee

Name	Position	Date of Appointment
1. Pol. Gen. Suchart Theerasawat ⁽¹⁾	Chairman of Corporate Governance and Sustainable Development Committee (Independent Director)	April 28, 2021
2. Mr. Suphit Suwagul	Director to Corporate Governance and Sustainable Development Committee (Independent Director)	January 1, 2018
3. Maj. Gen. Titawat Satiantip	Director to Corporate Governance and Sustainable Development Committee (Independent Director)	September 11, 2019

Remark :

⁽¹⁾ Pol. Gen. Suchart Theerasawat, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as Chairman of the Corporate Governance and Sustainable Development Committee, replacing Mr. Payungsak Chatsutipol (a director to the Corporate Governance and Sustainable Development Committee from January 13, 2017- April 2, 2021), who retired at the 2021 AGM on April 2, 2021.

Mrs. Uramanee Puttong, Vice President, Corporate Affairs and Corporate Secretary, acted as secretary to the Corporate Governance and Sustainable Development Committee from January 1 to September 30, 2021, and Mrs. Boosada Seema, Vice President, Corporate Affairs and Corporate Secretary, acts as Secretary to the Committee from October 1, 2021 onwards.

The Corporate Governance and Sustainable Development Committee consists of at least three directors and at least one of them as well as the Chairman must be an independent director. The current members of The Corporate Governance and Sustainable Development Committee are all independent directors.

The Corporate Governance and Sustainable Development Committee performed its duties as assigned by the Board in defining guidelines, providing recommendations on policy and procedures in relation to the code of conduct and business ethics, in line with corporate governance principles before submitting the report to the Board and management. The Corporate Governance and Sustainable Development Committee also monitored CG implementation, provided consultation, conducted assessment and reviewed related policies and procedures to be in compliance with corporate governance principles (code) and in line with those of SEC, SET and leading organizations to ensure that the Company's CG is up to international standards.

In 2021, The Corporate Governance and Sustainable Development Committee held five meetings in total in carrying out their tasks as stated in the Charter and as assigned by the Board and reported progress of the implementation under the CG policy to the Board and management quarterly, as well as publishing it in the annual report for the shareholders.

In addition, The Corporate Governance and Sustainable Development Committee also followed up on the progress of the improvement of operational guidelines to suit the current situation as follows:

- Approved the CG implementation plan, and ensured its compliance with the laws, relevant rules and regulations and the sustainable development work plan and followed up the progress regularly.
- Provided recommendations in relation to the treatment and responsibility toward each group of stakeholders, namely the shareholders, customers, suppliers, business partners and competitors, creditors, public sector, employees, communities, society and environment, and acknowledged

the Company's performance and formulation of guidelines/measures to mitigate impacts from Covid-19 pandemic on its group of stakeholders to survive the crisis.

- Offered opinions and suggestions for GGC's CG certification and awards for implementation under CG principles, such as the Corporate Governance Report of Thai Listed Companies (CGR) and AGM Checklist.
- Offered opinions and suggestions on anti-corruption measures and assessment of risks in GGC's operational process, which resulted in CAC's member recertification in March 2021 (first recertification).

The Corporate Governance and Sustainable Development Committee regularly submitted the reports on the progress the development to the Board for further advice and recommendations to take better care of stakeholders.

Details of the performance of the Corporate Governance and Sustainable Development Committee for 2021 are under "Report of the Corporate Governance and Sustainable Development Committee for 2021".

7.3.4 Risk Management Committee

(As of January 19, 2022)

Name	Position	Date of Appointment
1. Mrs. Kannika Ngamsopee	Chairman of Risk Management Committee	January 13, 2017
2. Mr. Jarun Wiwatjesadawut ⁽¹⁾	Director to Risk Management Committee (Independent Director)	April 28, 2021
3. Mr. Varit Namwong ⁽²⁾	Director to Risk Management Committee	January 19, 2022
4. Mr. Piroj Samutthanant ⁽³⁾	Director to Risk Management Committee	May 1, 2021

Remarks :

⁽¹⁾ Mr. Jarun Wiwatjesadawut, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director to the Risk Management Committee.

⁽²⁾ Mr. Varit Namwong, at the Board Meeting No. 1/2022 on January 19, 2022, was appointed as a director to the Risk Management Committee, replacing Mr. Patiparn Sukornthaman (a director to the Risk Management Committee from November 6, 2019 - December 31, 2021), who resigned.

⁽³⁾ Mr. Piroj Samutthanant, at the Board Meeting No. 4/2021 on April 28, 2021, was appointed as a director to the Risk Management Committee, replacing Mr. Suwat Kamolpanus (a director to the Risk Management Committee from August 1, 2020 - April 29, 2021), who resigned.

Mr. Jakrit Rungsimanop, Vice President, Corporate Strategy, acts as Secretary to the Risk Management Committee.

The Risk Management Committee consists of at least three directors, and at least one of them must be an independent director. The Risk Management Committee defines and reviews the policy, objectives and the scope of risk management to be applied as an operational framework for the corporate's risk management process to ensure that GGC's business is moving in the same direction and in line with the Company's business strategy and goals in the short term and the long term. The Risk Management Committee regularly reviews related policies, objectives and the risk management framework as well as factors which might have impact on the operation of the Company. The Risk Management Committee also gives priority to

early warning signs. In 2021, The Risk Management Committee monitored the implementation of the risk management and offered advice to enhance the efficiency of GGC's operation as follows:

- Monitored, followed up, and provided opinions and recommendations to management on corporate risk management for 2021 regularly as well as on emerging risk to enable the Company to maintain its risk appetite and reported its performance to the Board quarterly, or when there are risks from factors which might have material impacts on the Company's annual performance and business plans.
- Considered and provided opinions on the improvement and review of the risk management framework in aspects such as risk management framework for raw material and product price fluctuation, inventory management, investment in key projects, and foreign exchange rates.
- Provided opinions and recommendations on risk management guidelines for GGC's four key projects under its strategies and product value-adding project as follows:
 - Utility Provider for Nakhonsawan Biocomplex Phase 2 (NBC Phase 2): The Risk Management Committee considered and provided recommendations on risk assessment and comprehensive mitigation measures covering GGC's project implementation as well as its business partner's investment project, and carefully considered the terms in the drafting of contracts between its joint venture, GKBI and the business partner.
 - Bio-succinic Acid as a substitute for bioplastic feedstock: The Risk Management Committee provided recommendations for the improvement of significant measures to mitigate impacts from project implementation risk, which included project investment models, marketing development, project investment feasibility, technological development, and selection of business partner as a joint venture.
 - Project expansion from fatty alcohol products to downstream home and personal care (HPC) products: The Risk Management Committee provided recommendations and considered the risk assessment and risk mitigation measures covering all supply chains, and provided suggestions for business models that should be considered to suit its operations, as well as creating cooperation with business partners for efficient business development and reduce risk from product prototypes, market development and customers.
 - The sale of GGC's stocks in Thai Eastern Top Seeds Oil Co., Ltd (TETSO): The Risk Management Committee provided views and recommendations on the principles for the sale of its stocks in the joint-venture company, TETSO, with regard to legal requirements, responsibility and maintaining of good relations with business partners.

- Offered opinions and recommendations on the plan for efficiency enhancement of the operations and management as follows:
 - Efficiency improvement plans and measures on stability of machine performance, to mitigate risk from emergency production disruption.
 - Improvement of and review on the scope of Shared Services
 - Safety system of the IT system, and supported GGC's activities to raise awareness in employees on information safeguarding.
 - Risk management on the pricing strategy for methyl ester products in line with market situations and in maintaining its competitiveness.
- Approved the corporate risk management guidelines and the 2022 risk management framework.
- Reviewed the risk management policy and approved the proposed revision of the Risk Management Committee Charter in line with the enterprise risk management guidelines of The Committee of Sponsoring Organization of the Treadway Commission (COSO ERM 2017) and assessed the performance of the Risk Management Committee and reported the results to the Board and disclosed the results in the 56-1 One Report.

In 2021, The Risk Management Committee, in performing their duties under the scope of responsibilities as stipulated in its Charter and as assigned by the Board, held a total of seven meetings and reported its performance to the Board quarterly.

In addition, to ensure more alignment of risk management and internal control with SEC's CG principles and GGC Group's guidelines, as well as more efficiency of internal control in line with international standard of COSO for the Company to achieve its three objectives of internal control, namely operation, reporting and compliance in relation to GGC's operations, The Risk Management Committee supported and provided recommendations on the project on the development of risk and control self-assessment (RCSA) to enhance the efficiency of internal control and clear understanding of users in assessing key points in the internal control process and conducting assessment of risk in its own work process.

Details of the performance of The Risk Management Committee for 2021 are as shown in "Report of the Risk Management Committee for 2021".

7.4 Management

To manage GGC with efficiency and in compliance with the Company's policies and directions mandated by the Board, the Management Committee (MC), consisting of executives ranking at the level of Vice President or higher, under the Managing Director's supervision, has been set up and to report to the Managing Director, who is GGC's top executive with the authority and duty to manage the Company in line with the policy, business plans and budgets approved by the Board.

The MC defines the Company's business direction and guidelines in line with its strategy and policy set by the Board. MC considers, screens and offers opinions and suggestions in relation to GGC's policy, operational guidelines, corporate development to support business growth, on matters which might cause substantial change to the operation of the organization such as business expansion, joint investment, and project implementation. The MC

also comments and screens agenda of the meetings and relevant information before submitting it to the Board meeting, as well as matters on compliance with laws, rules and regulations of relevant regulatory organizations as well GGC's rules, and regulations and legal actions, to ensure that GGC's business operations complies with CG principles and international standards.

The MC holds at least three meetings a month. In 2021, it held a total of 50 meetings with the Vice President of Corporate Affairs and Corporate Secretary serving as its Secretary, taking the minutes and maintaining reports of the meetings.

7.4.1 Management

The List of GGC's executives under SEC's notification on the Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities, and GGC's organizational structure as of December 31, 2021 are as detailed below.

Name	Position
1. Mr. Piroj Samutthanant ⁽¹⁾	Managing Director
2. Mr. Kumpol Chaikitkosi ⁽²⁾	Deputy Managing Director, Operational Excellence
3. Mr. Warophat Kimchuwanit ⁽³⁾	Deputy Managing Director, Commercial Excellence, Acting Vice President, Business and Product Development
4. Mrs. Kunakorn Witthayapaisarn ⁽⁴⁾	Vice President, Internal Audit
5. Mrs. Boodsada Seema ⁽⁵⁾	Vice President, Corporate Affairs and Corporate Secretary
6. Ms. Wanlapa Sophiskhaunkhant	Vice President, Corporate Finance and Accounting
7. Mr. Jakrit Rungsimanop	Vice President, Corporate Strategy
8. Mr. Sansern Sujitjorn ⁽⁶⁾	Vice President, Human Resource and Corporate Support
9. Mr. Ekaphong Govitgoongrai	Vice President, Supply Planning and Feedstock Sourcing
10. Mr. Suchet Deemangmee	Vice President, Marketing and Sale
11. Mr. Thodsaphorn Phienchob	Vice President, Operations
12. Ms. Chompunuch Liamprawat	Vice President, Process Technology
13. Mr. Suriyawut Rawdkrajab	Vice President, Engineering and Maintenance
14. Mr. Sayan Saesue	Vice President, Project Management
15. Mr. Chanasiri Vanit	Vice President, Reporting to the Deputy Managing Director, Operational Excellence

Remarks:

⁽¹⁾ Mr. Piroj Samutthanant was appointed as Managing Director, replacing Mr. Suwat Kamolpanus, who resigned, with effect from May 1, 2021.

⁽²⁾ Mr. Kumpol Chaikitkosi was appointed as Deputy Managing Director, Operational Excellence, replacing Mr. Nikom Kasempura, who reassumed his position at PTT Global Chemical Plc (GC), with effect from January 1, 2021.

⁽³⁾ Mr. Warophat Kimchuwanit was appointed as Deputy Managing Director, Commercial Excellence, with effect from January 21, 2021, and as Acting Vice President, Business and Product Development, with effect from August 16, 2021.

⁽⁴⁾ Mrs. Kunakorn Witthayapaisarn, Vice President, Internal Audit, attended MC meetings to provide useful views and recommendations as well as to acknowledge the progress of operations, and will refrain from making approval voting for implementation which might affect her independence.

⁽⁵⁾ Mrs. Boodsada Seema was appointed as Vice President, Corporate Affairs and Corporate Secretary, replacing Mrs. Uramanee Puttong, who reassumed her position at GC, with effect from October 1, 2021.

⁽⁶⁾ Mr. Sansern Sujitjorn was appointed as Vice President, Human Resources and Corporate Support, with effect from February 1, 2021.

⁽⁷⁾ Mr. Chanasiri Vanit, Vice President, reporting to Managing Director, was transferred to the position of Vice President, reporting to the Deputy Managing Director, Operational Excellence, with effect from January 1, 2021.

Change in Management in 2021

Name	Position
1. Mr. Suwat Kamolpanus ⁽¹⁾	Managing Director
2. Mrs. Uramanee Puttong ⁽²⁾	Vice President, Corporate Affairs and Corporate Secretary
3. Mr. Passakorn Srisastra ⁽³⁾	Vice President, Business and Product Development

Remark:

⁽¹⁾ Mr. Suwat Kamolpanus resigned from the position of Managing Director, with effect from April 30, 2021.

⁽²⁾ Mrs. Uramanee Puttong, Vice President, Corporate Affairs and Corporate Secretary, reassumed her position at GC, with effect from October 1, 2021.

⁽³⁾ Mr. Passakorn Srisastra resigned from the position of Vice President, Business and Product Development, with effect from August 15, 2021.

Secondment

Name	Position
1. Mr. Piya Suri ⁽¹⁾	Vice President, Reporting to the Managing Director
2. Mr. Dumrong Putiput ⁽²⁾	Vice President, Reporting to the Managing Director

Remarks:

⁽¹⁾ Full-time secondee as Managing Director at Thai Ethoxylate Co., Ltd. (TEX)

⁽²⁾ Full-time secondee as Managing Director at GGC KTIS Bio Industrial Co., Ltd. (GKBI)

7.4.2 Remuneration Management

GGC conducts performance assessment of its executives annually based on KPIs, financial performance, performance in compliance with long-term strategic objectives, operational results, GGC's performance, comparison of practices with other peer listed companies, and in line with duties, responsibilities and management development and economic situations.

7.4.3 Management and Executive Remuneration

The remuneration of the Managing Director has been appropriately determined under clear, transparent, fair and reasonable criteria, taking into consideration responsibility and performance. The Nomination and Remuneration Committee will consider the remuneration and propose to the Board for consideration. The Managing Director will receive remuneration and other benefit as the top executive of the Company aside from those received as a director.

Remuneration for Executives under SEC's definitions for 2021 (including those who changed during the year) is shown in the table below.

Item	Remuneration for 2021	
	Managing Director	Executives under SEC's Definitions (Managing Director not included)
Monthly Remuneration	6,446,928.00	54,132,453.79
Bonus	2,745,037.46	28,180,722.45
Provident Fund	499,055.04	5,205,047.71
Total	9,691,020.50	87,518,223.95

Remarks:

⁽¹⁾ Remunerations of two Managing Directors:

Mr. Suwat Kamolpanus, for his service as Managing Director from January 1 – April 29, 2021, and
Mr. Piroj Samutthananont, for his service as Managing Director from May 1, – December 31, 2021.

⁽²⁾ Executives under SEC's Definitions (Managing Director not included): 18 executives

Remuneration for Directorship at Subsidiaries and Joint Companies (As of December 31, 2021)

GGC's directors serve at subsidiaries and joint ventures to ensure that the businesses are operated under the Company's policies.

Name	Position	Total Remuneration (Baht)
Thai Fatty Alcohols Company Limited (TFA)		
Mr. Warophat Kimchuwanit ⁽¹⁾	Chairman	None
Mr. Jakrit Rungsimanop	Director	None
Ms. Wanlapa Sophiskaunkhant	Director / Managing Director	None
GGC Biochemicals Company Limited (GGC Bio)		
Mr. Piroj Samutthananont ⁽²⁾	Chairman	None
Mr. Jakrit Rungsimanop	Director	None
Mr. Warophat Kimchuwanit ⁽³⁾	Director / Managing Director	None
Thai Ethoxylate Company Limited (TEX)		
Mr. Piroj Samutthananont ⁽⁴⁾	Director	229,354.84
Mr. Piya Suri	Director / Managing Director	360,000
GGC KTIS Bio Industrial Company Limited (GKBI)		
Mr. Piroj Samutthananont ⁽⁵⁾	Director	40,000
Mr. Kumpol Chaikitkosi ⁽⁶⁾	Director	20,000
Mr. Dumrong Putiput	Director / Managing Director	60,000
Thai Eastern Top Seeds Oil Company Limited (TETSO)		
Mr. Kumpol Chaikitkosi ⁽⁷⁾	Director	None
Mr. Ekaphong Govitgoongrai	Director	None

Remark: Remuneration not included withholding tax

⁽¹⁾ Mr. Warophat Kimchuwanit, at the 2021 AGM on March 16, 2021, was appointed as a director, replacing Mr. Suwat Kamolpanus, who has completed his term, and at TFA's Board Meeting No. 2/2021 on May 5, 2021, was appointed as Chairman of the TFA Board.

- ⁽²⁾ Mr. Piroj Samutthanant, at GKBI's Board Meeting No. 2/2021 on April 30, 2021, was appointed as a director, replacing Mr. Suwat Kamolpanus, who resigned, and as Chairman of the Board, with effect from May 1, 2021.
- ⁽³⁾ Mr. Warophat Kimchuwani, at the GGC Bio's Board Meeting No. 6/2021 on August 16, 2021, was appointed as a director and Managing Director, replacing Mr. Passakorn Srisastra, who resigned.
- ⁽⁴⁾ Mr. Piroj Samutthanant, at TEX's Board Meeting No. 2/2021 on May 12, 2021, was appointed as a director, replacing Mr. Suwat Kamolpanus, who resigned. Mr. Kamolpanus' remuneration for his service during his directorship from January 1 - April 29, 2021 totaled Baht 120,000.
- ⁽⁵⁾ Mr. Piroj Samutthanant, at GKBI's Board Meeting No. 6/2021 on April 30, 2021, was appointed as a director, replacing Mr. Suwat Kamolpanus, who resigned. Mr. Kamolpanus' remuneration for his service during his directorship from January 1 - April 29, 2021 totaled Baht 20,000.
- ⁽⁶⁾ Mr. Kumpol Chaikitkosi, at GKBI's Board Meeting No. 9/2021 on August 31, 2021, was appointed as a director, replacing Mr. Ekaphong Govitgoongrai, who resigned. Mr. Govitgoongrai's remuneration for his service during his directorship from January 1 - August 31, 2021 totaled Baht 40,000.
- ⁽⁷⁾ Mr. Kumpol Chaikitkosi, at TETSO's Board Meeting No. 4/2021 on August 20, 2021, was appointed as a director, replacing Mr. Passakorn Srisastra, who resigned

Securities held in the name of Executives, their spouses or cohabiting partners, and minor children

Securities Holder *	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of January 1, 2021	As of December 31, 2021	
1. Mr. Piroj Samutthanant ⁽¹⁾	N/A	- None -	N/A
2. Mr. Kumpol Chaikitkosi ⁽²⁾	- None -	- None -	No Change
3. Mr. Warophat Kimchuwani ⁽³⁾	N/A	- None -	N/A
4. Mrs. Boodsada Seema ⁽⁴⁾	N/A	- None -	N/A
5. Ms. Wanlapa Sophiskhaunkhant	- None -	- None -	No Change
6. Mr. Jakrit Rungsimanop	- None -	- None -	No Change
7. Mr. Sansern Sujitjorn ⁽⁵⁾	N/A	- None -	N/A
8. Mr. Ekaphong Govitgoongrai	- None -	- None -	No Change
9. Mr. Suchet Deemangmee	- None -	- None -	No Change
10. Mr. Thodsaphorn Phienchob	- None -	- None -	No Change
11. Ms. Chompunuch Liamprawat	- None -	- None -	No Change
12. Mr. Suriyawut Rawdkrajab	- None -	- None -	No Change
13. Mr. Sayan Saesue	- None -	- None -	No Change
14. Mr. Chanasiri Vanit ⁽⁶⁾	3,000	3,000	No Change
15. Mr. Piya Suri ⁽⁷⁾	- None -	- None -	No Change
16. Mr. Dumrong Putiput ⁽⁸⁾	- None -	- None -	No Change

Directors who resigned in 2021

Securities Holder *	Shareholding (No. of shares)		Change during the year (Number of shares)
	As of January 1, 2021	As of last day of work	
1. Mr. Suwat Kamolpanus	- None -	- None - (As of April 29, 2021)	No Change
2. Mrs. Uramanee Puttong	1,000	1,000 (As of September 30, 2021)	No Change
3. Mr. Passakorn Srisastra	- None -	- None - (As of August 14, 2021)	No Change

Remark:: In compliance with SEC's notification No. TorChor 17/2551 on Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities, Clause 2 (16)

⁽¹⁾ Mr. Piroj Samutthanont was appointed as Managing Director, replacing Mr. Suwat Kamolpanus, who resigned, with effect from May 1, 2021.

⁽²⁾ Mr. Kumpol Chaikitkosi was appointed as Deputy Managing Director, Operational Excellence, replacing Mr. Nikom Kasempura, who reassumed his position at PTT Global Chemical Plc., with effect from January 1, 2021.

⁽³⁾ Mr. Warophat Kimchuwanit was appointed as Deputy Managing Director, Commercial Excellence, with effect from January 21, 2021, and as Acting Vice President, Business and Product Development, with effect from August 16, 2564.

⁽⁴⁾ Mrs. Boodsada Seema was appointed as Vice President, Corporate Affairs and Corporate Secretary, replacing Mrs. Uramanee Puttong, who reassumed her position at PTT Global Chemical Plc., with effect from October 1, 2021.

⁽⁵⁾ Mr. Sansern Sujitjorn was appointed as Vice President, Human Resource and Corporate Support, with effect from February 1, 2021.

⁽⁶⁾ Mr. Chanasiri Vanit, Vice President, reporting to Managing Director, was transferred to the position of Vice President, Reporting to Deputy Managing Director, Operational Excellence, with effect from January 1, 2021.

⁽⁷⁾ Mr. Piya Suri was assigned as a full-time secondee to TEX.

⁽⁸⁾ Mr. Dumrong Putiput was assigned as a full-time secondee to GKBI.

7.5 Personnel

7.5.1 Human Resource Management and Development Policy

GGC has strived to become a learning organization with a friendly work environment that also promotes teamwork, fair treatment and safety. Also, the Company has valued skill development, knowledge transfer and competency of the employees. The Company listens to the employees' opinions and concerns fairly and equally while cultivating a corporate culture of GGC, believing that employees are valuable assets and are the key contribution to corporate success and sustainable growth.

GGC equipped its employees with knowledge and skills useful in performing their work in their functional units, identified the gaps of each line unit and closed them, aiming for 100% operation completion even during the Covid-19 crisis. The Company also focused on self-learning through the E-Learning Platform titled "GREEN".

The Company defines the knowledge and skills that are standard of employees into three groups, namely:

1. Legal and corporate policy courses (Corporate Course), with emphasis on raising awareness and update on current situation such as cybersecurity, information on Personal Data Protection Act (PDPA), and instillment of the anti-corruption culture.
2. Leadership Development Program: GGC values the development of management (Role Model) and development plan has been systematically formulated.

3. A curriculum to develop skills that are in line with the functions and responsibilities specified in each job position (Functional Competency Development).

GGC insisted on the work-from-home policy to reduce the risk of employees from Covid-19 infection and ensured that these prepared employees can deliver effective results. GGC also developed the roles and responsibilities at the supervisor level in order that they can efficiently communicate with and understand the employees in the departments under their supervision.

GGC has a plan to increase the capacity as well as competitiveness for business growth and brace for sudden changes in the future. In order to meet the Company's objectives, chief executives play a crucial role in encouraging personnel to develop their skills, exchange knowledge and work as a team. To forge unity, the Company has supported technology and tools in human resource development to respond to the rapidly growing demand and implement corporate strategy more effectively.

Personnel Development: GGC improves manpower in quantity and quality to be well prepared for any project operations through workforce planning, and equips them with proper knowledge and skills to generate new business opportunities.

GGC developed 'Top Talents' by defining a framework for their self-development via Digital Learning and work assignment so they can learn for work according to the "70-20-10 improvement" rule, in which 70% is learning via work, 20% learning by coaching and advice from supervisors and 10% is learning from training, including Digital Learning, to achieve their higher ability.

Succession Planning was prepared for key positions to ensure continuation of management succession in the same direction to achieve the goals.

GGC continues its implementation of the corporate culture in the four Core Behaviors: 1) Courage – to think, act and creat for better results; 2) Self-development for working as a team; 3) Proactive actions in responding to customers' needs; and 4) Commitment to working for public interests rather than personal interests. Hence, GGC has applied these four Core Behaviors with human resource management such as in the recruitment of employees whose practices are in line with the Company's Core Behaviors, performance assessment, annual performance review, and appointment to in-charge position, and management should serve as role models. GGC also promoted the roles of Change Agents who will help each department inside GGC transform itself by focusing on such matters to bring about more practical changes.

To foster morale and engagement among employees, the Company has created a two-way communication channel for management to send their messages, including information on the Company's business direction, and held activities such as MD Townhall and MD meets DM quarterly, where opinions from employees can be received by their managers. GGC also promoted employee well-being as well as their work-life balance.

7.5.2 Number of Employees

As of December 31, 2021, GGC had 268 employees in total, including the Managing Director (five additional employees from GC, one employee from GC Glycol, and one from GC Maintenance and Engineering (GCME) and 150 of them work at process/manufacturing sites. None of the Company's employees is a member of labor unions. The Company has never faced a strike or business interruption due to labor disputes since its inception. Overall, the Company has maintained a healthy relationship with employees.

The headcount of GGC's employees is shown in the table below. (As of December 31, 2021)

Business Unit	Number of Employees
Reporting to the Managing Director*	9
Internal Audit	4
Corporate Finance and Accounting	14
Corporate Affairs and Corporate Secretary	14
Corporate Strategy	7
Human Resource and Corporate Support	12
Internal Audit	13
Operational Excellence	2
Operations	110
Process Technology	16
Engineering and Maintenance	24
Project Management	10
Quality, Safety, Health and Environment	8
Commercial	1
Business and Product Development	7
Supply Planning and Feed Sourcing	17
Total	268

Remark:

* Number of secondees at GGC Subsidiaries/Joint Ventures (Secondment) had 6 employees

7.5.3 Employees' Remuneration

a) Monetary Remuneration

Monetary remuneration for GGC's employees and contract employees for 2021 comprised salary, bonus, wages and welfare, which amounted to about Baht 341 million in the previous year. The Company has defined a policy on employees' remuneration which reflects the Company's performance in the short term and long term and applied the Balanced Scorecard in the performance assessment. Annual salary rises of employees are based on the assessment of each individual performance and at levels which can compete with peer companies in the same market.

b) Other Remuneration

GGC, in compliance with Thailand's labor laws, contributes to the social security fund for employees and provides retirement benefits, and other benefits such as training and life insurance. These remuneration and benefits for 2021 totaled approximately Baht 47 million.

c) Provident Fund

GGC, in collaboration with PTT Global Chemical Public Company Limited (GC) 15 joint ventures, established provident funds for its employees. Contributions are made monthly by the employees at the minimum rate of 2 percent but not exceeding 15 percent of their base salaries and the Group contributes at the minimum rate of 5 percent but not exceeding 15 percent of the employees' base salaries. GGC's contributions to the provident fund at the end of 2021 was about Baht 15 million.

The ratio of GGC's employees joining the fund and those not joining is 94. GGC's Provident Fund Committee is responsible for the nomination of the Fund Manager, who must perform his duties in compliance with the Investment Governance Code (I Code). His past performance (Investment Performance) will be also taking into consideration.

Employees' Remuneration Paid in 2021

Item	Remuneration in 2021 (Baht Million)
Base salary, bonus, wages, and other welfare	341,449,071.48
Other compensation e.g. social security, employee training, health insurance	30,481,755.02
Retirement benefits	14,652,077.97
Other long - term benefits	2,446,718.00
Contributions to provident fund	15,230,182.26
Total	404,259,804.73

Employees' mean and median annual remuneration, and ratio of the mean and median annual remuneration of the Managing Director and the employees for 2021.

Unit: Baht

Item	Mean Annual Remuneration	Median
Mean/median annual remuneration of all employees (Managing Director not included)	1,841,865.28	1,281,646.89
Ratio of the mean/median annual remuneration of the employees and the Managing Director	5.26	7.56

Directorship of Subsidiaries/Joint Ventures/Related Companies

Directorship of Subsidiaries/Joint Ventures/Related Companies																
Name-Surname		Subsidiaries		Joint Ventures	Indirect Joint Venture	Related Companies										
	GGC	TFA	GGC Bio	TEX	GKBI	PTT	GC	GPSC	GCM	GCP	GC-M PTA	TPRC	GC Inter	PTTGC Netherlands	HMC	PTTAC
1. Mr. Kongkrapan Intarajang	<div></div>					<div></div>	<div></div> <div></div>	<div></div>					<div></div>	<div></div>		
2. Mr. Patiparn Sukorndhaman	<div></div>						<div></div>		<div></div>	<div></div>	<div></div>	<div></div>			<div></div>	<div></div>
3. Mr. Varit Namwong	<div></div>						<div></div>		<div></div>						<div></div>	
4. Mr. Piroj Samutthanant	<div></div> <div></div>		<div></div>	<div></div>	<div></div>		<div></div>									
5. Mr. Kumpol Chaikitkosi	<div></div>				<div></div>											
6. Mr. Warophat Kimchuwanit	<div></div>	<div></div>	<div></div> <div></div>													
7. Ms. Wanlapa Sophiskhaunkhant	<div></div>	<div></div> <div></div>														
8. Mr. Jakrit Rungsimanop	<div></div>	<div></div>	<div></div>													
9. Mr. Piya Suri	<div></div>			<div></div> <div></div>												
10. Mr. Dumrong Putiput	<div></div>				<div></div> <div></div>											

Remark:

* The Directors/Executives No.1 and No.3-10 have held the position in subsidiaries, joint venture and related companies as of 16 February 2022 and the Director No.2 has hold the position in subsidiaries, joint venture and related companies as of 31 December 2021.

Subsidiaries

TFA = Thai Fatty Alcohols Co., Ltd.
GGC Bio = GGC Biochemicals Co., Ltd.

Joint Ventures

TEX = Thai Ethoxylate Co., Ltd.

Indirect Joint Venture

GKBI = GGC KTIS Bio Industrial Co., Ltd.

Related Companies

PTT = PTT Plc
GC = PTT Global Chemical Plc.
GPSC = Global Power Synergy Plc.
GCM = GC Marketing Solutions Co., Ltd
GCP = GC Polyols Co., Ltd

GC-M PTA = GC-M PTA Co., Ltd.

TPRC = Thai Pet Resin Co., Ltd.

GC Inter = PTTGC International Private Limited

PTTGC Netherlands = PTTGC International (Netherlands) B.V.

HMC = HMC Polymers Co., Ltd.

PTTAC = PTT Asahi Chemical Co., Ltd.

Remarks:

● = Chairman
● = Director
● = Management

7.6 Other key information

7.6.1 Corporate Secretary

In compliance with Section 89/1 and Section 89/16 of the Securities Exchange of Thailand Act (No.4) B.E. 2551 (2008), the Board Meeting No. 9/2017 of November 8, 2017 appointed Mrs. Uramanee Puttong as Corporate Secretary, effective from January 1, 2018. The Board Meeting No. 8/2021 of August 6, 2021 appointed Mrs. Boonsada Seema as Corporate Secretary, replacing Mrs. Uramanee Puttong, who resumed her position at PTT Global Chemical Public Company Limited, with effect from October 1, 2021, to perform the duties as required under the laws in preparing and maintaining key corporate documents such as director registration, notices of the meeting, minutes of the meeting of the Board and of the Annual General Meeting of Shareholders (AGM), annual reports and reports on the vested interests of directors and executives. The Corporate Secretary also oversees the arrangements for the Board meetings and of the AGM, and informs the Board and executives about the rules and regulations that they should know. The Corporate Secretary also regularly attends training programs which will be useful in performing the duties. Her profile appears in the Executive Profile.

7.6.2 Head of Compliance

GGC assigned Mrs. Boonsada Seema, Vice President, Corporate Affairs and Corporate Secretary, to be responsible for the compliance with laws, relevant rules and regulations of GGC's operations and set up Legal and Compliance and Corporate Secretary and Governance to promote clear and effective work procedures.

The Board Meeting No. 16/2019 on December 18, 2019 approved the CG Compliance Policy, and acknowledged implementations under the GGC Compliance Program which have been reviewed by the meeting of the Corporate Governance and Sustainable Development Committee.

7.6.3 Chief of Internal Audit

The Audit Committee's Meeting No. 8/2017 on December 21, 2017 appointed Mrs. Kunakorn Witthayapaisarn as Vice President, Internal Audit, and as Secretary to the Audit Committee, with effect from January 1, 2018. Mrs. Kunakorn Witthayapaisarn, a certified internal auditor, has professional qualifications and extensive experience in internal audit. She also attended training courses on internal audit and corporate governance. Her profile appears in the Executive Profile.

The appointment, dismissal, and transfer of Vice President of Internal Audit must be approved by the Audit Committee as stated in the Audit Committee Charter.

7.6.4 Chief of Investors Relations

Ms. Wanlapa Sophiskhaunkhant was appointed Vice President, Corporate Finance and Accounting, and Ms. Paveena Ovararint, Division Manager, Investor Relations and Managerial Accounting, was assigned to oversee Investor Relations. This unit centralizes communication and disclosure of information for shareholders, investors, both institutions and retail, analysts, and related supervisory authorities. It also ensures the quality of the financial reporting process and of important information which might have impact on the prices of GGC's stocks, such as financial statements, presentation of corporate performance, quarterly and annual Management's Discussion and Analysis (MD&A), which show the Company's performance and outlook, including other information disclosed to the public via the SET channel to local and foreign investors alike.

Investor Relations contact channels: Investors or the general public can contact Investor Relations via phone: 0-2558-7345, 0-2558-7395, or email: IR@ggcplc.com, or Company website: www.ggcplc.com.

7.6.5 Accounting Controller

In 2021, GGC appointed Mrs. Nuttaya Wudtisuk as Division Manager, Accounting and Budgeting, with effect from October 1, 2019 to supervise and control GGC's corporate accounting in compliance with relevant standards, rules and regulations. Her qualifications are under the Accounting Controller profile.

7.6.6 Audit and Non-Audit Fees

1. Audit Fee

GGC and subsidiaries paid an audit fee amounting to Baht 2,270,000 to Deloitte Touche Tohmatsu Jaiyos Co., Ltd. for fiscal year 2021. GGC paid Baht 1,690,000, and its subsidiaries paid Baht 580,000.

2. Non-Audit Fee

For fiscal year 2021, GGC paid Deloitte Touche Tohmatsu Jaiyos Co., Ltd. an amount of Baht 198,000 for BOI consultation.

8. Report on Key Actions under Corporate Governance

8.1 Summary of Board of Directors' Performance in 2021

8.1.1 Nomination, Development and Performance Assessment of the Board

(1) Recruitment and Nomination of Directors of the Board, Subcommittees, and Managing Director

The Nomination and Remuneration Committee, which comprises three directors, two of whom are independent directors, is responsible for the recruitment and nomination of candidates without prohibited characteristics under applicable laws and relevant rules and regulations, along with GGC's Articles of Association, taking into consideration diverse qualifications which professional directors should possess and the structure, size and composition of the Board, variety of desired knowledge, competency, expertise and experience as well as the number of independent and female directors, to be proposed to the Board for approval and then to the Shareholders' Meeting for appointment in compliance with the laws.

Recruitment and nomination of directors can be divided into:

Nomination of New Directors: Directors to be appointed to the Board must have qualifications as required by relevant laws and regulations, expertise, knowledge and capability with vast experience in different professional fields useful for their performance as directors, which, as set in the Skill Matrix, are engineering, economics, finance and accounting, business management, security and social sciences, law, strategic planning, risk management, corporate governance, and so on.

Nomination and Appointment of Independent Directors: The number of independent directors on the Board will be taken into consideration in compliance with SEC's notification. As of December 31, 2021, the Board comprised 8 independent directors out of the total 11 directors, which exceeds the number required by SEC. GGC's definitions and qualifications of independent directors are as prescribed in its Corporate Governance and Business Code of Conduct (CG Handbook) disclosed on the Company's website. Moreover, it is required that an Independent Directors' Meeting be held once a year. The 2021 meeting was held on September 8, 2021, via electronics platform. All of the Independent Directors, with independency qualifications as required by SET, attended the meeting chaired by Prof. Dr. Kumchai Jongjakapun, Chairman. The meeting provided recommendations on and guidelines for GGC's business operations covering important issues such as the roles and responsibilities of the top executives, corporate direction and business strategy, adoption of technology to enhance operating efficiency, further actions in the whistleblower process, HR management to prepare competent employees for important positions, and enhancement of GGC's preparedness to support the country and drive the policy of the public sector.

Recruitment of the Managing Director: Under GGC's Articles of Association, the directors elect one among themselves to act as the Managing Director and Secretary to the Board. If the position becomes vacant, the Nomination and Remuneration Committee will nominate a qualified candidate who commands necessary and appropriate skills, experience and specific professional qualifications beneficial to and suiting GGC's business operations to the Board for approval. In 2021, the Nomination and Remuneration Committee nominated Mr. Piroj Samutthanont as the Managing Director with effect from May 1, 2021.

(2) Development of Directors, Executives and Corporate Secretary

Directors' Development and Trainings: GGC has set up procedures to support directors' continuing development. In 2021, the development included the following:

New Directors' Orientation: GGC has organized an orientation session for new directors under SET's guidelines, which consists of:

1. A briefing on the corporate governance code, relevant rules and regulations, GGC Group's nature of business, composition of the Board, relevant policies, rules and regulations which directly concerned the directors, vision, strategy, and business goals of GGC and GGC Group as well as their financial status, and other information considered important and necessary for their work before performing duties at their first Board Meeting.
2. New Directors receive key documents and related handbooks such as the corporate strategy plan, Articles of Association, memorandum of association, annual report, relevant rules and regulations, and the CG Handbook.

Directors' Training: GGC encourages directors to attend training sessions/seminars to enhance their knowledge in performing their duties as directors.

No.	Name	DCP	DAP	ACP	BMT	BNCP	ELP	RCP	RCL	AACP	CMLP	EPEL*	NDC**
1.	Mr. Kongkrapan Intarajang	119/2009						21/2009			Class 30	Class 14	Class 60
2.	Prof. Dr. Kumchai Jongjakapun	128/2010		38/2012				34/2014			Class 9		Class 50
3.	Mrs. Kannika Ngamsopee	21/2002				7/2019			13/2018	36/2020	Class 3		Class 52
4.	ACM Songtam Chokkanapitag	227/2016											Class 50
5.	Pol. Gen. Suchart Theerasawat		184/2021										Class 59
6.	Mr. Sarawut Benjakul	108/2008							8/2017		Class 5		
7.	Mr. Jarun Wiwatjesadawut	98/2008	9/2004								Class 9	Class 14	Class 26
8.	Mr. Suphit Suwagul	177/2013			8/2019		13/2018						
9.	Maj. Gen. Titawat Satiantip	285/2019											
10.	Mr. Patiparn Sukorndhman ⁽¹⁾	73/2006											
11.	Mr. Varit Namwong ⁽²⁾	160/2012	91/2021					47/2021				Class 7	Class 59
12.	Mr. Piroj Samutthanant	291/2020										Class 10	Class 61

Remarks:

⁽¹⁾ Mr. Patiparn Sukorndhman resigned from Director with effect on January 1, 2022.

⁽²⁾ Mr. Varit Namwong was appointed as a Director with effect from January 19, 2022.

* EPEL = The Executive Program in Energy Literacy for a Sustainable Future, Thailand Energy Academy

** NDC = The National Defence Course, National Defence College of Thailand

Corporate Secretary's Training

The Corporate Secretary attended training and development programs to enhance her knowledge and competency which would be beneficial to her in performing the duties to ensure smooth execution of the Board with access to necessary and appropriate information to support the Board's performance in line with the CG Code.

In 2021, Mrs. Uramanee Puttong served as Corporate Secretary from January 1, 2021 to September 30, 2021, and Mrs. Boodsada Seema served in this position starting from October 1, 2021.

The Corporate Secretary attended the training courses organized by the Thai Institute of Directors (IOD) such as Company Secretary Program (CSP) generation 18/2006, Effective Minutes Taking (EMT) program generation 3/2006, Board Reporting Program (BRP) program generation 11/2013 and Company Secretary Refreshment Training Program (RFP) Class 4/2021.

In addition, the Corporate Secretary also attended the Training Course Organized by Thai Listed Association namely Corporate Secretaries Professional Development Program Class 1/2021, and Advances for Corporate Secretaries 2020, and Nomination of Directors in compliance with CG Principle and other training courses such as APCG & Anti-Corruption Working Paper Briefing, Director's Legal Liabilities Program, and Ethical Leadership for New Era 2021 (In-house Programs by GC).

(3) Board's Performance Assessment

The CG Code required that the Board undergo performance assessment. GGC, in compliance, conducts the assessment annually using the Board's Performance Assessment Form. In 2021, all 11 directors holding the office at the time underwent the assessment:

Assessment of the Board's Performance (Entire Board)

The assessment comprised 1) Board Policy, 2) Board Performance, 3) Board Structure, Qualifications and Composition, 4) Board Style, 5) Board Meeting, and 6) Board Development.

The average score of the Board assessment (entire Board) is 95.34%

Assessment of Individual Directors' Performance (Self-Assessment)

The assessment comprised 1) Directors' Performance, 2) Corporate Governance and Business Code of Conduct, and 3) Self-Development and Teamwork.

The average score of Individual Directors' performance assessment (Self-Assessment) is 94.50%.

Assessment of Individual Directors' Performance (Cross-Assessment)

Assessment topics are 1) Knowledge and expertise in specific fields, self-development and teamwork, 2) Performance, and 3) Time devotion and meeting attendance.

The average score of Individual Directors' performance assessment (Cross-Assessment) is 93.25%.

Subcommittees

GGC's four Subcommittees are the Audit Committee, Nomination and Remuneration Committee, Corporate Governance and Sustainable Development Committee, and Risk Management Committee. The performance assessment of these Committees, both group and individual, was conducted for all.

In 2021, each committee reviewed and an improved series of questions and assessment criteria to cover performance in compliance with good corporate governance as shown below:

Audit Committee

Group assessment topics are the Charter of the Audit Committee, composition and qualifications of the Committee, performance assessment, relationship with the Vice President of Internal Audit, external auditors and Management.

Individual assessment topics are responsibility for performing duties, time devotion and self-development.

The results of the assessment of the Audit Committee are:

- Group assessment: an average score of 98.78%
- Individual assessment: an average score of 95.56%

Nomination and Remuneration Committee

Group assessment topics are the composition and qualifications of the Nomination and Remuneration Committee, performance, practices, meeting attendance and reporting and performance assessment of the Committee.

Individual assessment topics are knowledge, expertise and teamwork of the Committee, performance, practices, time devotion and meeting attendance.

The assessment results of the Nomination and Remuneration Committee are:

- Group assessment: an average score of 99.17%
- Individual assessment: an average score of 99.44%

Corporate Governance and Sustainable Development Committee

Group assessment topics are the composition and qualifications of the Corporate Governance and Sustainable Development Committee, performance, practices, meeting attendance and reporting and performance assessment of the Committee.

Individual assessment topics are knowledge and skills of the Committee, performance, practices, time devotion and meeting attendance.

The results of the assessment of the Corporate Governance and Sustainable Development Committee are:

- Group assessment: an average score of 94.63%
- Individual assessment: an average score of 88.67%

Risk Management Committee

Group assessment topics are the composition and qualifications of the Risk Management Committee, performance, role and duty, priority of review and compliance.

Individual assessment topics are the composition and qualifications of the Committee, meeting attendance, roles and duties and responsibility.

The results of the assessment of the Risk Management Committee are:

- Group assessment: an average score of 93.64%
- Individual assessment: an average score of 91.83%

8.1.2 Director's Meeting Attendance and Remuneration

In 2021, the Board, subcommittees, independent directors and non-executive directors attended the meetings scheduled in advance each year. Directors who have unexpected engagement and are unable to attend any meeting must submit a leave of absence to the Chairman along with reason and the Chairman will then inform the meeting accordingly before proceeding with the meeting. In the previous year, due to the Covid-19 situation, Board Meetings were held via an electronic channel or at GGC's Head Office via Microsoft Teams Meeting in strict compliance with the Emergency Decree on Electronic Meetings B.E. 2563 (2020).

The Board scheduled the dates of meetings in advance each year, usually once a month, to enable the directors to allocate their time for the meetings without affecting their permanent jobs. The directors who are government officials will be able to take a leave and use their experience and knowledge to perform another role for the development of the country as directors of the Company, whose vision is to be a leading company of green chemical products under the mission of creating sustainable value for all stakeholders in a social and environmentally friendly manner.

GGC has a fair and appropriate policy on remuneration of the directors and the subcommittees for 2021, which is in line with the CG Code. The Nomination and Remuneration Committee is responsible for the review and determination of the remuneration, taking into account the Board's performance and financial status of the Company, and comparison with economic situations of related businesses, including responsibilities of the Board and remuneration of directors of companies with a similar size.

Directors' remuneration must have the approval of the Shareholders' Meeting. The 2021 Annual General Meeting of Shareholders of April 2, 2021 approved the proposed remuneration for the Board of Directors and the subcommittees for 2021, and the bonuses for 2020 performance as follows:

(a) The Board and Subcommittees' Remuneration

Board / Subcommittee	Rate
1. Board of Directors	Monthly Allowance <ul style="list-style-type: none"> • Chairman 37,500 THB/Month • Director 30,000 THB/Month/Person
2. Subcommittees <ul style="list-style-type: none"> • Audit Committee • Nomination and Remuneration Committee • Corporate Governance and Sustainable Development Committee • Risk Management Committee 	Meeting Allowance (per meeting) <ul style="list-style-type: none"> • Chairman 25,000 THB/Meeting • Director 20,000 THB/Meeting/Person
3. Other remuneration	-None -

(b) Bonus

Directors bonus for the performance of the year 2020, all Directors receive bonuses. If the Company pays out dividends for a given year, the Board shall receive bonus payouts of 0.5% of the net profit but not over THB 10 million per year. The bonus portion is based on the term of each director. The Chairman of the Board shall receive an amount which is 25 percent higher than other directors. The 2021 AGM on April 2, 2021 approved the bonuses for the entire Board for 2021 performance totaling THB 2,462,944.65.

(c) Board Meeting

Name	Board Meeting in 2021							
	Board	Independent Directors	Non-Executive Directors	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainable Development Committee	Risk Management Committee	2021 Shareholders Meeting
	13 meetings	1 meeting	1 meeting	13 meetings	5 meetings	5 meetings	7 meetings	1 meeting
1. Mr. Kongkrapan Intarajang	13/13	-	1/1		-	-	-	1/1
2. Prof. Dr. Kumchai Jongjakapun	12/13	1/1	1/1	13/13	-	-	-	1/1
3. Mrs. Kannika Ngamsopee	13/13	1/1	1/1	13/13		-	7/7	1/1
4. ACM Songtam Chokkanapitag	13/13	1/1	1/1	-	5/5	-	-	1/1
5. Pol. Gen. Suchart Theerasawat ⁽¹⁾	10/13	1/1	1/1	-	-	3/4	-	-
6. Mr. Sarawut Benjakul ⁽²⁾	10/10	1/1	1/1	10/10	-	-	-	-
7. Mr. Jarun Wiwatjesadawut ⁽³⁾	10/10	1/1	1/1	-		-	6/6	-
8. Mr. Suphit Suwagul	13/13	1/1	1/1	-	-	5/5	-	1/1
9. Maj. Gen. Titawat Satiantip	13/13	1/1	1/1	-	5/5	5/5	-	1/1
10. Mr. Patiparn Sukorndhaman ⁽⁴⁾	13/13	-	1/1	-	5/5	-	7/7	1/1
11. Mr. Piroj Samutthanant ⁽⁵⁾	9/9	-	-	-	-	-	6/6	-
Directors who completed the terms in 2021								
1. Mr. Payungsak Chartsutipol	3/3	-	-	-	-	1/1	-	1/1
2. Mr. Apichart Jongskul	3/3	-	-	3/3	-	-	-	1/1
Directors who resigned in 2021								
1. Mr. Suwat Kamolpanus ⁽⁶⁾	4/4	-	-	-	-	-	1/1	1/1

Remarks:

- ⁽¹⁾ Pol. Gen. Suchart Theerasawat was appointed as Chairman of the Corporate Governance and Sustainable Development Committee, replacing Mr. Payungsak Chartsutipol, who has completed his term, with effect from April 28, 2021, and attended his first meeting of the Corporate Governance and Sustainable Development Committee, Meeting No. 2/2021, on June 10, 2021.
- ⁽²⁾ Mr. Sarawut Benjakul was appointed as a director, replacing Mr. Apichart Jongskul, who completed his term, with effect from April 2, 2021, and was also appointed as a director to the Audit Committee, replacing Mr. Apichart Jongskul, who completed his term, with effect from April 28, 2021. Mr. Sarawut Benjakul attended his first Board Meeting, Meeting No. 4/2021, on April 28, 2021, and his first Audit Committee Meeting, Meeting No. 4/2021, on April 30, 2021.
- ⁽³⁾ Mr. Jarun Wiwatjesadawut was appointed as a director, replacing Mr. Payungsak Chartsutipol, who completed his term, with effect from April 2, 2021, and was also appointed as a director to the Risk Management Committee, with effect from April 28, 2021. Mr. Jarun Wiwatjesadawut attended his first Board Meeting, Meeting No. 4/2021, on April 28, 2021 and attended his first Risk Management Committee Meeting, Meeting No. 2/2021, on May 6, 2021.
- ⁽⁴⁾ Mr. Patiparn Sukorndhaman resigned as a director, a director to the Nomination and Remuneration Committee, and a director to the Risk Management Committee, with effect from January 1, 2022.
- ⁽⁵⁾ Mr. Piroj Samutthanant was appointed as a director and member of the Risk Management Committee, replacing Mr. Suwat Kamolpanus, who resigned, with effect from May 1, 2021. Mr. Piroj Samutthanant attended his first Board Meeting, Meeting No. 5/2021, on May 7, 2021 and his first Risk Management Committee Meeting, Meeting No. 2/2021, on May 6, 2021.
- ⁽⁶⁾ Mr. Suwat Kamolpanus resigned as a director and a director to the Risk Management Committee, with effect from April 30, 2021.

(d) Director's Remuneration in 2021

Unit: Baht

Name	Remuneration of the Board	Meting Allowance				Bonus 2020 (paid in 2021)*
		Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainable Development Committee	Risk Management Committee	
1. Mr. Kongkrapan Intarajang	450,000.00					317,631.35
2. Prof. Dr. Kumchai Jongjakapun	360,000.00	325,000.00				254,105.07
3. Mrs. Kannika Ngamsopee	360,000.00	260,000.00			175,000.00	254,105.07
4. ACM Songtam Chokkanapitag	360,000.00		125,000.00			254,105.07
5. Pol. Gen. Suchart Theerasawat ⁽¹⁾	368,709.68			75,000.00		6,248.49
6. Mr. Sarawut Benjakul ⁽²⁾	269,000.00	200,000.00				
7. Mr. Jarun Wiwatjesadawut ⁽³⁾	269,000.00				120,000.00	
8. Mr. Suphit Suwagul	360,000.00			100,000.00		254,105.07
9. Maj. Gen. Titawat Satiantip ⁽⁴⁾	360,000.00		100,000.00	140,000.00		254,105.07
10. Mr. Patiparn Sukorndhaman	360,000.00		100,000.00		140,000.00	254,105.07
11. Mr. Piroj Samutthanant ⁽⁵⁾	240,000.00				120,000.00	
Total	3,396,709.68	785,000.00	225,000.00	315,000.00	415,000.00	1,594,405.19

Name	Remuneration of the Board	Meeting Allowance				Bonus 2020 (paid in 2021)*
		Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainable Development Committee	Risk Management Committee	

Directors who completed the terms in 2021 and received remuneration in 2021 ⁽⁶⁾

1. Mr. Payungsak Chartsutipol ⁽⁷⁾	92,000.00			75,000.00		254,105.07
2. Mr. Apichart Jongskul	92,000.00	60,000.00				254,105.07
Total	184,000.00	60,000.00		75,000.00		508,210.14

Directors who resigned in 2021 and received remuneration in 2021 ⁽⁸⁾

1. Mr. Suwat Kamolpanus	119,000.00				20,000.00	106,224.25
Total	479,000.00		100,000.00		160,000.00	360,329.32

Remarks:

* The bonus for 2020 performance paid in 2021 to directors was based on the term of each director in 2020 but not exceeding Baht 10 million.

⁽¹⁾ Pol. Gen. Suchart Theerasawat was appointed as a director on December 23, 2020. Remuneration for his service from December 23 to December 31, 2020 and paid in January 2021 totaled Baht 8,709.68.

⁽²⁾ Mr. Sarawut Benjakul was appointed as a director, with effect from April 2, 2021, and his remuneration, monthly allowance, totalling Baht 29,000, was paid in the same month. He was also appointed as a director to the Audit Committee, with effect from April 28, 2021 and received the meeting allowance for attending the meetings (his first meeting was Meeting No. 4/2021 of April 30, 2021).

⁽³⁾ Mr. Jarun Wiwatjesadawut was appointed as a director, with effect from April 2, 2021 and received his remuneration totalling Baht 29,000 in the same month. He was also appointed as a director to the Risk Management Committee, with effect from April 28, 2021 and received meeting allowance for attending the meetings (his first Committee Meeting was Meeting No. 2/2021 of May 6, 2021).

⁽⁴⁾ Maj. Gen. Titawat Satiantip's meeting allowance for attending the meetings of the Corporate Governance and Sustainable Development Committee in 2020 and paid in 2021 totaled Baht 40,000.

⁽⁵⁾ Mr. Piroj Samutthanant was appointed as a director and a director to the Risk Management Committee, with effect from May 1, 2021. He received his monthly allowance from May 2021 onward, and received meeting allowance for attending the meetings of the Risk Management Committee (his first Committee Meeting was Meeting No. 2/2021 of May 6, 2021). The table shows only remuneration for his director position, executive remuneration not included.

⁽⁶⁾ Two directors, Mr. Payungsak Chartsutipol and Mr. Apichart Jongskul, completed their terms on April 2, 2021.

⁽⁷⁾ Mr. Payungsak Chartsutipol's meeting allowance for attending the meetings of the Corporate Governance and Sustainable Development Committee in 2020 and paid in 2021 totaled Baht 50,000.

⁽⁸⁾ Mr. Suwat Kamolpanus resigned as director and director to the Risk Management Committee, with effect from April 30, 2021.

(e) Remuneration of Directors Seconded to GGC's Affiliates and Joint Ventures
Holding a position as a director of subsidiaries / indirect joint venture
of the company director to supervise the business of subsidiaries and
joint ventures as well as operate in accordance with the business policy
of the group.

Name	Position	Total Remuneration (Baht)
GGC Biochemicals Company Limited (GGC Bio) (wholly owned by GGC)		
Mr. Piroj Samutthanant ⁽¹⁾	Chairman	- None -
Thai Ethoxylate Company Limited (GGC holds 50% interest)		
Mr. Piroj Samutthanant ⁽²⁾	Director	229,354.84
GGC KTIS Bio Industrial Company Limited (GGC indirectly holds 50% interest)		
Mr. Piroj Samutthanant ⁽³⁾	Director	40,000

Remarks: * Total remuneration is subject to withholding tax

⁽¹⁾ The meeting of the Board of GGC Biochemicals Company Limited No. 2/2021 of April 30, 2021, appointed Mr. Piroj Samutthanant as Chairman / Director, replacing Mr. Suwat Kamolpanus, who resigned.

⁽²⁾ The meeting of the Board of Thai Ethoxylate Company Limited No. 2/2021 of May 12, 2021, appointed Mr. Piroj Samutthanant as a Director, replacing Mr. Suwat Kamolpanus, who resigned. Mr. Kamolpanus's remuneration for his service from January 1 - April 29, 2021 totaled Baht 120,000.

⁽³⁾ The meeting of the Board of GGC KTIS Bio Industrial Company Limited No. 6/2021 of April 30, 2021, appointed Mr. Piroj Samutthanant as a Director, replacing Mr. Suwat Kamolpanus, who resigned. Mr. Kamolpanus's remuneration for his service from January 1 - April 29, 2021 totaled Baht 20,000.

8.1.3 Governance of Subsidiaries and Associates

GGC's management of its subsidiaries and affiliates are detailed under "GGC Group Structure and Operations" and disclosed on the Company's website www.ggcplc.com under Organization Structure. The Board has formulated mechanisms in the governance of its group of companies to oversee its investment interest as follows:

- The Managing Director was authorized to define policies, rules, regulations, methods, management guidelines, and delegate approval authority to executives as seen necessary as well as assigning any employee or any person to the position of director of GGC Group companies under the recruitment and nomination criteria with office terms in compliance with GGC's Articles of Association and the conditions of the joint-investment agreement with such company, including fixing an appropriate number of companies where each executive can hold directorship.
- The Managing Director ensures that implementation of GGC Group companies under key policies, such as CG policy, whistleblower policy, fraud and anti-corruption guidelines, compliance, including other policies, align with those of GGC and in compliance with SEC's and SET's rules and regulations, as well as other applicable laws.
- GGC prepared the GGC Way of Conduct to be applied in the management and monitoring of its invested companies appropriately, in line with GGC's objectives, nature of business and strategies as well as multi-level governance on the Apply & Explain principle to standardize GGC Group's overall operations.

- In 2021, GGC conveyed the GGC Way of Conduct to the companies in GGC Group which are ready to align and standardize the monitoring and management of the operations of the Group for better connection and ensure that the operations are moving in the same direction.

8.1.4 Monitoring of Compliance with CG Policy and Practices

GGC has conducted its business in strict compliance with SET's corporate governance code for listed companies, Corporate Governance Report (CGR), and Dow Jones Sustainability Indices (DJSI). In the past year, GGC complied with an international-standard CG code covering five categories:

1. The Rights of Shareholders

The Board of Directors values the protection of the shareholders' rights and their equality and included it in the CG Handbook and ensures that GGC complies as follows:

1. Essential information disclosed to shareholders must be accurate and complete. The information, positive as well as negative, must be clear and up-to-date, even if some issues are not a legal requirement for disclosure. If the Company considers it essential to shareholders, the Company will disclose it via its website and through SET's information disclosure channels.
2. Encouraged shareholders' participation and exercising of their voting rights in the meeting or authorizing proxies to attend the meeting and invited shareholders to express their opinions or provide their questions equitably.
3. The 2021 Annual General Meeting of Shareholders (AGM): The 2021 AGM was held on April 2, 2021, at 9:30 hours at the Vibhavadi Ballroom, Lobby level, Centara Grand at Central Plaza Ladprao, Bangkok. Facilitation was provided to shareholders, under the Covid-19 situation, as follows:

Before the Meeting

- Minority shareholders with no less than 0.4% of the shares with voting rights were invited to propose meeting agenda and nominate candidates for directorship. The criteria for the nomination with clear procedures were posted on SET's and GCC's website before the meeting date and the submission period was from October 1, 2020 to December 31, 2020.
- The Board of Directors at Meeting No. 2/2021, on February 10, 2021 approved the date of the 2021 Annual General Meeting of Shareholders. Accordingly, GGC informed the Stock Exchange of Thailand to disseminate the meeting's resolution on the date of the 2021 AGM, the record date and agenda items on the same day, about two months before the date of the AGM.
- Nominated candidates or proposed agenda items will be considered under the criteria previously set. The Nomination and Remuneration Committee will screen the qualifications of the candidates and the Corporate Governance and Sustainable Development Committee will screen the agenda items to be included on the meeting agenda before submitting them to the Board for consideration. The Board will inform the shareholders at the AGM of the results of the consideration along with reasons. This year, no meeting agenda items or director nomination was received.

- Appointing of proxies to attend the AGM and vote on shareholders' behalf: GGC delivered to shareholders proxy forms on which shareholders can mark their voting, "Approve", "Disapprove" or "Abstain" for each agenda item. Details on the independent directors' profiles are also attached for shareholders to consider as their proxies with detailed explanation, procedures, documentary evidence to be used for proxy identification for convenience in attending the meeting, in Thai and English.
- Access to the meeting venue and contact phone numbers for inquiry are clearly stated and delivered to shareholders together with the invitation letter by mail on March 1, 2021, or 21 days in advance of the meeting date.

On the day of the meeting

- Under the Covid-19 situation, GGC held the 2021 AGM with due regard for the preventive measures announced by the Center for Covid-19 Situation Administration (CCSA) and the Bangkok Metropolitan Administration as well as laws and other requirements: Screening points were set up for shareholders to fill in a Covid-19 screening form, as well as an alcohol gel hand washing station and hand sanitizer service points; shareholders must keep a 1.5 meter social distancing from all directions; questions were written and sent in advance instead of using the microphone to reduce contact; as well as the use of Check in & Check out Thai Chana application before the registration. The shareholders were required to wear hygienic masks or fabric masks throughout the meeting, which normally takes up to two hours. This year, 110 shareholders and proxies attended the meeting.
- Barcode scanning was used in the registration process for convenience and efficiency with staff verifying shareholders' documents ahead of time. Registration began more than two hours before the meeting started.
- Shareholder who could not attend the AGM and had authorised proxies can follow the meeting live via Web-live Broadcast by registering his shareholder number before the viewing. The Company was evidently ready to apply advanced technology and adapt itself to the dynamic circumstances.
- GGC's 10 directors attended the AGM. Management, auditors, legal advisors, shareholders who volunteered as vote-counting witnesses and shareholders' rights protection volunteers to evaluate meeting quality were also present at the Vibhavadi Ballroom, Centara Grand at Central Plaza Ladprao, Bangkok, at No. 1695, Phaholyothin Road, Chatuchak Subdistrict, Chatuchak District, Bangkok 10900. The meeting was broadcasted via Web-live Broadcast.
- Before commencing the meeting, the Chairman explicitly explained the method of voting and counting procedures for each agenda and provided voting cards for each agenda item. Shareholders and proxies could vote "Approve", "Disapprove" or "Abstain".
- The Chairman proceeded with the AGM under the agenda items, and shareholders were invited to ask questions and express opinions equitably. During each agenda item, shareholders or proxies could raise questions in advance by scanning the QR code or write on the form provided or on the question sheets and hand them to the officers to gather and submit to the Board for response. The Chairman of each subcommittee and Managing Director and management

answered the questions raised by the shareholders. Essential questions and opinions were recorded in the minutes of the meeting.

After the Meeting

- GGC disclosed the resolutions passed at the 2021 Annual General Meeting of Shareholders (AGM) and the voting - Approve, Disapprove, Abstain and voided - and the results of every meeting agenda item through the Stock Exchange of Thailand's portal once the meeting had ended. GGC prepared the minutes of the AGM, specifying the names of Directors and management in attendance, as well as other relevant attendees, essential explanations, a list of questions and answers and a summary of opinions expressed, in Thai and English, and submitted these to shareholders, the Stock Exchange of Thailand and other related agencies within 14 days after the date of the meeting, and posted them on GGC's website: www.ggcplc.com.

2. Equitable Treatment of Shareholders

GGC is committed to equitable treatment of shareholders, major or minor, Thai or foreign. GGC's equitable treatment of shareholders can be summarized below:

- GGC values all shareholders and has defined guidelines and best practices for the treatment and published it on GGC's website to ensure investors' confidence and foster shareholders' confidence on equitable treatment together with ongoing appropriate returns.
- Minor shareholders are invited to express their opinions, complaints and recommendations to GGC through the Board, Chairman of the Corporate Governance and Sustainable Development Committee (independent directors) or Corporate Secretary via Company's website www.ggcplc.com under "Good Corporate Governance" or E-mail: corporategovernance@ggcplc.com. Institutional investors can request information or express their opinions via three channels: Company's website under Investors Relations, E-mail at IR@ggcplc.com or phone: 02-558-7395, 02-558-7345. Securities analysts and fund managers can communicate via LINE for prompt and convenient reporting and responses.

3. Roles of Stakeholders

GGC values all groups of stakeholders and treats all equitably. All principles on the rights and impacts on stakeholders are compiled, and written best practices are formulated and posted on GGC's website, and communication channels are provided for stakeholders to send their opinions to the Company. The policies and best practices toward all groups of stakeholders and concrete implementation in 2021 can be summarized as follows:

1. **Shareholders:** GGC respects the fundamental rights of shareholders and treats each shareholder equitably for his or her maximum satisfaction, including the right to participate in the Annual General Meeting of Shareholders (AGM), the right to vote, to propose meeting agenda items, and to nominate candidates for directorship before the AGM. The shareholders can propose recommendations or views and are provided with contact channels via the GGC's website www.ggcplc.com and via E-mail at: corporategovernance@ggcplc.com.

Institutional investors and minor investors: GGC holds meetings on quarterly operational and financial results via Facebook live and Microsoft Teams, including Virtual Roadshow via online, and communicates through assorted activities. GGC participated in the Opportunity Day quarterly, and the online SET Digital Roadshow in collaboration with the Stock Exchange of Thailand to provide channels for international institutions and minor/retail investors to access to information and contact with listed companies. In addition, in compliance with Investors Relations' ethics, GGC refrains from seeing any investor 14 calendar days before the date of GGC's announcement of corporate performance to safeguard confident information not yet disclosed to the public.

Moreover, GGC's 2021 AGM was ranked "Excellence" by the 2021 Annual General Meeting of Shareholders Quality Assessment, with a complete score of 100 for the fourth consecutive year.

2. **Customers:** GGC operates its business for the maximum satisfaction of customers. The Company ensures that its products and services are safe and of acceptable standard. GGC also provides channels to receive opinions and complaints on its products and services to improve them.

GGC conducts quality checks on its products and issues a Certificate of Analysis (COA) before delivering them to customers to ensure quality reliability for safe use in the processes.

The Company also treats all its customers equitably and regularly disseminates information on its products and services through sales agents and media such as promotional articles, newsletters and GGC's website.

3. **Suppliers:** The Company values and treats its suppliers as its stakeholders in a fair and transparent manner to foster their confidence. The businesses are conducted with transparency, fairness and strictly under the agreed conditions. GGC prepared the Supplier Code of Conduct and Procurement Ethics in line with the CG Handbook and improved suppliers' selection and registration processes, setting selection, assessment and a verification standards of suppliers, which are under the care of the Vendor Register Committee, as well as a process for checking and assessing suppliers annually. In addition, GGC holds a Supplier Visit to visit key suppliers on a quarterly basis to foster relationship and sustainable business.
4. **Institutional Creditors:** GGC treats institutional creditors equitably and fairly. The selection of institutional creditors for the Company's financial support and loans are executed in a transparent and fair manner, and information disclosed to them are accurate, complete and timely. GGC also regularly held activities with institutional creditors to foster good relationship.
5. **Public Sector:** GGC values the public sector and its agencies. GGC also defined and published in the CG Handbook guidelines on best practices for the treatment of the public sector, and compliance with the laws, rules and regulations to avoid any action which might impact GGC. The Company is also committed to lawfully obtaining permits from applicable government agencies. GGC regularly supports public activities. Representatives of GGC participated in an activity under the concept of "Zero Tolerance: Thais will not Tolerate Corruption" (as under

“Anti-Corruption”) to foster the confidence of GGC’s commitment to conducting business honestly, transparently and accountably.

6. **Employees:** GGC focuses on developing employees’ competency through knowledge-sharing activities which will enhance knowledge in business operations, knowledge promotion via the LINE application, E-mail, external training, public training courses, as well as preparation of assessment forms and participation in GGC Group’s activities. In 2021, GGC implemented self-education systems, the GREEN E-learning, and Anytime, Anywhere Learning, which are accessible around the clock to ensure continued development of employees and enable them to educate themselves while working from homes to reduce exposure to Covid-19. GGC promoted the quality of the work environment of its employees for safety reasons, and supported essential work materials for working from homes and conducted a survey on the views of employees on various issues to understand their problems along with needs for further improvement and development. GGC also defined a policy on employee remuneration that reflects the Company’s performance as well as the Talent and Succession Management system to prepare them for business growth in the country and abroad.
7. **Communities, Society and Environment:** GGC stresses implementation of social and community responsibility to foster confidence and trust among all stakeholders and regularly visits the surrounding communities around GGC’s facilities. During the Covid-19 pandemic, GGC enhanced relationship with the communities by communicating via phone as another channel to learn of their opinions and problems. The Company implemented the Green Heart Project to distribute alcohol gel and liquid soap to communities in Rayong and government agencies to promote hygiene and reduce Covid-19 transmission. As a result, GGC passed the initial assessment stage and was ranked among the six organisations that had passed the assessment for Industrial Excellence Awards 2021, Social Responsibility category, organized by the Ministry of Industry.

GGC prepared an Integrated Sustainability Report (ISR) under a world-class sustainability report framework, which covers economic, social and environment issues, including matters of material impacts to the Company. Details are as shown in the 2021 Integrated Sustainability Report.

4. Disclosure of Information and Transparency

The Company appreciates the significance of disclosure of information and transparency and set this among best practices and included in the CG Handbook and published it on GGC’s website for all shareholders and interested parties. GGC ensures that the information disclosed is accurate, complete, sufficient, reliable and timely, and the information which includes financial and non-financial information are disclosed in strict compliance with laws and applicable rules and regulations via the SET Link of the Stock Exchange of Thailand, and GGC’s website www.ggcplc.com. Investor Relations (IR) and Corporate Affairs and Corporate Secretary are responsible for monitoring information and handling queries. The actions taken are as follows:

GGC's material information disclosed in the 56-1 One Report are:

- Financial Information: This has been reviewed and audited for accuracy in line with accounting standards and approved by the Audit Committee and the Board of Directors before disclosure to shareholders and the public. To ensure transparency, the Board included the Responsibility for Financial Statements together with the report of the external auditor, which included connected transactions and Management Discussion and Analysis (MD&A) as well as financial risk management in the form 56-1.
- Non-Financial Information: GGC disclosed GGC Group's business structure, which consists of the major shareholding structure and number of shares, institutional shareholder ratios, the free-float ratios, reports on interests of directors and executives and those of parties related to GGC Group's business and management filed when they first took up the positions/yearly report and with each change, including monthly shareholding reports and at the year-end, internal control and risk management audit reports, the charter of each Subcommittee, declaration of independence of Independent Directors and performance reports of the Subcommittees in the previous year.

Channels for information disclosure in Thai and English:

- SET Link of the Stock Exchange of Thailand
- GGC's website: www.ggcplc.com. Corporate information in both Thai and English is regularly updated and completely specifies formal communication channels of each department and director.
- Disclosure of information to all stakeholders through quarterly analyst meetings, roadshows, management meetings, E-mail and LINE application, etc.

GGC set up Investor Relations to centralize all its communication and disclosure of essential information to shareholders, institutional and minor/retail investors, financial analysts and applicable supervisory authorities. Investor Relations ensures the quality of the financial reporting process, including material information which might impact the prices of GGC's securities such as financial statements, performance presentations, quarterly/annual Management Discussion and Analysis (MD&A), which represent GGC's performance and outlooks, including information disclosed to the public via SET Link to local and foreign investors alike. In addition, the "Investor Relations Code of Conduct" was instituted to define roles and best practices of Investor Relations in its treatment of shareholders, as seen in the CG Handbook and on the Company's website.

In 2021, the Company's executives regularly met shareholders, security analysts, investors and employees through various activities, adapted to suit the New Normal, to present performance results, such as analyst meetings, roadshows, local and aboard, as follows:

Investors' Meeting	
Domestic Investors	4 times
SET Opportunity Day	4 times
Financial Analyst Meeting	4 times
Meeting at the Company	-
Teleconference	43 times
Information Disclosure	
Disclosure via SET Link and GGC's Website	81 times

This year, due to the Covid-19 pandemic, no institutional investors' meeting or financial analyst meeting was held.

GGC discloses information via its website www.ggcplc.com for other stakeholders equitably. Interested parties can access the information via channels provided below:

- 1) Mail : Investor Relations,
Global Green Chemicals Public Company Limited,
555/1 Energy Complex Building A, 4th Floor,
Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900
- 2) Phone : +66 (0) 2558-7395, +66 (0) 2558-7345
- 3) E-mail : ir@ggcplc.com
- 4) Fax : +66 (0) 2558-7301
- 5) Website : www.ggcplc.com

Moreover, shareholders, investors and interested parties can contact the Corporate Secretary for enquiry at E-mail: corporategovernance@ggcplc.com.

5. Responsibilities of the Board of Directors

The Board has defined a policy concerning its responsibilities. In 2021, the Board's actions included:

(1) Definition of policies, business strategies and directions

The Board considers, reviews and establishes operational policies, vision, mission, work plans, budgets and organizational development strategies in line with evolving business situations, defines business indicators and goals, provides recommendations for management to achieve goals, and assigns the Managing Director to regularly report to the Board. The Board also holds a meeting to consider long-term (10-year) corporate directions and strategies annually.

(2) Corporate Governance and Code of Business Conduct

The Board established a policy on corporate governance for directors, management and employees to adhere to as guidelines for the business operations of GGC Group to ensure standards, transparency, efficiency and accountability of operations, based on business ethics and integrity and taking into account equitable benefits and rights of all stakeholders. Corporate Affairs and Corporate Secretary has been assigned as the central unit to oversee related matters. Details of good corporate governance appear under “The Good Corporate Governance”

Since the fourth quarter of 2019, all directors, management and employees have signed on the Acknowledge and Conformity Form agreeing to adopt the principles, policies and ethics in the "Corporate Governance and Code of Business Conduct Handbook" in their conduct of business.

In 2021, the Board at the meeting No. 10/2021 on September 15, 2021, approved the revised and updated CG Handbook to be more in line with the rules and best practices of local regulatory bodies, international standards, applicable laws and SEC’s and SET’s criteria, as well as practices of PTT Group companies to ensure that the CG Handbook is up to date and in line with GGC’s business strategies and directions as well as local and international CG principles.

(3) Internal Control and Internal Audit

The Board recognizes the importance of internal control and internal audit systems and mandated that GGC Group be equipped with a standardized internal control system aligning with its risk appetite by considering appropriate control environment factors. Internal Audit has been tasked with the review of the systems and monitoring of the implementation and is to report the progress to the Audit Committee and the Board to ensure that the Company can achieve its goals on operations, reporting and compliance with applicable laws, rules and regulations to foster stakeholders’ confidence. Details appear under “Internal Control”.

(4) Risk Management

The Board, in accordance with the stipulated Roles, Duties and Responsibilities of the Board of Directors, identifies key risks and formulates comprehensive risk management guidelines. The Risk Management Committee defines a risk policy, monitor and promote efficiency of GGC Group’s risk management, identify significant risks, formulate action plans, monitor, assess and improve risks to match the risk appetite and report progress of the risk management to the Board. Details appear under "Risk Management".

(5) Conflicts of Interest

GGC takes very seriously the policy on conflicts of interest and included it in the “Corporate Governance and Business Code of Conduct”. The policy prohibits directors, management and employees from exploiting their positions for personal gain which might lead to transactions of conflicts of interest with GGC. If the transaction is necessary, directors, management and employees with such transactions must refrain from participating in the approval process for transactions which are defined as connected transactions under SEC’s and SET’s notifications and criteria. GGC also prohibits and regularly warns its directors, management and employees against taking advantage of their positions in trading GGC’s stocks or disclose inside information (still under consideration) to others for personal gain in trading GGC’s stocks. Moreover, directors and executives from the vice president up and those in finance-related positions under SEC’s criteria must

submit reports on their interests or those of their related persons. All employees are also required to report their conflicts of interest via GGC's intranet annually or file such reports promptly upon potential conflicts of interest concerning any consideration process or decision-making on GGC's projects.

Key implementation under the four CG Principles

1. Prevention of Conflicts of Interest

In 2021, GGC's actions in preventing conflicts of interest are summarized as follows:

- (1) Followed up on GGC Group's executives and employees' annual reports on conflicts of interest via GGC's system. All executives and employees submitted their respective reports.
- (2) Rolled out the Connected Transactions Manual for GGC and GGC Group to ensure that transactions between them are conducted and disclosed in compliance with SEC's and SET's criteria, and in the best interests of the companies and all stakeholders, and they must refrain from being part of or involved in any conflicts of interest and ensure a clear and transparent operation in the best interests of GGC Group.

2. Abuse of Inside Information

GGC has developed a policy on the use of inside information and included it in the CG Handbook, disclosed it on GGC's website for investors' information, and disseminated it among directors, management, and employees to adhere to and to refrain from exploiting material inside information not yet disclosed to the public for personal or others' gain, including GGC's securities trading. Details of the policy are under "CG Policy and Practices".

In 2021, there was no report on GGC's directors or executives' securities trading during blackout periods. Changes in securities holdings of GGC's directors and executives, their spouses and minor children, are disclosed under "Board of Directors" and "Executives".

3. Anti-Corruption

GGC manages its business operations with corporate governance with emphasis on transparency, honesty and integrity and in a responsible manner for society, environment and all stakeholders, and with strong intention against all forms of fraud and corruption, bribery to domestic and international government officers, or officers of private agencies, and supports and promotes all its employees' awareness of all forms of fraud and corruption. The Company has improved and developed its business guidelines and practices in greater compliance with the laws and CG as follows:

- **CAC Certification:** GGC joined Thai Private Sector Collective Action against Corruption (CAC) in declaring its intention against all forms of fraud and corruption in 2017 and became CAC's certified member in 2018. As suggested by the CAC Council during the first quarter of 2019, GGC improved its risk management and internal control of anti-corruption to make it more effective. The improvement followed CAC's procedures to completion, and the Board accordingly submitted to CAC for re-certification. In 2021, its CAC membership won its first recertification on March 31, 2021 for a three-year period to March 30, 2024.

- **Legal and Compliance:** In 2021, Legal and Compliance managed risks arising from non-compliance or violation of corporate rules and regulations by communicating with all departments through training and other media so that employees are aware of legal consequences from such actions and of the laws, rules and regulations concerning their performance. Legal and Compliance also improved the Company's rules to be more concise and with adequate monitoring, and communicated it to concerned employees to ensure their strict compliance with the laws and GGC's rules and regulations.

4. Whistleblowing

GGC recognizes the importance of all stakeholders' roles and participation in monitoring the business when confronting actions against the Business Code of Conduct, fraud and corruption, or any misconduct. They can forward tips or evidence or complaints directly to the Chairman of the Corporate Governance and Sustainable Development Committee, the Vice President of Internal Audit, or the Corporate Secretary, or to other channels provided below:

1. Vice President of Internal Audit, or Corporate Secretary	Corporate Secretary or Vice President of Internal Audit, 555/1 Energy Complex Building A, 4 th Floor, Vibhavadi Rangsit Road, Chatuchak District, Bangkok 10900
2. E-mail	GGCVoice@ggcplc.com
3. Website	www.ggcplc.com (under Corporate Governance section)

In addition, to facilitate the handling of complaints, the Company has grouped complaints into: 1) Complaints about Corporate Governance and Business Code of Conduct, and 2) Complaints concerning stakeholders.

Process under the Whistleblowing Policy

- **Filing a Complaint:** Any person who witnessed unethical business behavior or illegal misconduct can file a complaint to the Company through GGC's designated channels above.
- **Complaint Registration and Investigative Process:** The Corporate Secretary is responsible for the registration of complaints and forwarding them to Internal Audit or related departments for investigation and factfinding.
- **Confidentiality and Whistleblower Protection:** Names and other related information of the whistleblowers will be kept confidential for their protection.
- **Response:** A response will be made to the complaints of the whistleblower, informants or stakeholders who have left in their complaints their contact addresses. Actions will be reported to the Corporate Governance and Sustainable Development Committee and the Audit Committee for their acknowledgement.

GGC has put in place a Whistleblowing Procedure to keep all complaints in one place with standardized registration numbers and will be separated according to the defined categories to facilitate handling.

In 2021, there were two complaints concerning CG and Business Code of Conduct. The complaints, with reference to the operation manual and procedures under the complaint policy, fell within GGC's scope of criteria on the organization's work requirements and regulations, and the matter was forwarded to HR for further consideration and action.

Complaints Statistics in 2021: GGC received two complaints:

Date	Receipt No.	Issue	Responsible Unit
April 29, 2021	WB 001/2564	Human Rights	Human Resource and Corporate Support
May 12, 2021	WB 002 – 005/2564	Work requirements / Company regulations	Human Resource and Corporate Support

Report of the Audit Committee

Dear Shareholders,

Consisting of three independent directors that are experts, knowledgeable, and proficient in legal and administrative matters, Global Green Chemicals Plc's Audit Committee members command sufficient expertise and experience in finance and accounting to review the credibility of financial statements. The committee also commands components and qualifications required by the announcements of the Capital Market Supervisory Board and SET. Note that its chairman does not serve on other sub-committees. The current composition is as follows.

- | | | |
|----------------------|-------------|----------|
| 1. Prof. Dr. Kumchai | Jongjakapun | Chairman |
| 2. Mrs. Kannika | Ngamsopee | Member |
| 3. Mr. Sarawut | Benjakul | Member*. |

(* Appointed by Board Meeting No. 4/2564 on April 28, 2021)

Serving as the committee secretary is Mrs. Kunakorn Witthayapaisarn, Vice President, Internal Audit.

The committee independently executed Board-assigned and charter duties in line with best practices of audit committees of SEC, SET, and leading reference agencies. Its review and support ensured that GGC Group complied with the CG Code with a focus on sustainable development and in line with applicable laws and requirements. It also ensured that GGC commanded sufficient and effective risk management and internal control practices. Finally, it valued efficient and effective internal audit of international professional standards.

This year the committee held 13 meetings, with perfect attendance each time. Below are the highlights and views.

1. Review of financial statements

The committee examined quarterly and annual financial statements through meetings held with the external auditor, executives of finance and accounting units, management, and Internal Audit executives to review the accuracy and comprehensiveness of financial statements along with disclosure of supplementary data and the adequacy of internal control related to financial statement preparation and observations arising from the external auditor's audit and review. Thanks to clarifications by related executives and the external auditor, the committee regarded GGC's financial statements of 2021 as reasonably and essentially accurate, compliant with financial report standards, adequate in information disclosure, and beneficial to users. To promote auditors' freedom, the committee also held an exclusive meeting with the external auditor in the absence of management and Internal Audit to consult the external auditor about its freedom of execution and expression of views, access to audit data, scope and plans for the annual audit, risks, internal control, internal audit, and other matters. The external auditor expressed no material observations.

2. Review of risk management processes

The committee examined quarterly and annual financial statements through meetings held with the external auditor, executives of finance and accounting units, management, and Internal Audit executives to review the accuracy and comprehensiveness of financial statements along with disclosure of supplementary data and the adequacy of internal control related to financial statement preparation and observations arising from the external auditor's audit and review. Thanks to clarifications by related executives and the external auditor, the committee regarded GGC's financial statements of 2021 as reasonably and essentially accurate, compliant with financial report standards, adequate in information disclosure, and beneficial to users. To promote auditors' freedom, the committee also held an exclusive meeting with the external auditor in the absence of management and Internal Audit to consult the external auditor

about its freedom of execution and expression of views, access to audit data, scope and plans for the annual audit, risks, internal control, internal audit, and other matters. The external auditor expressed no material observations.

3. Review of internal control systems

The committee reviewed assessment findings of internal control adequacy prepared by management under SEC's assessment form and best practices. It also reviewed internal control practices together with Internal Audit on audit outcomes under the risk-based audit plan; no significant issues or deficiencies were found that could impact corporate goal achievement. This year GGC particularly valued the development and upgrading of internal control system efficiency for earnest, ongoing efficiency. Finally, management valued and speeded up corrective actions recommended by the Audit Committee, the external auditor, and Internal Audit, all of which were efficiently carried out. Each quarter the committee monitored the efficiency of internal control concerning GGC's missing feedstock inventory and ways to establish sustainability and continuity of internal control. The purpose was to review, comment, and advise management to support additional internal control practices for greater efficiency and effectiveness as well as encouraging continuous and earnest actions.

4. Review of corporate governance practices

The committee ensured that the complaint-handling process was efficient and effective through additional scoping of its duties in acknowledging summaries of GGC's complaint-handling actions. It also valued the transfer of corporate governance oversight to GGC Group by acknowledging GGC Way of Conduct actions, which represents a key role of the committee under the CG Code, to assure stakeholders.

5. Oversight of internal audit

The committee regularly reviewed Internal Audit's charter, considering the unit's freedom and efficiency of execution together with the annual internal audit plans, which embraced key risks and supported GGC's strategies. It also reviewed examination findings and monitored the execution of these plans quarterly, in the process providing recommendations and tracking corrective actions to promote good governance and develop internal control efficiency. To promote Internal Audit's freedom under the best practices of listed companies, the committee together with the Managing Director reviewed the annual performance of the Vice President of Internal Audit against the KPIs formulated by itself under GGC's performance assessment criteria.

6. Review of compliance practices

The committee commented on GGC's engagement in related-party transactions or those with potential conflicts of interest to ensure compliance with laws and SET's requirements so that these transactions may indeed be sensible and in GGC's best interests and that disclosure may be thorough. It also acknowledged the external auditor's complete reporting of data on related-party transactions, which indicated no anomaly. The committee also reviewed and commented on GGC's request to revise the approach related-party transactions so that GGC may execute business in compliance with applicable laws and regulations.

The committee reviewed audit reports by Internal Audit, finding no law infringement or that of regulations with potential impacts on GGC. It received no report from the external auditor, third-party complaints, or management's information disclosure indicating GGC's infringement of business laws that could significantly affect the company. At any rate, the committee gave recommendations on compliance system development for higher efficiency.

7. Appointment of the external auditor and audit fees

The committee reviewed and provided advice on the selection process of the external auditor for 2022-2024 and selected, nominated, and proposed audit fees for a credible, experienced, and independent auditor. The nominee and fees will be proposed to the AGM for appointment.

8. Audit Committee's quality assurance

Regularly reviewing its own Board-approved charter, the committee reported its performance outcomes to the Board quarterly and annually. It conducted group and individual self-assessment this year, reporting the findings for the Board's acknowledgment and helpful recommendations on its execution of duties as well as for this year's annual report. Further, the Board acknowledged data on the duties of the Audit Committee, GGC's operations, and internal audit in support of the committee's efficiency.

In summary, the committee executed its duties and responsibility as mandated by its charter, leveraging competency, care, prudence, and sufficient freedom in addition to commenting and providing advice while taking into account equitable treatment of stakeholders in GGC's best interests.

The Audit Committee's overall opinion is that this year GGC commanded financial reports prepared under generally accepted accounting principles. These reports were credible, disclosed adequate data, and benefited users of financial statements. Further, GGC complied with applicable business laws, corporate governance and risk management practices, and an adequate as well as effective internal control system. Internal Audit also successfully executed its plans, conformed to the international scope of the internal audit profession with commitment to the code of conduct and independence, thus enabling the unit to fully support the Audit Committee's duties and generating value added for GGC.

This year the Audit Committee received excellent cooperation from the Board, management, external auditor, Internal Audit, and all related parties.

On behalf of the Audit Committee



(Prof. Dr. Kumchai Jongjakapun)
Chairman of the Audit Committee

Report of the Nomination and Remuneration Committee

Dear Shareholders,

The Nomination and Remuneration Committee is chaired by ACM Songtam Chokkanapitag, with Mr. Patiparn Sukorndhaman and Maj. Gen. Titawat Satiantip as members.

In executing charter and Board-assigned duties this year, the committee held five meetings as highlighted below.

1. Nomination and selection of directors, sub-committee members, and the Managing Director

- Nominated directors in place of those due to retire at the 2021 AGM for the Board's and the AGM's approval. To this end, it also allowed shareholders to nominate those with complete qualifications within three months, at the end of which no nomination was forthcoming. The committee therefore nominated Mr. Sarawut Benjakul and Mr. Jarun Wiwatjesdawut to replace those whose terms had been completed, and Pol. Gen. Suchart Theerasawat and Maj. Gen. Titawat Satiantip to another term. All of them were perfectly qualified, without prohibited characteristics under the law and applicable criteria; they were also competent, with experience relevant to GGC's business strategies. The Board and the AGM 2021 duly approved the proposal.
- Nominated and selected qualified directors in place of those who resigned during the year, namely Mr. Pairoj Samutthananon for the Board's approval. Consideration had been made from his qualifications under applicable laws and criteria, the Articles of Association, the CG Code, knowledge, skills, and the Board Skill Matrix in addition to SEPO's Directors' Pool. The Board approved the proposal.
- Nominated to the Board qualified directors to serve as sub-committee members to fill vacant posts due to term completion. To this end, the committee reviewed the sub-committees' components and individual qualifications against the requirements of SEC, SET, Articles of Association, and sub-committee charters as well as the Board Skill Matrix in addition to specific experience that would prove helpful to their directorship and membership of these sub-committees.

2. Directors', sub-committee members', and the Managing Director's compensation

- Reviewed compensation-setting for the Board and sub-committees for this year and bonus-setting for 2020 for approval by the Board and the AGM by reviewing their suitability under the CG Code, namely company performance in comparison with the current economic situations of businesses related to petroleum and petrochemical, principles and policies approved by the shareholders, duties and responsibility, the Board's annual performance assessment outcomes, and board compensation data of companies of peer sizes. The findings were tabled for the Board's submission to the 2021 AGM, which approved them.
- Decided the 2021 compensation of the Managing Director on the basis of his performance outcomes as well as assigned responsibility for the Board's approval.

3. Top executive and Managing Director's performance assessment

- Revised the 2021 Board performance assessment forms (overall, individual, and cross-assessment) for completeness and timeliness, in line with the CG Code for listed companies, DJSI assessment criteria, and the ASEAN Corporate Governance Scorecard. The assessment outcomes formed part of the review of the Board's annual compensation apart from GGC's performance.
- Reviewed the committee's 2021 performance assessment form for completeness and agreement with current standards. The assessment outcomes were then reported to the Board.
- Defined criteria for the Managing Director's 2021 performance assessment and proceeded with the actual assessment to decide proper and fair compensation before tabling it for the Board's approval.

4. Performance development of Nomination and Remuneration Committee

- Set six planned meetings in advance for 2022, with additional meetings as seen fit, to acknowledge actions and provide recommendations to the Board and management.
- Reviewed and improved its own charter for suitability and alignment with the CG Code and its performance.
- Reviewed and improved the Board Skills Matrix in line with the CG Code, DJSI standard, and IOD's best practices for nomination committees for director and sub-committee member nomination.
- Reviewed and improved criteria and processes for directors' nomination for timeliness and alignment with applicable laws and requirements together with international standards.
- Ensured disclosure of all nomination criteria for directors as well as their compensation figures in the annual report and at AGMs in fulfillment of CGR criteria.

The Nomination and Remuneration Committee is committed to executing its duties with prudence, transparency, and compliance with the CG Code to foster confidence among shareholders and all stakeholders in GGC's best interests to supplement long-term value to GGC.

On behalf of the Nomination
and Remuneration Committee



(ACM Songtam Chokkanapitag)
Chairman of the Nomination
and Remuneration Committee

Report of the Corporate Governance and Sustainable Development Committee

Dear Shareholders,

This year's Corporate Governance and Sustainable Development Committee, chaired by Pol. Gen. Suchart Theerasawat, with Mr. Suphit Suwagul and Maj. Gen. Titawat Satiantip as members, executed all their charter duties and Board-assigned duties. Five meetings were held, with the following highlights:

1. Corporate governance (CG)

- Monitored CG practices to ensure alignment with the requirements and criteria of domestic regulators, international standards, corporate strategies, and business directions. The committee approved CG plans for 2022 for defining GGC's concrete approach to implementation as well as monitoring and measurement of CG conduct.
- Ensured that business commanded stewardship of and responsibility for all stakeholders (customers, suppliers, creditors, employees, communities, investors, shareholders, society, the environment, and health & safety) through report presentation by responsible agencies every quarter. Also, it advised and constantly tracked outcomes to plan responses to each stakeholder group's expectations.
- Supervised the organization of the 2021 AGM under the prevailing Covid-19 to ensure a smooth, efficient meeting that aligned with the law, AGM Checklist practices, and the CG Code. As a result, GGC earned an excellent rating (perfect score) given by the Thai Investors Association.
- Oversaw the definition of a criterion allowing shareholders to propose meeting agenda and nominate directors ahead of the 2022 AGM at least three months ahead (October 1-December 31, 2021).
- Monitored and provided advice on revised compliance with SEC's 2017 CG Code for listed companies for the Board's consideration and disclosure in Form 56-1 One Report.
- Provided comments and advice on the measures to counter corrupt practices and assess corruption risks in corporate work procedures.
- Monitored and provided advice on the completion of GGC's self-assessment form for participation in the CGR (Corporate Governance Report) Project against the assessment criteria developed from OECD's CG Code. As a result, GGC earned excellent rating for the fourth consecutive year from Thai IOD.
- Approved amendment to the CG and Code of Business Conduct 2021 Handbook for timeliness in line with GGC Group as well as international criteria.

2. Pursuit of sustainable development

- Monitored practices to ensure agreement with the international standard (UN Global Compact). For the second time, GGC earned the LEAD (top tier) acclaim. As for DJSI and CDP (Carbon Disclosure Project), GGC commands action plans for future certification and acceptance. Also, it approved the 2022 sustainable development plan in line with its strategies, global situations, and dynamic challenges.

- Advocated and valued stakeholder stewardship. GGC, in conjunction with the Thai Red Cross Society and Standard Manufacturing Co., Ltd. (a business partner), produced alcohol hand gel with GGC's glycerine product for inclusion in the Covid-19 survival kit as a preliminary measure for easing the plight of those affected by Covid-19. GGC also extended the Green Health Project and delivered the CHOB alcohol gel to flood victims. As a result, GGC earned a Prime Minister's Award and a CSR-DIW Continuous Award for the seventh successive year from the Department of Industrial Works.

3. Compliance with applicable laws and requirements

- Regularly monitored and provided advice on corporate compliance and supervised management of complaints filed through every corporate channel for conformance to the complaint-handling policy through quarterly report presentation. Also, the committee valued awareness enhancement and understanding of the GRC (Governance, Risk Management & Internal Control, and Compliance) code and operation plan formulation in line with the Personal Data Protection Act of 2019.
- Approved the 2021 compliance plan's conformance to laws, rules, and regulation to prevent and lower non-compliance risks.

4. Execution of duties and assessment

- Scheduled this committee's meetings at least every quarter during 2022, with additional meetings as required, to deliberate and acknowledge operation and reports, provide recommendations to the Board and management, and review meeting agenda setting for deliberation and acknowledgment.
- Reviewed its charter to ensure alignment with duties and responsibility as well as conformance to related requirements and regulations.
- Reviewed its performance assessment forms for 2021 (group and self-assessment) and acknowledged assessment outcomes to ensure complete execution of duties.
- Reported execution and performance assessment outcomes (group and self-assessment) for 2021 for the Board's acknowledgment.

The Corporate Governance and Sustainable Development Committee values its supervision of GGC's strict compliance with the CG Policy and Business Code of Conduct and compliance policy in parallel with sustainable development. It is committed to developing GGC's and GGC Group's CG practices in constant pursuit of parity with international standards. The unanimous view is that CG is key GGC supporting GGC's operating efficiency while promoting sustainable development, which will lead to confidence among all stakeholders and international acceptance.

On behalf of the Corporate Governance
and Sustainable Development Committee



(Pol. Gen. Suchart Theerasawat)
Chairman of the Corporate Governance
and Sustainable Development Committee

Report of Risk Management Committee

Dear Shareholders,

The Risk Management Committee consists of four directors, two of whom are independent directors. All members possess experience in diverse fields of industry and business together with mastery of risk management. Chairing the committee is Mrs. Kannika Ngamsopee (independent director), with Mr. Patiparn Sukorndhaman, Mr. Jarun Wiwatjesadawut (independent Director), and Mr. Piroj Samutthanant (Management Director) serving as members.

This year GGC continued to face the world's massive crisis arising from the Covid-19 pandemic, which has wielded impacts worldwide on economies, human lives, and human safety in all corners of the world. In addition, it faced crude oil price volatility, price competition among methyl ester producers, crude palm oil feedstock price volatility, and a drought-induced feedstock shortage in Thailand. On the bright side, the crisis gave rise to a positive world trend for more attention to health and hygiene as well as green products, evident in policy formulation on global climate change and goals on green-product consumption—there lie GGC's business opportunities today and in the future. The Risk Management Committee executed its duties with utmost dedication in commenting, advising, and monitoring mitigation plans as well as various crisis management actions to ease impacts on performance outcomes, implementation of key projects, business continuity, and employees' safety. All these have enabled GGC to survive the crises of 2021 while executing key business matters and achieving goals, which underscores its efficient risk management standard that helped GGC cope with global economic volatility, market competition uncertainty and severity, as well as new risk factors in a speedy manner.

GGC values risk management, steering enterprise risk management (ERM) under the CG Code and implementing the risk management process for its management to proceed efficiently while GGC achieves its goals, thus fostering shareholders' confidence. GGC also engages in assessment of risks arising from external factors or incidents potentially affecting its business operations. With prudence and efficiency, it reviewed mitigation plans together with risk management frameworks.

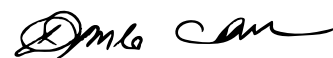
This year the committee held seven meetings and executed Board-assigned and charter missions under the scope of authority and responsibility as highlighted below.

1. Constantly steered, monitored, commented, and advised management on ERM 2021 and commented on mitigation plans for emerging risks to ensure compatibility with GGC's risk appetite. The committee reported its performance outcomes to the Board every quarter or whenever risks arising from various factors could significantly affect short-term corporate goals and corporate strategic goals.
2. Commented on the improvement and revision of risk management frameworks for feedstock and product price volatility, inventory management, key project investment, and forex.
3. Reviewed risk management for four key projects against its strategic plans and the project for project value addition:
 - 3.1 The Utility Provider for Nakhonsawan Bio Complex Phase 2 Project: The committee reviewed risk assessment and the mitigation plan to embrace project implementation and partners' investment projects. It also reviewed risk issues concerning various contract terms between joint-venture GKBI and business partners.

- 3.2 The Bio-Succinic Acid Project to produce bioplastics feedstock: The committee provided advice on improving key measures to ease project risks, namely project investment format, market development, project investment cost-effectiveness, technological development, and selection of business partners under this joint-investment project.
- 3.3 The project to extend fatty alcohols toward HPC: The committee provided advice and considered risk assessment together with the mitigation plan to embrace the entire supply chain; they also examined proper business models. Also considered was the establishment of cooperation with business partners for efficient business development while lowering risks concerning prototype products and market as well as customer development.
- 3.4 Share sale in TETSO: The committee commented and provided advice on the sale in this joint venture with due regard for legal provisions and responsibility as well as cordial relations with business partners.
4. Commented and provided advice on a plan to improve operating efficiency and the internal control process:
 - 4.1 Efficiency improvement and measures for machinery security
 - 4.2 IT system security and the support to GGC's activity to educate employees on information security
 - 4.3 Risk management for methyl ester sales price strategy to align with market situations and upkeeping of GGC's competitiveness.
5. Endorsed the 2022 enterprise risk management (ERM) guidelines and instructed GGC to track updates on the 2021 ERM residual risks efficiently in line with the plan.
6. Commented and provided advice on the Risk and Control Self-Assessment ("RCSA") Project to align more with SEC's CG Code and GGC Group's best practices to promote GGC's achievement of internal control objectives, namely operation, reporting, and compliance.
7. Revised the risk management policy and the committee's charter in line with the COSO ERM 20127 (Enterprise Risk Management) and reported its performance assessment outcomes for the Board's acknowledgment and disclosure in Form 56-1 One Report.

In tackling risk management, GGC took into consideration impacts of external factors, emerging risks, strategic focus, stakeholders' expectations, and residual risks to satisfy its risk appetite and promote efficient goal and objective achievement.

On behalf of the Risk Management Committee



(Mrs. Kannika Ngamsoppee)

Chairman of the Risk Management Committee

9. Internal Control & Connected Transaction

9.1 Internal Control

GGC values an internal control system under the international standard of The Committee of Sponsoring Organizations of the Treadway Commission (COSO) in pursuit of its objectives of efficient operation, accuracy and completeness of reports, and full compliance with relevant laws and regulations. These would ensure righteous and transparent operation of business in line with its objectives.

At Board of Directors Meeting No. 2/2021 of February 17, 2021, the Board assessed such internal control system. Consideration was given to management's SEC's assessment findings on the adequacy of the system and the Audit Committee's report of its review on such adequacy. The Board's view was that the system was both adequate and appropriate. To elaborate, GGC had assigned a unit and personnel to monitor the efficiency of the system for efficient implementation as well as for accurate and credible reports so that GGC may comply with applicable laws and regulations. The other purpose is to sufficiently prevent company assets from the malfeasance of authorized officers and related parties as well as transaction engagement with parties of conflicts and connected parties. Internal Audit reviewed the corporate internal control system against its risk-based audit plans, making several recommendations for improvement. Management took these to heart and accelerated corrective actions without finding significant deficiencies in the system that could affect GGC's main objective achievement.

GGC has adopted COSO's internal control framework of five elements:

- 1) Control Environment
- 2) Risk Assessment
- 3) Control Activities
- 4) Information & Communication
- 5) Monitoring and Reporting Activities

In 2021, GGC improved its processes and systems to increase its efficiency of internal control to strengthen the governance process and to identify risks and issues efficiently and rapidly. GGC's internal control system is summarized below.

Control Environment

The Board and management ensure that GGC operates its businesses in a righteous and ethical manner while cultivating among its personnel corporate values in support of the corporate culture that focus on integrity, ethics, and responsibility. GGC is committed to providing a good, appropriate, and efficient control environment as follows:

- To ensure the efficiency of operations, the Board works independently of management in overseeing GGC's overall business and comments on its strategic directions to guide business plans and action plans. At the same time, it regularly monitors GGC's performance and the performance of subcommittees to ensure achievement of goals.
- The Board has amended and approved the corporate structure as business groups and functions with common goals in line with its growth. This allows for efficient, transparent, and uniform business implementation for the

entire group. Checks and balances and alignment result from segregation of duties in key functions. Duties, responsibility, and delegation of authority are defined under the corporate structure, which is then communicated to employees to be aware of their own roles, authority, duties, and responsibility.

- The Board has defined policies on corporate governance and compliance with laws, regulations, internal control policy, and on anti-corruption and guidelines for the Board and the workforce to abide by. It also distributed the Corporate Governance and Business Code of Conduct Handbook with the communication for their acknowledgment and signature as a pledge by all across GGC Group to accept as work guidelines under corporate governance.
- GGC has set a whistleblower policy, stating procedures for the complaint scope and adding complaint channels for diversity, including whistleblower protective measures and fair, transparent treatment of whistleblowers. These establish credibility for the whistleblower system and the complainant's confidence.
- GGC has educated employees to raise awareness of Corporate Governance, and Business Code of Conduct, conflicts of interest, and anti-corruption through communication channels every month. Senior executives and employees participated in training on corporate governance and compliance.
- GGC's corporate culture is engrained for employees' awareness of ethical business conduct and alignment with good practices through emphasis on examples of behavior and illustrate key behavior across the corporation to guide all employees.
- GGC's human resource management process defines the qualifications of each job position in line with the criteria for personnel recruitment and selection. It provides knowledge and skills development for staff, with close monitoring and fair, transparent appraisal of their performances.
- Full compliance with GGC's internal control policy is required from the Board, management, and other employees in performing their duties to achieve GGC's objectives and goals.

Risk Assessment

GGC focuses on promoting the corporate risk management culture by promoting such management as part of employees' responsibilities and values such management by linking their assessment to the strategic plan formulation and that of short-term and long-term business plans. Appointed by the Board, the Risk Management Committee (RMC) sets and reviews policies, objectives, risk management scope, monitoring and evaluation of compliance with the scope, and giving opinions and recommendations on GGC's corporate risk management and project investment risks. The Enterprise Risk Management Committee (ERMC), chaired by the Managing Director, ensures that GGC manages its risks efficiently, leading to the achievement of business goals. Below are GGC's risk management approaches:

- The Board and The Risk Management Committee focus on promoting the risk management corporate culture by defining a policy requiring everyone to become aware of and understand risk management as part of the culture, comply with the risk management policy, and make risk management everyone's mandate.
- GGC promotes the knowledge and understanding of corporate risk management by training with experts on enterprise risk management, involving the Board, management, and other employees by setting risk management as part of everyone's job description.
- GGC defines clear objectives and goals linking to its vision and mission.

- GGC manages enterprise risks under the ISO 31000 - Risk Management scope and COSO Enterprise Risk Management guidelines, and institutes a risk management policy for all.
- GGC carries out the risk profiling process of identifying, analyzing, assessing and managing risks at the corporate and unit levels that could compromise enterprise goal achievement, embracing year-round risks, and specifies risk mitigations plans to systematically manage risks.
- GGC assesses risks by recognizing changes in factors and emerging risks, monitors the management of corporate risks against GGC's risk appetite, and defines key risk indicators (KRIs) to track changes that may hinder the achievement of objectives, with an average of monthly submission of risk management reports to ERM for acknowledgment and reporting to the Board and RMC every quarter.

Control Activities

In place are control activities spanning all major processes, including risk management, to mitigate risks that may hinder the achievement of objectives:

- GGC has designed its control activities with due regard for sound internal control principles. These include the segregation of duties and systematic authorization of approval to groups of employees for checks and balances. In place are policies and good practices for conflicts of interest transactions. In addition, GGC's business has been conducted in a transparent, fair and auditable manner. Approval of transactions takes into account GGC's utmost benefit.
- GGC established written rules and regulations, requirements, corporate policies, and job manuals, which define the scope of power and duties of the Managing Director, executives, and employees by level along with clear work procedures as guidelines for their job performance. GGC also regularly reviews to ensure that business has been conducted in compliance with the Articles of Association, corporate policy, requirements, and job manuals.
- GGC specified preventive and mitigation plans in line with risk assessment outcomes to manage risks at GGC's risk appetite level. It monitors and reports the implementation of these plans to The Risk Management Committee and the Board for acknowledgment.
- GGC commands internal control of processes, both by the processes set out in the manual control system and by automated control systems defined in the automated control system for greater efficiency in business conduct and more careful and accurate internal control, including a process to manage feedstock and goods inventory together with a system to record and store inventory items. Both controls represent preventive control and detective control.
- GGC reviews IT-based control activities, including an authorization matrix, meaning the management of access to information safely and the ability to efficiently keep critical data. GGC also devises requirements on the IT security policy to ensure that the IT system as a whole is appropriate, efficient, and secure, without interruption.
- GGC put in place processes to supervise its invested affiliates in individual businesses so that subsidiaries and associates may have compatible business guidelines that comply with GGC's policies, guidelines, and strategic directions while being able to track the work of these subsidiaries and associates regularly and continually.
- In 2021, GGC relentlessly improved its internal control system embracing key processes across the corporation by clearly assigning responsible parties and improvement plans. Progress has been evident. Internal Control

has also closely monitored these improvement steps and regularly reported updates to subcommittees as seen fit. In addition, the integrated Governance Risk Management & Compliance taskforce implemented the plans for communication and education on the significance and revision of key processes to drive GGC's governance development, raise the efficiency of planning, monitoring, and assessment under sufficient internal control to achieve strategic goals.

Since GGC is an affiliate of PTT Global Chemical Plc. ("GC"), it was directed to follow the GC Way of Conduct, which is GC's guidance for conduct and affiliate supervision. GGC itself would follow the same guideline. In 2021, GGC has conducted GGC Way of Conduct and Communicated to internal department, Subsidiaries as well as assess the business operations of affiliated companies in which the company holds shares.

Information & Communication

GGC values the quality of information and communication. Internal and external channels are provided for employees to access the information required for their efficient operation as follows:

- GGC prepares various reports for submission to the Board by including analysis of relevant data from internal and external sources, showing changes, trends, sales performance, production outputs, and inventory in support of presentations, including financial statements and performance reports. The company prepares supporting adequate data for the Board's decision-making; besides, meeting documents are sent ahead of Board meetings for their analysis and decision-making. The Board can request additional information from applicable units in support of their deliberation.
- Diverse elements of the internal communication process are provided, taking into account their compatibility with the types of data and communication objectives. GGC's business directions, goals, and key policies are communicated through the MD Townhall, cross-functional team meetings, site visits, the intranet, and e-mail.
- GGC disseminates its information to various stakeholders, including communication through its website. Investor Relations, Management Accounting, and Corporate Communications and Social Responsibility are responsible for information dissemination.

Monitoring and Reporting Activities

In ensuring the adequacy and efficiency of internal control, GGC undertakes the following monitoring and assessment processes:

- GGC assigns a unit to take charge of managing internal control to support the management's assessment, development, implementation, and review of the adequacy of the system, and give opinions about the 2nd line of defense. The outcomes of internal control assessment are reported to management to ensure efficient internal control.
- Independent Internal Audit, reporting direct to the Audit Committee, performs audit duties to ensure sufficiency, suitability, and consistently practiced internal control. To this end, Internal Audit audits and assesses internal control under various activities against the audit plan approved by the Audit Committee, which conforms to GGC's strategic directions and key risks affecting operation. At the same time, it provides recommendations for high efficiency of internal control. Jointly with management, it defines guidelines for internal control improvement. Internal Audit reports its findings to the Audit Committee each quarter. Assessment findings on accounting and finance are provided by the external auditor, who presents its findings and reviews to the Audit Committee quarterly and annually.

- GGC secured the membership status of CAC (Private Sector Collective Action against Corruption) and must review its status every three years to report its assessment findings, which is signed by the Audit Committee to guarantee the existence of policies, guidelines, and measures for risk assessment and corruption prevention. GGC's mandate is to run its business in line with CAC's corporate governance code.

Besides finding no significant shortcomings either in GGC's internal control system or in transactions or items that may involve conflicts of interest, the assessment in 2021 of all the five components indicated no potential conflicts of interest, corrupt practices, or violation of laws on securities and exchange, SET regulations, or other applicable laws.

9.2 Connected transactions

For Fiscal Year 2021, GGC conducted business transactions with various companies with common shareholders or directors. In the absence of reference market prices, connected transactions with entities of potential conflicts of interest are based on market or contractual prices. Details of the relationship with these companies are as follows:

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
PTT Public Company Limited (PTT)	<ul style="list-style-type: none"> Major shareholder of GC holding 45.18% Director who is PTT Executive: 1. Mr. Kongkrapan Intarajang Sales/purchase transactions of products and services 	Statements of income			
		Revenue from sales of goods and services	102	-	-
		Purchase of goods or services	757	1	168
		Other revenue	21	-	-
		Other expenses	51	5	3
		Financial statements			
		Other receivables – related business	-	-	-
		Trade payables – related business	-	-	-
		Other payables – related business	1	3	2
PTT Global Chemical Public Company Limited (GC)	<ul style="list-style-type: none"> Major shareholder of GGC holding 72.29% Common director: 1. Mr. Kongkrapan Intarajang Director who is GC Executive: 1. Mr. Kongkrapan Intarajang 2. Mr. Patiparn Sukorndhaman 3. Mr. Piroj Samutthanant 	Statements of income			
		Revenue from sales of goods and services	1,012	1,574	1,792
		Purchase of goods or services	232	186	183
		Other revenue	18	-	-
		Other expenses	104	80	74
		Interest payment	-	11	8
		Financial statements			
		Trade receivables – related business	112	109	155
		Other receivables – related business	19	16	1

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
	<ul style="list-style-type: none"> Sales/purchase transactions of products and services 	Right to use assets – related business	-	300	257
		Trade payables – related business	3	9	7
		Other payables – related business	65	24	35
		Payables to contractors – related business	-	1	-
		1-year term of financial lease liabilities – related business	-	19	15
		Financial lease liabilities – related business	-	286	253
GC Glycol Company Limited (GC Glycol)	<ul style="list-style-type: none"> GC holds 100% of the shares Sales/purchase transactions of products and services 	Statements of income			
		Revenue from sales of goods and services	-	-	2
		Purchase of goods or services	-	-	1
		Other expenses	11	2	9
		Interest payment	-	1	1
		Financial statements			
		Right to use assets – related business	-	28	13
		Other payables – related business	2	1	4
		1-year term of financial lease liabilities – related business	-	9	8
		Financial lease liabilities – related business	-	20	7
Solution Creation Company Limited (SUN)	<ul style="list-style-type: none"> GC holds 100% of the shares Sales/purchase transactions of products 	Statements of income			
		Revenue from sales of goods and services	25	30	62
		Financial statements			
		Trade receivables – related business	5	6	15

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
Global Power Synergy Public Company Limited (GPSC)	<ul style="list-style-type: none"> PTT holds 42.53%, GC holds 10.00%, and Thaioil Power Company Limited (in which TOP holds 20.78% of the shares) Common directors: <ol style="list-style-type: none"> Mr. Payungsak Chartsutipol (completed his term in 2021 AGM dated April 2, 2021) Mr. Kongkrapan Intarajang Service transactions 	Statements of income			
		Purchase of goods or services	499	481	427
		Financial statements			
		Trade payables – related business	34	40	42
GC Maintenance and Engineering Company Limited (GCME)	<ul style="list-style-type: none"> GC holds 100% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	56	62	88
		Other expenses	-	-	1
		Financial statements			
		Trade receivables – related business	-	-	-
		Other payables – related business	21	23	26
GC Logistics Solutions Company Limited (GCL)	<ul style="list-style-type: none"> GC holds 99% and SUN holds 1% of the shares Service transactions 	Statements of income			
		Other expenses	19	17	13
		Financial statements			
		Other payables – related business	5	3	3
		Payables to contractors – related business	-	-	1

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
Thai Tank Terminal Company Limited (TTT)	<ul style="list-style-type: none"> GC holds 51% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	6	-	-
		Financial statements			
		Other payables – related business	-	-	-
PTT Digital Solution Company Limited (PTT Digital)	<ul style="list-style-type: none"> GC holds 40%, PTT holds 20%, TOP holds 20%, and PTTEP holds 20% of the shares Service transactions 	Statements of income			
		Other expenses	5	7	13
		Financial statements			
		Other payables – related business	1	2	2
Eastern Fluid Transport Company Limited (EFT)	<ul style="list-style-type: none"> GC holds 15% and TTT holds 15% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	0	0	0
		Financial statements			
		Other payables – related business	-	-	-
NPC Safety and Environmental Service Company Limited (NPC S&E)	<ul style="list-style-type: none"> GC holds 100% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	16	19	18
		Other expenses	2	-	4
		Financial statements			
Dhipaya Insurance Public Company Limited (Until August 2021)	<ul style="list-style-type: none"> PTT holds 13.33% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	16	21	22
		Other revenue	-	2	-
		Financial statements			
		Other receivables – related business	14	22	-
		Other payables – related business	-	-	-

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
Thai Oil Public Company Limited (TOP)	<ul style="list-style-type: none"> PTT holds 45.03% of the shares Sales/purchase transactions of products and services 	Statements of income			
		Revenue from sales of goods and services	1,070	1,813	2,643
		Other revenue	2	-	-
		Financial statements			
		Trade receivables – related business	100	146	198
		Other receivables – related business	-	-	-
		Other payables – related business	3	-	-
PTT Oil and Retail Business Public Company Limited (PTTOR)	<ul style="list-style-type: none"> PTT holds 75% of the shares Sales/purchase transactions of products 	Statements of income			
		Revenue from sales of goods and services	4,293	6,465	4,144
		Purchase of goods or services	74	58	105
		Other revenue	-	-	-
		Financial statements			
		Trade receivables – related business	447	342	270
		Trade payables – related business	6	8	13
Energy Complex Company Limited (ENCO)	<ul style="list-style-type: none"> PTT holds 50% of the shares and PTTEP (in which PTT holds 63.79% of the shares) holds 50% of the shares Service transactions 	Statements of income			
		Other expenses	11	8	9
		Financial statements			
		Other receivables – related business	-	-	3
		Right to use assets – related business	-	3	-

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
		Other payables – related business	-	-	-
		1-year term of financial lease liabilities – related business	-	3	-
IRPC Public Company Limited	<ul style="list-style-type: none"> PTT holds 45.05% of the shares Sales/purchase transactions of products and services 	Statements of income			
		Revenue from sales of goods and services	212	562	1,578
		Financial statements			
		Trade receivables – related business	64	39	66
		Other receivables – related business	-	-	-
Business Services Alliance Company Limited (BSA)	<ul style="list-style-type: none"> PTT holds 100% of the shares GC holds 25% of the preferred stocks Service transactions 	Statements of income			
		Purchase of goods or services	2	2	2
		Other expenses	8	11	12
		Financial statements			
		Other payables – related business	2	3	4
TOP Solvent Company Limited (TS)	<ul style="list-style-type: none"> Subsidiary of Thailoil Solvent Company Limited (TOS), a subsidiary of TOP (in which PTT holds 45.03% of the shares), holds 100% of the shares Sales/purchase transactions of products 	Statements of income			
		Revenue from sales of goods and services	0	-	-
NPC S&E Security Guard Company Limited (NPCSG)	<ul style="list-style-type: none"> NPC S&E holds 100% of the shares Service transactions 	Statements of income			
		Purchase of goods or services	6	7	7
		Other expenses	1	1	-
		Financial statements			
		Other payables – related business	1	1	1

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
(Million THB)					
Advanced Biochemical (Thailand) Company Limited (Advanced Biochemical)	<ul style="list-style-type: none"> Vinythai Public Company Limited (VNT) (in which GC holds 24.98% of the shares) holds 100% of the shares Sales/purchase transactions of products 	Statements of income			
		Revenue from sales of goods and services	272	344	824
		Financial statements			
		Trade receivables – related business	20	30	163
PTT International Trading Pte. Ltd (PTTT)	<ul style="list-style-type: none"> PTT holds 100% of the shares Sales/purchase transactions of products 	Statements of income			
		Purchase of goods or services	46	33	-
		Financial statements			
		Trade payables – related business	15	-	-
Emery Oleochemicals (M) Sdn Bh (EOM)	<ul style="list-style-type: none"> A subsidiary of GC, which holds 50% of the shares Purchase transactions of products or services 	Statements of income			
		Purchase of goods or services	19	-	-
GC Polyols Company Limited (GCP)	<ul style="list-style-type: none"> GC holds 82.1% of the shares in GC Purchase transactions of products or services Common Director: 1. Mr. Patiparn Sukorndhaman 	Statements of income			
		Revenue from sales of goods and services	-	7	85
		Financial statements			
		Trade receivables – related business	-	2	13
Emery Oleochemicals LLC (EOMUSA)	<ul style="list-style-type: none"> Emery Oleochemicals (M) Sdn. Bhd. (in which GC holds 50% of the shares) holds 100% of the shares 	Statements of income			
		Revenue from sales of goods and services	-	11	29
		Financial statements			
PTT Phenol Company Limited (PPCL)	<ul style="list-style-type: none"> GC holds 100% of the shares Purchase transactions of products or services 	Statements of income			
		Revenue from sales of goods and services	-	0	-
		Purchase product or services	0	-	-
		Other revenue	-	0	0

Company	Relationship (As of December 31, 2021)	Connected Transaction	2019	2020	2021
GC Oxirane Company Limited (GC Oxirane)	<ul style="list-style-type: none"> GC holds 100% of the shares Purchase transactions of products or services 	Statements of income			
		Revenue from sales of goods and services	-	-	-
		Other revenue	-	-	0
GC Estate Company Limited (GCEC)	<ul style="list-style-type: none"> GC holds 100% of the shares Service transactions 	Statements of income			
		Other expenses	-	1	2
		Financial statements			
		Right to use assets – related business	-	9	6
		1-year term of financial lease liabilities – related business	-	3	4
		Financial lease liabilities – related business	-	7	3

Justification and Sensibility of Connected Transactions

GGC's connected transactions for the fiscal year ended on December 31, 2021, were undertaken in the course of normal businesses in line with the general business terms, as reasonable people would do with contractual partners under similar circumstances at arm's length.

In engaging in connected transactions where GGC produced for related companies, the objectives were to enable the buyers to process or make their own products. To this end, GGC's prices aligned with contractual formulas or market prices (as applicable), which had considered both contractual parties' interests and were referenced to market prices without siphoning of mutual benefits or irregular items.

Similarly, service transactions with related companies were meant for related companies to carry out day-to-day businesses. The rates of service fees were subject to market conditions, which had considered both parties' interests and referenced to market prices without siphoning of mutual benefits or irregular items.

Finally, purchases of goods, feedstock, or services (or all of these) from related companies were in the normal course of business. Such goods, feedstock, or services aligned with GGC's demand and business operations, and their prices were subject to contractual agreements that benefited both parties without siphoning of mutual benefits or irregular items. GGC also needed to lease certain real-estate items from related companies, including office buildings and land, for which it had examined the need for each type of real estate in its own best interests without siphoning of mutual benefits.

Measures and Approval Procedures for Connected Transactions

To engage in transactions with related parties, GGC reviews the suitability of all transactions and set prices and terms on an arm's length basis.

When GGC or its subsidiaries have engaged in connected transactions under applicable Stock Exchange of Thailand (SET) and Securities and Exchange Commission (SEC) announcements on information disclosure and actions by listed companies on related-party transactions, the Board of Directors strictly ensures such actions abide by the criteria, provisions, and procedures of the announcements. The Board of Directors also discloses the transactions in Form 56-1 One Report for the transparency of related-party transactions and eliminate conflicts of interest.

If a GGC director buys or sells its properties or engages in business with it by himself or herself or on behalf of other parties, GGC's Articles of Association clearly state that the transaction must secure a prior consent from the Board of Directors before its binding on GGC. At any rate, any director with vested interests in buying or selling properties or engaging in any business with GGC is barred by the Articles of Association from voting on such matters.

Apart from the approval of the Board of Directors, if the engagement of GGC or that of its subsidiaries in related-party transactions or actions result in the acquisition or sale of their significant assets, under the criteria of SEC announcements on related transactions of listed companies or the acquisition or sale of assets of listed companies, GGC or its subsidiaries (or both) must conform to the rules and procedures under such announcements. The Audit Committee must express its views on the measures or procedures for the engagement in connected transactions. If the committee has a dissenting opinion, they must state it.

The Company has control measures over connected transactions in order to control, audit and execute random checks of actual transactions' conformance to contracts, policies or terms. Any transactions with related parties must be undertaken for regular businesses. To this end, the volumes of goods or feedstock traded, or services received by GGC from such related parties must match its needs and business operations. In addition, the prices, as well as the giving or acceptance of services by related parties, must conform to contractual provisions and benefit the businesses of both GGC and the related parties without siphoning of such benefits or any irregular items. Moreover, Internal Audit scrutinizes the movements to ensure that the Company has already set out control measures for such connected transactions in line with the regulations and in accordance with the internal audit plan. The progress is regularly reported to the Audit Committee.

Opinion of Independent Directors

No different opinion from the views of the Board of Directors.

Policy or Trends of Connected Transactions

As previously done, future transactions involving GGC are to be conducted as in the normal course of business without irregular items or siphoning of benefits between itself and related parties. The pricing policy between GGC and related parties is to be based on the same prices under the normal business as for third parties. The prices of goods or feedstock bought from related parties are to align with contracts or with market prices for such feedstock. In addition, the service fees to be paid to related parties are to be tied to regular fees paid to third parties. Finally, the prices of goods charged by GGC to related parties are to be tied to market prices. Disclosure of GGC's related-party transactions abides by the law and regulations defined by SEC, SET, and accounting standards for related parties defined by the Federation of Accounting Professions under the Royal Patronage.

A stylized city skyline illustration. It features various buildings in white, yellow, and dark blue. There are green bushes and trees. A red truck with a blue trailer is on a grey road. The background is a solid blue sky with a yellow sun, white clouds, and small white birds.

Section

03


Financial
Statements



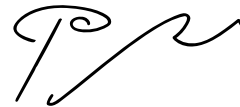
Report of the Board of Directors' Responsibility for a Financial Reports

The consolidate financial statements of Global Green Chemicals Public Company Limited (“GGC”) and its subsidiaries were prepared in accordance with the Securities Exchange Commission under the Securities and Exchange Act B.E. 2535 and Department of Business Development, issued under the Accounting Act B.E. 2543 Section 11 Paragraph 3 in an accordance with the Federation of Accounting Professions’ Thai Financial Reporting Standards.

The Board of Directors is responsible for the Financial report of GGC’s and its subsidiaries in providing responsible assurance that the financial report present fairly financial position, financial performance and cash flows. The accounting data is sufficiently and accurately recorded to preserve GGC’s asset and prevent fraud and irregularity. The financial reports have been prepared accordingly to appropriate accounting policy and in accordance with consistency practices, and in accordance with Thai Financial Reporting standards. Significant information has been adequately disclosed in note of financial statements, where the auditors expressed an opinion on the financial statement of GGC’s and its subsidiaries in the auditor’s report.



(Mr. Kongkrapan Intarajang)
Chairman



(Mr. Piroj Samutthananont)
Managing Director

Independent Auditor's Report

REPORT OF THE INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

TO THE SHAREHOLDERS AND BOARD OF DIRECTORS
GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED

Opinion

We have audited the consolidated financial statements of Global Green Chemicals Public Company Limited and its subsidiaries (the "Group") and the separate financial statements of Global Green Chemicals Public Company Limited (the "Company") which comprise the consolidated and separate statements of financial position as at December 31, 2021, and the related consolidated and separate statements of profit or loss, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated and separate financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated and separate financial statements present fairly, in all material respects, the financial position of Global Green Chemicals Public Company Limited and its subsidiaries and of Global Green Chemicals Public Company Limited as at December 31, 2021, and financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards ("TFRSs").

Basis for Opinion

We conducted our audit in accordance with Thai Standards on Auditing ("TSAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements section of our report. We are independent of the Group in accordance with the Federation of Accounting Professions' Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to the audit of the consolidated and separate financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated and separate financial statements of the current period. This matter was addressed in the context of our audit of the consolidated and separate financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on this matter.

Key Audit Matter	Audit Responses
<p>The measurement of inventories valuation</p> <p>Inventories of the Group are significant balance to the consolidated and separate financial statements.</p> <p>The raw material and finished goods are commodities that contain intense price volatility. This volatility may lead to valuation of inventories at the end of reporting period as inventories are measured at the lower of cost or net realizable value.</p> <p>The accounting policy of inventories valuation of the Group and the detail of inventories are disclosed in notes to the financial statements no. 3.7 and 8, respectively.</p>	<p>Key audit procedures included:</p> <ul style="list-style-type: none"> • Gaining understanding and performing test of design and implementation as well as operating effectiveness of the relevant controls over inventories valuation measurement process. • Assessing the appropriateness of the methodology used to calculate the net realizable value of inventories at the reporting period, considering the reasonableness of the market price used by reference to the expected selling price of commodity, and testing the accuracy of the calculation. • If the net realizable value is lower than the cost, considering to propose the adjustment of allowance for diminution in value of inventories in the consolidated and separate financial statements. • Assessing the adequate disclosure in relation to the estimation of allowance for diminution in value of inventories in notes to the financial statements.

Other Information

Management is responsible for the other information. The other information comprise the information included in the annual report, but does not include the consolidated and separate financial statements and our auditor's report thereon.

Our opinion on the consolidated and separate financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated and separate financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated and Separate Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, management is responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated and Separate Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

As part of an audit in accordance with TSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated and separate financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.



Mongkol Somphol
Certified Public Accountant (Thailand)
Registration No. 8444

DELOITTE TOUCHE TOHMATSU JAIYOS AUDIT CO., LTD.

BANGKOK
February 11, 2022

Statements of Financial Position

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF FINANCIAL POSITION
AS AT DECEMBER 31, 2021

Unit : Baht

	Notes	Consolidated financial statements		Separate financial statements	
		As at	As at	As at	As at
		December 31, 2021	December 31, 2020	December 31, 2021	December 31, 2020
ASSETS					
CURRENT ASSETS					
Cash and cash equivalents	4	1,511,048,136	1,742,488,151	678,854,426	1,001,739,926
Current investments in financial assets	5	280,000,000	400,000,000	280,000,000	400,000,000
Trade receivables	6	2,381,395,693	1,637,042,972	2,456,271,947	1,735,561,147
Other receivables	7	306,308,184	286,495,332	303,160,671	283,691,080
Value-added tax receivable		108,097,253	25,469,359	-	-
Inventories	8	2,024,065,681	2,002,715,732	1,590,905,979	1,591,773,323
Investment held for sale	10	-	-	-	-
Other current assets		35,809,394	32,939,893	33,341,880	31,853,481
Total Current Assets		6,646,724,341	6,127,151,439	5,342,534,903	5,044,618,957
NON-CURRENT ASSETS					
Investments in subsidiaries	9	-	-	3,005,625,000	2,734,890,000
Investments in an associate	10	-	-	-	-
Investments in joint ventures	10	1,880,748,498	1,622,949,586	690,500,000	690,500,000
Plant and equipment	11	4,258,813,804	4,576,475,846	4,002,205,359	4,283,940,809
Right-of-use assets	12	473,597,113	589,139,247	455,778,042	556,303,905
Intangible assets	13	66,814,515	68,713,302	29,881,853	35,079,223
Deferred tax assets	14	180,996,903	228,320,155	177,811,615	227,714,443
Other non-current assets		8,806,190	26,423,878	8,806,190	26,423,878
Total Non-current Assets		6,869,777,023	7,112,022,014	8,370,608,059	8,554,852,258
TOTAL ASSETS		13,516,501,364	13,239,173,453	13,713,142,962	13,599,471,215

Notes to the financial statements form an integral part of these statements

Statements of Financial Position

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENTS OF FINANCIAL POSITION (CONTINUED)

AS AT DECEMBER 31, 2021

Unit : Baht

Unit : Baht					
	Notes	Consolidated financial statements		Separate financial statements	
		As at	As at	As at	As at
		December 31, 2021	December 31, 2020	December 31, 2021	December 31, 2020
LIABILITIES AND SHAREHOLDERS' EQUITY					
CURRENT LIABILITIES					
Trade payables	17	1,226,394,622	813,658,538	1,216,028,640	801,671,951
Other payables	18	398,326,685	262,457,832	310,570,240	219,779,803
Payables to contractors		61,152,597	110,980,083	60,534,796	110,199,732
Current portion of long-term borrowings					
from financial institutions	15	763,970,775	565,843,310	763,970,775	565,843,310
Current portion of lease liabilities	16	120,388,608	133,440,145	112,335,329	123,656,657
Income tax payable		29,815,680	-	-	-
Short-term provision	32.2	443,570,129	-	443,570,129	-
Total Current Liabilities		3,043,619,096	1,886,379,908	2,907,009,909	1,821,151,453
NON-CURRENT LIABILITIES					
Long-term borrowings from financial institutions	15	-	763,970,775	-	763,970,775
Lease liabilities	16	382,009,955	482,752,836	370,528,664	458,482,366
Provision for employee benefits	19	120,503,390	112,942,319	120,503,390	112,942,319
Total Non-current Liabilities		502,513,345	1,359,665,930	491,032,054	1,335,395,460
TOTAL LIABILITIES		3,546,132,441	3,246,045,838	3,398,041,963	3,156,546,913
SHAREHOLDERS' EQUITY					
SHARE CAPITAL	20				
Authorized share capital					
1,023,666,700 ordinary shares of					
Baht 9.50 each		9,724,833,650	9,724,833,650	9,724,833,650	9,724,833,650
Issued and paid-up share capital					
1,023,666,700 ordinary shares of					
Baht 9.50 each		9,724,833,650	9,724,833,650	9,724,833,650	9,724,833,650
Share premium		89,240,250	89,240,250	89,240,250	89,240,250
Difference arising from business combination					
under common control		(4,134,457)	(4,134,457)	-	-
RETAINED EARNINGS					
Appropriated					
Legal reserve	21	61,039,000	49,799,000	61,039,000	49,799,000
Unappropriated		99,390,480	133,389,172	439,988,099	579,051,402
TOTAL SHAREHOLDERS' EQUITY		9,970,368,923	9,993,127,615	10,315,100,999	10,442,924,302
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		13,516,501,364	13,239,173,453	13,713,142,962	13,599,471,215

Notes to the financial statements form an integral part of these statements

Statements of Profit or Loss

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF PROFIT OR LOSS
FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Revenues from sales		20,923,382,039	18,202,525,601	20,147,315,523	17,803,999,334
Cost of sales		(19,378,744,039)	(16,860,030,001)	(19,127,734,280)	(16,828,715,868)
Gross profit		1,544,638,000	1,342,495,600	1,019,581,243	975,283,466
Interest income and dividend income		6,393,148	19,146,807	201,640,411	81,375,173
Other income		65,454,805	40,175,160	103,015,046	74,828,312
Selling and distribution expenses	26	(337,807,742)	(346,695,499)	(126,011,812)	(198,214,180)
Administrative expenses	27	(456,076,355)	(481,431,595)	(442,977,924)	(451,790,423)
Estimated damage causing by lawsuit	32.2	(443,570,129)	-	(443,570,129)	-
Loss from impairment of investment		-	(9,451,454)	-	(66,600,000)
Net foreign exchange gain		73,535,228	8,933,195	10,268,243	3,935,946
Net derivatives (loss) gain		(68,095,882)	8,396,853	(205,409)	346,830
Finance costs	29	(49,456,708)	(69,019,247)	(48,467,491)	(67,525,959)
Share of loss of investments in an associate	10	-	(18,720,844)	-	-
Share of profit of investments in joint ventures	10	86,431,307	81,171,447	-	-
Profit before income tax (expense) income		421,445,672	575,000,423	273,272,178	351,639,165
Income tax (expense) income	14	(91,226,534)	(14,858,423)	(48,485,047)	3,846,639
PROFIT FOR THE YEAR		330,219,138	560,142,000	224,787,131	355,485,804
PROFIT ATTRIBUTABLE TO:					
Owners of the parent		330,219,138	560,142,000	224,787,131	355,485,804
Profit for the year		330,219,138	560,142,000	224,787,131	355,485,804
BASIC EARNINGS PER SHARE (BAHT)	24	0.32	0.55	0.22	0.35

Notes to the financial statements form an integral part of these statements

Statements of Comprehensive Income

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
PROFIT FOR THE YEAR		330,219,138	560,142,000	224,787,131	355,485,804
Other comprehensive income (loss)					
<i>Items that will not be reclassified subsequently to profit or loss</i>					
Gain (Loss) on remeasurements of defined benefit plans	19	5,671,126	(8,814,411)	5,671,126	(8,814,411)
Share of other comprehensive loss of investment in joint ventures	10	(367,396)	(1,611,037)	-	-
Total items that will not be reclassified subsequently to profit or loss		<u>5,303,730</u>	<u>(10,425,448)</u>	<u>5,671,126</u>	<u>(8,814,411)</u>
Other comprehensive income (loss) for the years, net of tax		<u>5,303,730</u>	<u>(10,425,448)</u>	<u>5,671,126</u>	<u>(8,814,411)</u>
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		<u><u>335,522,868</u></u>	<u><u>549,716,552</u></u>	<u><u>230,458,257</u></u>	<u><u>346,671,393</u></u>
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:					
Owners of the parent		<u>335,522,868</u>	<u>549,716,552</u>	<u>230,458,257</u>	<u>346,671,393</u>
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		<u><u>335,522,868</u></u>	<u><u>549,716,552</u></u>	<u><u>230,458,257</u></u>	<u><u>346,671,393</u></u>

Statement of Changes in Shareholders' Equity

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY
FOR THE YEAR ENDED DECEMBER 31, 2021

Consolidated financial statements							Unit : Baht
		Retained earnings					
		Difference arising from business combination under common control	Share premium	Legal reserve	Unappropriated	Total shareholders' equity	
Notes	Issued and paid-up share capital						
	9,724,833,650	(4,134,457)	89,240,250	32,024,000	(193,820,060)	9,648,143,383	
Dividends paid	-	-	-	-	(204,732,320)	(204,732,320)	
Legal reserve	-	-	-	17,775,000	(17,775,000)	-	
Profit for the year	-	-	-	-	560,142,000	560,142,000	
Other comprehensive income (loss)	-	-	-	-	(10,425,448)	(10,425,448)	
Balance as at December 31, 2020	9,724,833,650	(4,134,457)	89,240,250	49,799,000	133,389,172	9,993,127,615	
Balance as at January 1, 2021	9,724,833,650	(4,134,457)	89,240,250	49,799,000	133,389,172	9,993,127,615	
Dividends paid	-	-	-	-	(358,281,560)	(358,281,560)	
Legal reserve	-	-	-	11,240,000	(11,240,000)	-	
Profit for the year	-	-	-	-	330,219,138	330,219,138	
Other comprehensive income (loss)	-	-	-	-	5,303,730	5,303,730	
Balance as at December 31, 2021	9,724,833,650	(4,134,457)	89,240,250	61,039,000	99,390,480	9,970,368,923	

Notes to the financial statements form an integral part of these statements

Statement of Changes in Shareholders' Equity

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEAR ENDED DECEMBER 31, 2021

	Notes	Separate financial statements				Total shareholders' equity
		Issued and paid-up share capital	Share premium	Retained earnings		
				Legal reserve	Unappropriated	
Balance as at January 1, 2020		9,724,833,650	89,240,250	32,024,000	454,887,329	10,300,985,229
Dividends paid	22	-	-	-	(204,732,320)	(204,732,320)
Legal reserve	21	-	-	17,775,000	(17,775,000)	-
Profit for the year		-	-	-	355,485,804	355,485,804
Other comprehensive income (loss)		-	-	-	(8,814,411)	(8,814,411)
Balance as at December 31, 2020		9,724,833,650	89,240,250	49,799,000	579,051,402	10,442,924,302
Balance as at January 1, 2021		9,724,833,650	89,240,250	49,799,000	579,051,402	10,442,924,302
Dividends paid	22	-	-	-	(358,281,560)	(358,281,560)
Legal reserve	21	-	-	11,240,000	(11,240,000)	-
Profit for the year		-	-	-	224,787,131	224,787,131
Other comprehensive income (loss)		-	-	-	5,671,126	5,671,126
Balance as at December 31, 2021		9,724,833,650	89,240,250	61,039,000	439,988,099	10,315,100,999

Unit : Baht

Notes to the financial statements form an integral part of these statements

Statements of Cash Flows

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Baht

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES				
Profit for the years	330,219,138	560,142,000	224,787,131	355,485,804
Adjustments for				
Depreciation and amortization	711,897,152	683,254,156	665,186,551	633,678,145
Interest income and dividend income	(6,393,148)	(19,146,807)	(201,640,411)	(81,375,173)
Finance costs	49,456,708	69,019,247	48,467,491	67,525,959
Unrealised (gain) loss on derivatives	10,657,034	(1,767,743)	(104,890)	86,122
Unrealised (gain) loss on exchange rate	(6,206,640)	1,689,947	(1,743,525)	1,155,087
(Reversal) of loss on inventories devaluation	-	(16,084,547)	-	-
Loss on raw materials written-off	107,548	4,385,818	76,057	2,505,768
Loss on obsolete inventories	2,329,036	13,422,840	2,311,697	13,422,840
Gain on right-of-use assets written-off	(1,077,751)	(80,081)	(1,062,510)	-
(Gain) loss on sales and writing off of plant and equipment	(179,163)	18,842,711	(179,167)	6,211,198
Provision for employee benefits	14,883,044	12,803,609	14,883,044	12,803,609
Actuarial loss	-	2,339,690	-	2,339,690
Loss on impairment of investment	-	9,451,454	-	66,600,000
Estimated damage causing by lawsuit	443,570,129	-	443,570,129	-
Share of loss on investments in an associate	-	18,720,844	-	-
Share of profit on investments in joint ventures	(86,431,307)	(81,171,447)	-	-
Income tax expense (income)	91,226,534	14,858,423	48,485,047	(3,846,639)
Profit from operations before changes in operating assets and liabilities	1,554,058,314	1,290,680,114	1,243,036,644	1,076,592,410
Changes in operating assets and liabilities				
Trade receivables	(740,730,662)	(212,102,095)	(720,770,336)	(387,835,136)
Other receivables	(20,910,654)	(487,580)	(21,079,979)	22,908,754
Value-added tax receivable	(82,627,894)	(13,338,509)	-	-
Inventories	(23,786,533)	(443,627,095)	(1,520,410)	(290,756,276)
Other current assets	(94,685,357)	(38,828,060)	(93,304,293)	(40,431,103)
Other non-current assets	5,493,622	(40,499)	5,493,622	(40,499)
Trade payables	412,769,591	(104,463,268)	414,390,196	(108,631,585)
Other payables	119,760,152	(82,766,361)	86,839,026	(71,102,059)
Other non-current liabilities	-	(905,000)	-	(905,000)
Cash paid for provision for employee benefits	(233,066)	(74,556)	(233,066)	(74,556)
Net cash received from operation	1,129,107,513	394,047,091	912,851,404	199,724,950
Income taxes received (paid)	(13,724,657)	(2,360,517)	1,780,700	(2,318,831)
Net cash provided by operating activities	1,115,382,856	391,686,574	914,632,104	197,406,119

Statements of Cash Flows

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF CASH FLOWS (CONTINUED)
FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Baht

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
CASH FLOWS FROM INVESTING ACTIVITIES				
Interest received	6,329,661	20,438,554	4,432,465	16,269,941
Dividend received	91,140,000	66,402,000	197,140,000	66,402,000
Decrease in current investments in financial assets	120,000,000	600,000,000	120,000,000	600,000,000
Cash paid for acquisition of plant and equipment	(219,878,579)	(320,939,599)	(218,055,253)	(318,421,632)
Cash received from sales of plant and equipment	3,111,600	6,680,100	3,111,600	6,680,100
Cash paid for acquisition of intangible assets	(5,704,153)	(2,355,763)	(2,387,970)	(2,355,763)
Cash paid for investment in a subsidiary	-	-	(270,735,000)	(524,540,000)
Cash paid for investment in a joint venture	(262,875,000)	(522,500,000)	-	-
Net cash used in investing activities	(267,876,471)	(152,274,708)	(166,494,158)	(155,965,354)
CASH FLOWS FROM FINANCING ACTIVITIES				
Finance cost paid	(31,816,345)	(46,178,522)	(31,816,345)	(46,178,522)
Dividends paid	(358,281,560)	(204,732,320)	(358,281,560)	(204,732,320)
Repayments of lease liabilities	(126,403,313)	(114,875,519)	(116,814,260)	(103,916,946)
Repayments of long-term borrowings from financial institutions	(567,000,000)	(441,000,000)	(567,000,000)	(441,000,000)
Net cash used in financing activities	(1,083,501,218)	(806,786,361)	(1,073,912,165)	(795,827,788)
Net decrease in cash and cash equivalents, before effect of exchange rates	(235,994,833)	(567,374,495)	(325,774,219)	(754,387,023)
Effect of exchange rate changes on cash and cash equivalents	4,554,818	(954,441)	2,888,719	(652,668)
Net decrease in cash and cash equivalents	(231,440,015)	(568,328,936)	(322,885,500)	(755,039,691)
Cash and cash equivalents at the beginning of the years	1,742,488,151	2,310,817,087	1,001,739,926	1,756,779,617
Cash and cash equivalents at the end of the years	<u>1,511,048,136</u>	<u>1,742,488,151</u>	<u>678,854,426</u>	<u>1,001,739,926</u>
Non-cash items				
Payables to contractors	61,152,597	110,980,083	60,534,796	110,199,732

Notes to the financial statements form an integral part of these statements

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

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Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

1. THE COMPANY'S OPERATIONS AND GENERAL INFORMATION

Global Green Chemicals Public Company Limited, (the "Company"), was registered on May 2, 2017 in accordance with Public Company Limited Act, B.E. 2535. The Board of Governors of the Stock Exchange of Thailand, ("the SET"), approved the listing of the Company on the day that the Registrar accepted the registration on May 2, 2017 and has its registered offices as follows:

Head Office	: 555/1, Energy Complex, Building A, 4 th Floor, Vibhavadi-rangsit Road, Chatuchak Sub-District, Chatuchak District, Bangkok, Thailand
Branch 1	: 8, I-8 Road, Mab Ta Phut Industrial Estate, Tambon Map Ta Phut, Amphur Mueang Rayong, Rayong, Thailand
Branch 2	: 8 Soi G12, Pakorn Songkhrao-Rat Road, Tambon Map Ta Phut, Amphur Mueang Rayong, Rayong, Thailand
Branch 3	: 199/1 Moo 2, Tambon Khao Sok, Amphur Nong Yai, Chonburi, Thailand

The parent and ultimate parent companies are PTT Global Chemical Public Company Limited and PTT Public Company Limited, respectively. Both are incorporated in Thailand.

The principal activities of the Company are production, distribution and transportation of Oleochemicals products. The Company's major products are Methyl ester, Fatty alcohol, Fatty acid, Fatty Amine, other Alcohol's ester, and other By products.

Coronavirus Disease 2019 Pandemic

The coronavirus disease 2019 ("COVID-19") pandemic is continuing to evolve, resulting in an economic slowdown and adversely impacting most businesses and industries. This situation may bring uncertainties and have an impact on the operating environment. The Company and its subsidiaries (the "Group") management considered that there is no financial impact in respect of valuation of assets, provisions and contingent liabilities. However, the Group's management will continue to monitor the ongoing situation.

2. BASIS FOR PREPARATION AND PRESENTATION OF THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

- 2.1 The Group maintains its accounting records in Thai Baht and prepares its statutory financial statements in the Thai language in conformity with Thai Financial Reporting Standards (TFRS) and accounting practices generally accepted in Thailand.
- 2.2 The Group's financial statements have been prepared in accordance with the Thai Accounting Standard (TAS) No. 1 "Presentation of Financial Statements", which was effective for financial periods beginning on or after January 1, 2020 onward, and the Regulation of The Stock Exchange of Thailand (SET) dated October 2, 2017, regarding the preparation and submission of financial statements and reports for the financial position and results of operations of the listed companies B.E. 2560 and the Notification of the Department of Business Development regarding "The Brief Particulars in the Financial Statements (No.3) B.E. 2562" dated December 26, 2019.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

- 2.3 The financial statements have been prepared under the historical cost convention except as disclosed in the significant accounting policies.
- 2.4 An English version of the financial statements have been prepared from the financial statements that are in the Thai language under the law. In the event of a conflict or a difference in interpretation between the two languages, the Thai language financial statements shall prevail.
- 2.5 The consolidated financial statements included the accounts of the Group, after elimination of intercompany transactions, of which the percentage of shareholding as at December 31, 2021 and 2020, is as follows:

Name of the entity	Type of business	Country of incorporation	Ownership interest (%)	
			2021	2020
<i>Subsidiaries</i>				
Thai Fatty Alcohols Co., Ltd.	Manufacturing and distributing biochemical products	Thailand	100	100
GGC Biochemical Co., Ltd.	Holding and operating local business	Thailand	100	100
<i>Associate</i>				
Thai Eastern Top Seeds Oil Co., Ltd.	Manufacturing and distributing crude palm kernel oil	Thailand	30	30
<i>Joint venture</i>				
Thai Ethoxylate Co., Ltd.	Manufacturing and distributing chemical and ethoxylate product	Thailand	50	50
<i>Indirect joint venture</i>				
GGC KTIS Bioindustrial Co., Ltd.	Manufacturing and distributing biofuel	Thailand	50	50

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

- 2.6 Thai Financial Reporting Standards affecting the presentation and disclosure in the current period financial statements.

During the year, the Group has adopted the revised financial reporting standards and the Conceptual Framework for Financial Reporting guidelines on accounting issued by the Federation of Accounting Professions which are effective for fiscal years beginning on or after January 1, 2021. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revisions to references to the Conceptual Framework in TFRSs, the amendment for definition of business, the amendment for definition of materiality and accounting requirements for interest rate reform. The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements.

- 2.7 Thai Financial Reporting Standards announced in the Royal Gazette but not yet effective

The 2021 amendment to Thai Financial Reporting Standards No. 16 "Leases" ("TFRS 16") added the requirements for the temporary exception arising from interest rate benchmark reform, which the Group shall apply these amendments for annual reporting periods beginning on or after January 1, 2022 with earlier application permitted. This revised TFRS 16 has been announced in the Royal Gazette on January 27, 2021.

Subsequently, the 2021 amendment to TFRS 16 - Phase 2 has been announced in the Royal Gazette on May 13, 2021, which permits a lessee to apply the practical expedient regarding COVID-19-related rent concessions to rent concessions for which any reduction in lease payments affects only payments originally due on or before June 30, 2022. A lessee shall apply this amendment for annual reporting periods beginning on or after April 1, 2021 with earlier application is permitted.

In addition, the Federation of Accounting Professions has issued the Notification regarding Thai Financial Reporting Standards ("TFRSs") that are relevant to Interest Rate Benchmark Reform Phase 2 amendments ("Phase 2 amendments") and amends Thai Financial Reporting Standards No. 4 "Insurance Contracts", Thai Financial Reporting Standards No. 7 "Financial Instruments: Disclosures" and Thai Financial Reporting Standards No. 9 "Financial Instruments". The Phase 2 amendments address issues that might affect financial reporting during the reform of an interest rate benchmark, including the effects of changes to contractual cash flows or hedging relationships arising from the replacement of an interest rate benchmark with an alternative benchmark rate. Such TFRSs have been announced in the Royal Gazette on June 28, 2021 and will be effective for the financial statements for the periods beginning on or after January 1, 2022 onwards with earlier application permitted.

The Group's management will adopt such TFRSs in the preparation of the Group's financial statements when it becomes effective. The Group's management is in the process to assess the impact of these TFRSs on the financial statements of the Group in the period of initial application.

In addition, the Federation of Accounting Professions has issued the Notification regarding the amendments to Thai Financial Reporting Standards and guidelines on accounting which have been announced in the Royal Gazette on December 22, 2021. Such Thai Financial Reporting Standards and guidelines on accounting are not applicable to the Group.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3. SIGNIFICANT ACCOUNTING POLICIES

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

3.1 Basis of consolidation

The consolidated financial statements relate to the Company and its subsidiaries and the Group's interests in joint ventures and associates.

Business combinations

The Group applies the acquisition method for all business combinations when control is transferred to the Group, as described in subsidiaries section, other than those with entities under common control.

The Group recognises goodwill at the acquisition date measured as the excess of (1) over (2) as:

- (1) The aggregate of:
 - the fair value of the consideration transferred;
 - the recognised amount of any non-controlling interests in the acquiree; and
 - if the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree.
- (2) The net fair value of the identifiable assets acquired and liabilities assumed.

If value of (1) is less than (2), difference is contributed to gain on bargain purchase and recognised immediately in the statements of profit or loss.

The consideration transferred is recognised at fair value at the acquisition date.

Transaction costs that the Group incurs in connection with a business combination, such as legal fees, and other professional and consulting fees are expensed as incurred.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

Acquisitions from entities under common control

Business combination under common control are accounted for using a method similar to the pooling of interest method. Under that method the acquirer recognizes assets and liabilities of the acquired businesses at their carrying amounts in the consolidated financial statements of the ultimate parent company at the moment of the transaction. The difference between the carrying amount of the acquired net assets and the consideration transferred is recognized as surplus or discount from business combinations under common control in shareholder's equity. The surplus or discount will be transferred to retained earnings upon divestment of the businesses acquired.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

The results from operations of the acquired businesses will be included in the consolidated financial statements of the acquirer from the beginning of the comparative period or the moment the businesses came under common control, whichever date is later, until control ceases.

Subsidiaries

Subsidiaries are entities controlled by the Group. The Group controls an entity when it has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

Non-controlling interests

At the acquisition date, the Group measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

Loss of control

When the Group loses control over a subsidiary, it derecognises the assets and liabilities of the subsidiary, and any related non-controlling interests and other components of equity. Any resulting gain or loss is recognised in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

Interests in equity-accounted investees

The Group's interests in equity-accounted investees comprise interests in joint ventures and an associate.

A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than the rights to its assets and obligations for its liabilities. Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies.

Interests in joint ventures and associates are accounted for using the equity method. They are recognised initially at cost. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and other comprehensive income of equity-accounted investees, until the date on which joint control or significant influence ceases.

Transactions eliminated on consolidation

Intra-group balances and transactions and any unrealised income or expenses arising from intra-group transactions are eliminated in preparing the consolidated financial statements. Unrealised gains and losses arising from transactions with joint ventures and associates are eliminated against the investment to the extent of the Group's interest in the investee.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.2 Foreign currencies

Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currency of Group entities at exchange rate at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to the functional currency at the exchange rate at the reporting date.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to the functional currency at the exchange rates at the dates of the transactions.

Foreign currency differences arising on retranslation are generally recognised as income or an expense in the statement of profit or loss.

3.3 Cash and cash equivalents

Cash and cash equivalents comprise cash balances, call deposits and highly liquid current investments exclude bank deposits used as collateral (if any).

3.4 Financial instrument

The Group shall recognise a financial asset or a financial liability in its statement of financial position only when the Group becomes party to the contractual provisions of the instrument.

Recognition, Measurement and Classification of financial assets

Regular way of purchases and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised only when the rights to receive cash flows from the financial assets have expired or when the Group has transferred the financial assets which transferred substantially all the risks and rewards of ownership of the financial assets.

At initial recognition, the Group measures a financial asset as follows:

- A financial asset measured at amortised cost and a financial asset measured at fair value through other comprehensive income are measured at their fair value, plus transaction costs that are directly attributable to the acquisition or issuance of the financial assets.
- A financial asset measured at fair value through profit or loss is measured at its fair value. Transaction costs are expensed in profit or loss.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Subsequent measurement of financial assets depends on the Group's business model for managing the financial asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its financial assets:

- Amortised cost - A financial asset will be measured at amortised cost when the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows. In addition, the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Interest income from these financial assets is using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and impairment losses are presented in profit or loss.
- Fair value through other comprehensive income (FVTOCI) - A financial asset will be measured at FVTOCI when it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. In addition, the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment losses and interest income using effective interest rate method. When the financial asset is derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified to profit or loss or retained earnings.
- Fair value through profit or loss (FVTPL) - A financial asset that does not meet the criteria for amortised cost or FVTOCI are measured at FVTPL.

Impairment

The Group assesses on a forward-looking basis the expected credit loss associated with its financial assets carried at amortised cost and investments in debt instruments that are measured at FVTOCI. The Group applies general or simplified approach for credit-impaired consideration which depends on the significant of credit risk.

In determining allowance of expected credit loss, the financial asset is considered to have low credit risk and no significant incremental of credit risk since initial recognition. The Group will not recognize any allowance of expected credit loss.

Calculation of the recoverable amount

The recoverable amount of a financial asset is the value-in-use of assets or fair value of assets less cost to sell whichever is higher. In assessing the value-in-use of assets to estimated the future cash flows discounted before tax is taken to their present value using an appropriate discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Reversals of impairment

An impairment loss in respect of a financial asset is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised in profit or loss.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity.

On derecognition of a financial asset measured at amortized cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument which the Group has elected on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

Recognition, Measurement and Classification of financial liabilities and equities

Financial instruments issued by the Group must be classified as financial liabilities or equity instruments by considering contractual obligations.

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity and is unable to deny or avoid the settlement of the obligation indefinitely, it is considered a financial liability.
- Where the Group has no contractual obligation or has an unconditional right to avoid the settlement of the obligation, it is considered an equity instrument.

At initial recognition, the Group measures financial liabilities, which are not measured at FVTPL, at fair value minus transaction costs that are directly attributable to the acquisition or issuance of the financial assets. The Group classifies all financial liabilities as subsequently measured at amortised cost, except for some financial liabilities.

Derecognition of financial liabilities

The Group derecognizes financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

Derivatives

Derivatives are used to manage exposure to foreign exchange arising from operating activities. Derivatives are not used for trading purposes. However, derivatives that do not qualify for hedging instruments are accounted for as trading instruments.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in profit or loss when incurred. Subsequent to initial recognition, they are remeasured at fair value. The gain or loss on remeasurement is recognised immediately in profit or loss.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

The fair value of forward exchange contracts is based on their listed market price as the reporting date, if available. If the listed market price is not available, then fair value is estimated by forward contract with the same nature and maturity date at the reporting date.

3.5 Current investments in financial assets

Current investments in financial assets consist of time deposits with a maturity term of over 3 months up to 12 months without obligations.

3.6 Trade and other receivables

Trade and other receivables are stated at their invoice value less allowance for expected credit losses.

The allowance for expected credit losses is disclosed in Note 3.4.

3.7 Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost is calculated using the weighted average cost principle, and comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Net realisable value is the expected selling price of commodity in the ordinary course of business less the estimated costs to complete and to make the sale.

Provision is made for obsolete and slow-moving of finished goods, raw materials, factory supplies and spare parts based on the items that are obsoleted and expected to be unsalable.

3.8 Investments

Investments in subsidiaries, joint ventures and an associate

Investments in subsidiaries, joint ventures and an associate in the separate financial statements of the Company are accounted for using the cost method less allowance for impairment loss (if any). Investments in joint ventures and an associate in the consolidated financial statements are accounted for using the equity method less allowance for impairment loss (if any).

Disposal of investments

On disposal of an investment, the difference between net disposal proceeds and the carrying amount, is recognised in profit or loss.

If the Group disposes of part of its holding of a particular investment, the deemed cost of the part sold and holding of the investment is determined using the weighted average method applied to the carrying value of the total holding of the investment.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.9 Plant and equipment

Recognition and measurement

Owned assets

Plant and equipment are measured at cost less accumulated depreciation and provision for impairment losses (if any).

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the assets to a working condition for their intended use, the costs of dismantling and removing the items and restoring the site on which they are located, and capitalised borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of plant and equipment have different useful lives, they are accounted for as separate items (major components) of plant and equipment.

Any gains and losses on disposal of an item of plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of plant and equipment, and are recognised in the statement of profit or loss.

Subsequent costs

The cost of replacing a part of an item of plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group, and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of plant and equipment are recognised in the statement of profit or loss as incurred.

Depreciation

Depreciation is calculated based on the depreciable amount, which is the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is charged to profit or loss on a Straight-line basis over the estimated useful lives of each component of an item of plant and equipment. The estimated useful lives are as follows:

Plant, machinery, equipment and factory tools	5 - 25 years
Buildings and buildings improvement	5 - 25 years
Land improvement	5 - 20 years
Furniture, fixtures and office equipment	3 - 5 years
Vehicles	5 years

No depreciation is provided on freehold land or assets under construction.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.10 Leases

The Group as lessee

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognises a right-of-use asset and corresponding lease liability with respect to all lease arrangements in which it is the lease, except for short-term leases with a lease term of 12 months or less and leases of low value assets, in which the lease payments are recognised as operating expense on a Straight-line basis over the lease term and presents as an expense in the statement of income.

The lease liability is initially measured at the present value of the lease payments that are not paid at that date, discounted by using the interest rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- Variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- Amount expected to be payable by the lease under residual value guarantees;
- Exercise price of purchase options, if the lease is reasonably certain to exercise the options; and
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

The lease liability is subsequently measured using the effective interest method and by reducing the carrying amount to reflect the lease payments made. The Group recognises interest from lease liability in the statement of income.

The Group remeasures the lease liability and makes a corresponding adjustment to the related right-of-use asset whenever:

- The lease term has been changed resulting in a change in the assessment of exercise of a purchase option to purchase the underlying asset, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.
- The lease payments have been changed due to changes in an index or a rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate.
- A lease contract is modified and the lease modification that is not accounted for as a separate lease, in which case the lease liability is remeasured based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

The right-of-use assets comprise the initial measurement of the corresponding lease liability, including lease payments made at or before the commencement day, any initial direct costs, less any lease incentives received. They are subsequently measured at cost less accumulated depreciation and provision for accumulated impairment losses.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset and the Group expects to exercise a purchase option, the related right-of-use is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease. In addition, the right-of-use assets are assessed for impairment in accordance with TAS 36 "Impairment of assets".

The Group as lessor

Leases for which the Group is a lessor are classified as operating leases.

Rental income from operating leases is recognised on a Straight line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a Straight line basis over the lease term.

3.11 Intangible assets

Goodwill

Goodwill that arises upon the acquisition of businesses is included in intangible assets. Subsequent to initial recognition, goodwill is measured at cost less provision for impairment losses (if any).

Goodwill in investment in joint ventures and associates is included in the carrying amount of the investment in joint ventures and associates, impairment loss on such an investment is deducted directly in investment in joint ventures and associates.

Production license fees and other intangible assets

Production license fees and other intangible assets that are acquired by the Group and have finite useful lives are measured at cost less accumulated amortisation and provision for impairment losses (if any).

Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure which cannot generate the future economic benefits, including expenditure on internally generated goodwill and brands, are recognised in the statement of profit or loss as incurred.

Amortisation

Amortisation is based on the cost of the asset, or other amount substituted for cost, less its residual value.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Amortisation is recognised in the statement of profit or loss on a Straight-line basis over the estimated useful lives of intangible assets, other than goodwill and trademark, from the date that they are available for use, since this most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. The estimated useful lives of assets are as follows:

Production licence fees	20	years
Other intangible assets	3-15	years

No amortisation is provided on intangible asset under development.

Amortisation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.12 Impairment

The carrying amounts of the Group's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the assets' recoverable amounts are estimated. For goodwill and intangible assets that have indefinite useful lives or are not yet available for use, the recoverable amount is estimated each year at the same time.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. The impairment loss is recognised in the statement of profit or loss.

Calculation of recoverable amount

The recoverable amount of a non-financial asset is the greater of the asset's value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

Reversals of impairment

An impairment loss in respect of a financial asset is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised in the statement of profit or loss.

An impairment loss in respect of goodwill is not reversed.

Impairment losses recognised in prior periods in respect of other non-financial assets are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.13 Interest-bearing liabilities

Interest-bearing liabilities are recognised initially at fair value less attributable transaction charges. Subsequent to initial recognition, interest-bearing liabilities are stated at amortised cost with any difference between cost and redemption value being recognised in profit or loss over the period of the borrowings on an effective interest basis.

3.14 Trade and other payables

Trade and other payables are stated at cost.

3.15 Employee benefits

Defined contribution plans

Obligations for contributions to defined contribution plans are expensed as the related service is provided. The defined contribution plans comprise provident funds established by the Group for its employees. Membership to the funds is on a voluntary basis. Contributions are made monthly by the employees at the minimum rate as required by law not exceeding 15% of their basic salaries and the Group contributes at the minimum rate as required by law not exceeding 15% of the employees' basic salaries. The provident funds are registered with the Ministry of Finance as juristic entities and are managed by a licensed Fund Manager.

Defined benefit plans

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount.

The calculation of defined benefit obligations is performed every 3 years by a qualified actuary using the projected unit credit method.

Remeasurements of the defined benefit liability, actuarial gain or loss are recognised immediately in Other comprehensive income. The Group determines the interest expense on the defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period. Interest expense and other expenses related to defined benefit plans are recognised in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in profit or loss. The Group recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Other long-term employee benefits

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognised in profit or loss in the period in which they arise.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Termination benefits

Termination benefits are expensed at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognises costs for a restructuring. If benefits are not expected to be settled wholly within 12 months of the end of the reporting period, then they are discounted.

Short-term employee benefits

Short-term employee benefits are expensed as the related service is provided. A liability is recognised for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

3.16 Provisions

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount on provisions is recognised as finance cost.

3.17 Revenue

Revenue excludes value added taxes and is arrived at after deduction of trade discounts.

Revenues from sale of goods

Revenues from sale of goods is recognised when control of the goods has transferred to the customer, being at the point the goods are delivered to the customer.

Investment income

Investment income consists of dividend income and interest income from investments and bank deposits.

Dividend income is recognised in profit or loss on the date the Group's right to receive payments is established. Interest income is recognised on a time basis, based on the principal outstanding and the applicable interest rate.

Other income

Other income is recognised on an accrual basis.

3.18 Finance costs

Finance costs is recognised using the effective interest method and comprise interest expense on borrowings, unwinding of the discount on provisions and contingent consideration.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss using the effective interest method.

3.19 Income tax

Income tax expense for the year comprises current and deferred tax. Current and deferred tax are recognised in profit or loss except to the extent that they are related to the items recognised in equity are recognised in the statement of comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income for the year, using tax rates enacted at the end of the reporting period, and any adjustment to tax payable or receivable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts and taxable value of assets and liabilities, using tax rates enacted or substantively enacted to the temporary differences when they reverse.

Deferred tax is not recognised for the following temporary differences:

- the initial recognition of goodwill and related transactions
- the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting associated and joint venture nor taxable profit or loss
- differences relating to investments in subsidiaries, an associate and joint ventures to the extent that it is probable that they will not reverse in the foreseeable future.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

In determining the amount of current and deferred tax, the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Group believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

Deferred tax assets and liabilities on different tax entities are offset if there is a legally enforceable right to offset current tax assets and liabilities, and they relate to income taxes levied by the same tax authority.

A deferred tax asset is recognised to the extent that it is probable that deferred tax assets can be utilised as future tax benefit. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.20 Basic earnings (losses) per share

Basic earnings (losses) per share (“EPS”) is calculated by dividing net profit or loss for the year attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the year, adjusted for treasury shares.

3.21 Segment reporting

Segment results that are reported to the Group’s Management Committee (the chief operating decision maker) include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

3.22 Measurement of fair values

A number of the Group’s accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

When measuring the fair value of an asset or liability, the Company uses market observable data as far as possible. Fair values are categorised into different levels in fair value hierarchy based on the inputs to valuation techniques used as follows;

Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or liability might be categorised in different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

3.23 Use of management’s judgments

The preparation of financial statements in conformity with TFRS requires the Company’s management to exercise judgments in order to determine the accounting policies, estimates and various assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the end of the reporting period and the reported amounts of revenues and expenses during the reporting period. Although these estimates are based on management’s reasonable consideration of current events, actual results may differ from these estimates. The significant accounting estimations are as follows:

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

3.23.1 Fair value measurements and valuation processes

Some of the Group's assets and liabilities are measured at fair value for financial reporting purposes.

In estimating the fair value of an asset or liability, the Group uses market-observable data to the extent it is available. Where Level 1 inputs are not available, the Group uses other observable information either directly or indirectly or other unobservable information according to level of fair value respectively.

Information about valuation techniques and inputs used in determining the fair value of various assets and liabilities are disclosed in Note 31.

3.23.2 Calculation of recoverable amount

In the calculation of recoverable amount, the Group's management estimated the future cash flows discounted to their present value using an appropriate discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

3.23.3 Impairment of goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of the cash-generating units to which goodwill has been allocated. The value-in-use calculation requires the Group's management to estimate the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate present value where the actual future cash flows are less than expected, an impairment loss may arise.

3.23.4 Impairment of investment in subsidiaries, associate and joint ventures

Determining whether investment in subsidiaries, associate and joint ventures is impaired requires an estimation of the recoverable amount. The value-in-use calculation requires the Group's management to estimate the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate present value where the actual future cash flows are less than expected, an impairment loss may arise.

3.23.5 Recognition of deferred tax assets

The recognition of deferred tax assets is based upon whether it is probable that sufficient taxable profits will be available in the future against which the reversal of temporary differences can be deducted which involves judgement regarding the future financial performance of the Group.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

4. CASH AND CASH EQUIVALENTS

4.1 Cash and cash equivalents as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Cash at banks - current accounts	9	6	9	6
Cash at banks - savings accounts	1,148	1,555	608	953
Cash at banks - foreign currency accounts	354	181	62	43
Total	1,511	1,742	679	1,002

4.2 Non-cash transactions

Reconciliation of liabilities arising from financing activities

The table below details changes in the liabilities arising from financing activities, including both cash and non-cash changes.

As at December 31, 2021

	Consolidated financial statements							Unit : Million Baht
	Non-cash changes							
	Balance as at January 1, 2021	Net financing cash flows	Interest expense	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Others*	Balance as at December 31, 2021
Accrued interest expense	-	(32)	29	-	-	-	3	-
Finance lease liabilities	616	(126)	-	-	29	16	(33)	502
Long-term borrowings from financial institutions	1,330	(567)	-	1	-	-	-	764
Total	1,946	(725)	29	1	29	16	(30)	1,266

*Changes from modification and termination of leases.

As at December 31, 2020

	Consolidated financial statements							Unit : Million Baht
	Non-cash changes							
	Balance as at January 1, 2020	Net financing cash flows	Interest expense	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Effect from first-time adoption of new accounting policy	Balance as at December 31, 2020
Accrued interest expense	-	(46)	45	-	-	-	1	-
Finance lease liabilities	20	(115)	-	-	215	22	(8)	616
Long-term borrowings from financial institutions	1,770	(441)	-	1	-	-	-	1,330
Total	1,790	(602)	45	1	215	22	(7)	1,946

*Changes from modification and termination of leases.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

As at December 31, 2021

Unit : Million Baht

Separate financial statements								Unit : Million Baht
	Balance as at January 1, 2021	Net financing cash flows	Interest expense	Non-cash changes				Balance as at December 31, 2021
				Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Others*	
Accrued interest expense	-	(32)	29	-	-	-	3	-
Finance lease liabilities	582	(117)	-	-	29	16	(27)	483
Long-term borrowings from financial institutions	1,330	(567)	-	1	-	-	-	764
Total	1,912	(716)	29	1	29	16	(24)	1,247

*Changes from modification and termination of leases.

As at December 31, 2020

Unit : Million Baht

	Separate financial statements								Balance as at December 31, 2020
	Balance as at January 1, 2020	Net financing cash flows	Interest expense	Non-cash changes				Others*	
				Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Effect from first-time adoption of new accounting policy		
Accrued interest expense	-	(46)	45	-	-	-	-	1	-
Finance lease liabilities	20	(104)	-	-	167	21	476	2	582
Long-term borrowings from financial institutions	1,770	(441)	-	1	-	-	-	-	1,330
Total	1,790	(591)	45	1	167	21	476	3	1,912

*Changes from modification and termination of leases.

5. CURRENT INVESTMENTS IN FINANCIAL ASSETS

Current investments in financial assets as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Time deposits with maturity of more than 3 months but not more than 1 year (interest rate of 0.65% to 1.05% per annum)	280	400	280	400
Total	280	400	280	400

6. TRADE RECEIVABLES

Trade receivables as at December 31, 2021 and 2020 consist of :

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Related parties (see Note 23)	1,227	982	1,882	1,365
Other parties	1,154	655	574	371
Total	2,381	1,637	2,456	1,736
<u>Less</u> Allowance for expected credit loss	-	-	-	-
Net	2,381	1,637	2,456	1,736

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Trade receivables as at December 31, 2021 and 2020 are classified by aging and Lifetime ECL as follows:

Unit : Million Baht					
CONSOLIDATED FINANCIAL STATEMENTS					
Not past due	Trade receivables Days past due				Total
	Less than 3 months	more than 3 months but not later than 6 months	more than 6 months but not later than 12 months	Over than 12 months	
As at December 31, 2021					
Expected credit loss rate	0%	0%	0%	0%	0%
Expected total gross carrying amount at default					
- Related parties	1,201	26	-	-	1,227
- Other parties	1,103	51	-	-	1,154
Lifetime ECL	-	-	-	-	-
Total trade receivables	2,304	77	-	-	2,381
As at December 31, 2020					
Expected credit loss rate	0%	0%	0%	0%	0%
Expected total gross carrying amount at default					
- Related parties	980	2	-	-	982
- Other parties	628	27	-	-	655
Lifetime ECL	-	-	-	-	-
Total trade receivables	1,608	29	-	-	1,637
Unit : Million Baht					
SEPARATE FINANCIAL STATEMENTS					
Not past due	Trade receivables Days past due				Total
	Less than 3 months	more than 3 months but not later than 6 months	more than 6 months but not later than 12 months	Over than 12 months	
As at December 31, 2021					
Expected credit loss rate	0%	0%	0%	0%	0%
Expected total gross carrying amount at default					
- Related parties	1,856	26	-	-	1,882
- Other parties	555	19	-	-	574
Lifetime ECL	-	-	-	-	-
Total trade receivables	2,411	45	-	-	2,456
As at December 31, 2020					
Expected credit loss rate	0%	0%	0%	0%	0%
Expected total gross carhrying amount at default					
- Related parties	1,365	-	-	-	1,365
- Other parties	364	7	-	-	371
Lifetime ECL	-	-	-	-	-
Total trade receivables	1,729	7	-	-	1,736

The normal credit term granted by the Group ranges from 15 days to 60 days.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

7. OTHER RECEIVABLES

Other receivables as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Prepaid expenses	253	254	250	250
Accrued income	36	4	35	3
Other receivables	5	18	8	21
Others	12	11	10	9
Total	306	287	303	283

8. INVENTORIES

Inventories as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Finished goods	902	855	565	535
Work in progress	107	84	107	84
Raw materials	657	574	645	564
Spare parts and factory supplies	317	354	286	327
Goods in transit	57	150	4	96
Total	2,040	2,017	1,607	1,606
Less Allowance for inventories devaluation	(16)	(14)	(16)	(14)
Net	2,024	2,003	1,591	1,592

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Inventories recognised as an expense and included in cost of sales account				
- Cost of sales	19,379	16,876	19,128	16,829
- Write-down to net realisable value	-	(16)	-	-
Net	19,379	16,860	19,128	16,829

As at December 31, 2021 and 2020, the Company's inventories included petroleum legal reserve of 680 liters with approximated value of Baht 0.03 million and 2,000 liters with approximated value of Baht 0.07 million, respectively.

9. INVESTMENTS IN SUBSIDIARIES

Transaction movement of investments in subsidiaries for the years ended December 31, 2021 and 2020 is as follows:

	Unit : Million Baht Separate Financial statements	
	2021	2020
As at January 1,	2,735	2,210
Acquisition	271	525
As at December 31,	3,006	2,735

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Investments in subsidiaries as at December 31, 2021 and 2020 and dividend income for years ended December 31, 2021 and 2020 are as follows:

	Ownership interest 2021 2020 (%)	Paid-up capital 2021 2020	Separate financial statements Cost	Impairment 2021 2020	Cost - net 2021 2020	Dividend income 2021 2020
Subsidiaries						
Thai Fatty Alcohols Co., Ltd.	100	1,060	1,060	-	1,685	106
GGC Biochemical Co., Ltd.	100	1,321	1,050	-	1,321	-
Total			3,006	2,735	3,006	106

Unit: Million Baht

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Change in investment in subsidiary

On November 27, 2018, the Board of Directors' Meeting of the Company passed a resolution to approve to establish GGC Biochemical Co., Ltd. for investing in sugarcane and sugar businesses for operating in Nakhonsawan Biocomplex Project which is 100% owned by the Company. Subsequently on December 18, 2018, GGC Biochemical Co., Ltd. registered the initial authorized share capital of Baht 1 million and fully received such payment. Then, in 2021, the subsidiary additionally called for paid-up share capital as follows:

No.	Number of Share (shares)	Baht per Share	Amount (Baht)	Payment date
1.	850,000	70	59,500,000	January 22, 2021
2.	340,000	4	1,360,000	January 22, 2021
3.	100,000	65	6,500,000	March 26, 2021
4.	9,500,000	10	95,000,000	April 26, 2021
5.	9,500,000	2	19,000,000	July 23, 2021
6.	3,575,000	25	89,375,000	August 10, 2021
Total			<u>270,735,000</u>	

As at December 31, 2021, the subsidiary had paid-up share capital in amount of Baht 1,321 million.

10. INVESTMENT IN AN ASSOCIATE AND JOINT VENTURES

Transaction movement of investments in an associate and joint ventures for the years ended December 31, 2021 and 2020 is as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Associate				
As at January 1,	-	28	-	67
Acquisition	-	-	-	-
Share of net loss of investment in an associate	-	(19)	-	-
Allowance for impairment of investment	-	(9)	-	(67)
As at December 31,	-	-	-	-
Joint venture				
As at January 1,	602	584	691	691
Share of net profit of investment in a joint venture	136	86	-	-
Share of other comprehensive income (loss) of investment in a joint venture	1	(2)	-	-
Dividend income	(91)	(66)	-	-
As at December 31,	648	602	691	691

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Indirect joint venture				
As at January 1,	1,021	503	-	-
Acquisition	263	523	-	-
Share of net loss of investments in a joint venture	(49)	(5)	-	-
Share of other comprehensive loss of investment in a joint venture	(2)	-	-	-
As at December 31,	1,233	1,021	-	-
Total investment in joint venture and indirect joint venture	1,881	1,623	691	691
Total movements of investment in an associate and joint ventures				
As at January 1,	1,623	1,115	691	758
Acquisition	263	523	-	-
Share of net profits of investments in an associate and joint ventures	87	62	-	-
Share of other comprehensive loss of investments in a joint venture	(1)	(2)	-	-
Dividend income	(91)	(66)	-	-
Allowance for impairment of investment	-	(9)	-	(67)
As at December 31,	1,881	1,623	691	691

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Investments in an associate and joint ventures as at December 31, 2021 and 2020 and dividend income for the years ended as at December 31, 2021 and 2020 are as follows:

	Ownership interest 2021 2020		Paid-up capital 2021 2020		Cost 2021 2020		Consolidated financial statements				Unit : Million Baht	
							Equity method 2021 2020	Impairment 2021 2020	Equity method - net 2021 2020	Dividend income 2021 2020		
Associate												
Thai Eastern Top Seeds Oil Co., Ltd.*	30	30	222	222	67	67	-	9	-	-	-	-
Total investment in an associate					67	67	-	9	-	-	-	-
Joint venture												
Thai Ethoxylate Co., Ltd.	50	50	420	420	691	691	648	602	648	602	91	66
Indirect Joint venture												
GGC KTIS Bioindustrial Co., Ltd.	50	50	2,618	2,093	1,309	1,046	1,233	1,021	1,233	1,021	-	-
Total investment in joint venture and indirect joint venture					2,000	1,737	1,881	1,623	1,881	1,623	91	66
Total					2,067	1,804	1,881	1,632	1,881	1,623	91	66

*During the year ended December 31, 2020, the Company recognised impairment loss on the investment in Thai Eastern Top Seeds Oil Co., Ltd. in the consolidated financial statements amounting to Baht 9.45 million because the recoverable amount of investment in such company was less than its carrying amount. Subsequently, on September 15, 2021, the Board of Directors' Meeting of the Company passed a resolution to approve to sell all shares in Thai Eastern Top Seeds Oil Co., Ltd. total amount of Baht 1 to a company. All shares have been sold and fully paid-up on January 13, 2022. As a result, the Company classified such investment to investment held for sale in the consolidated financial statements as at December 31, 2021.

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2021

	Ownership interest 2021	2020 (%)	Paid-up capital 2021	2020	Separate financial statements				Unit : Million Baht	
					Cost 2021	Cost 2020	Impairment 2021	Impairment 2020	Cost - net 2021	Dividend income 2021
Associate										
Thai Eastern Top Seeds Oil Co., Ltd.*	30	30	222	222	67	67	(67)	(67)	-	-
					67	67	(67)	(67)	-	-
Joint venture										
Thai Ethoxylate Co., Ltd.	50	50	420	420	691	691	-	-	691	91
					691	691	-	-	691	91
Total					758	758	(67)	(67)	691	91

*During the year ended December 31, 2020, the Company recognised impairment loss on the investment in Thai Eastern Top Seeds Oil Co., Ltd. in the separate financial statements amounting to Baht 66.60 million because the recoverable amount of investment in such company was less than its carrying amount. Subsequently, on September 15, 2021, the Board of Directors' Meeting of the Company passed a resolution to approve to sell all shares in Thai Eastern Top Seeds Oil Co., Ltd. total amount of Baht 1 to a company. All shares have been sold and fully paid-up on January 13, 2022. As a result, the Company classified such investment to investment held for sale in the separate financial statements as at December 31, 2021.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Associate and Joint ventures

The following table summarises the financial information of the associate and joint ventures as included in their own financial statements are as follows:

	Thai Ethoxylate Co., Ltd.		Thai Eastern Top Seed Oil Co., Ltd.		Unit : Million Baht GGC KTIS Bioindustrial Co., Ltd.	
	2021	2020	2021	2020	2021	2020
For the years ended December 31,						
Statements of income						
Revenue	5,765	3,978	380	483	-	-
Profit (loss)	271	182	(58)	(62)	(99)	(9)
Other comprehensive income (loss)	1	(3)	-	-	(3)	-
Total comprehensive income (loss) (100%)	272	179	(58)	(62)	(102)	(9)
Total comprehensive income (loss) of the Group's interest						
	136	89	(17)	(19)	(51)	(5)
Elimination of unrealised profit (loss)	1	(5)	-	-	-	-
Less loss in excess of investment of the Group's interest	-	-	8	-	-	-
The Group's share of total comprehensive income (loss)	137	84	(9)	(19)	(51)	(5)
As at December 31,						
Statements of financial position						
Current assets	2,178	1,652	30	24	312	211
Non-current assets	448	426	298	332	6,794	5,399
Current liabilities	(1,253)	(800)	(228)	(189)	(155)	(165)
Non-current liabilities	(68)	(61)	(127)	(136)	(4,486)	(3,403)
Net assets (100%)	1,305	1,217	(27)	31	2,465	2,042
Ownership interest (%)	50	50	30	30	50	50
The Group's share of net assets	653	608	(8)	9	1,233	1,021
Elimination of unrealised profit (loss)	(5)	(6)	-	-	-	-
Allowance for impairment of investment	-	-	-	(9)	-	-
Less loss in excess of investment of the Group's interest	-	-	8	-	-	-
Carrying amount of investments in associate and joint ventures	648	602	-	-	1,233	1,021

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Thai Ethoxylate Co., Ltd.		Thai Eastern Top Seed Oil Co., Ltd.		Unit : Million Baht GGC KTIS Bioindustrial Co., Ltd.	
	2021	2020	2021	2020	2021	2020
Remark:						
a. Includes:						
- depreciation and amortisation	53	49	38	38	3	2
- interest expenses	2	2	12	12	-	-
- income tax expense	68	51	-	-	2	(2)
b. Includes cash and cash equivalents	561	653	15	1	70	16
c. Includes current financial liabilities (excluding trade and other payables and provisions)	9	9	101	102	76	9
d. Includes non-current financial liabilities (excluding trade and other payables and provisions)	27	22	126	135	4,469	3,402

Change in investment in indirect joint venture

On December 19, 2018, the Board of Directors' Meeting of GGC Biochemical Company Limited, the Company's subsidiary, passed a resolution to approve to establish GGC KTIS Bioindustrial Company Limited as a joint venture company. The purpose of the joint venture company is planned to invest in Nakhonsawan Biocomplex Project. GGC Biochemical Co., Ltd. will hold 50% of the issued and paid-up capital of GKBI while the remaining 50% of shares will be held by KTIS Bioethanol Company Limited. Then, in 2021, the indirect joint venture additionally called for paid-up share capital as follows:

No.	Number of Share (shares)	Baht per Share	Amount (Baht)	Payment date
1.	850,000	70	59,500,000	January 25, 2021
2.	9,500,000	10	95,000,000	April 27, 2021
3.	9,500,000	2	19,000,000	July 27, 2021
4.	3,575,000	25	89,375,000	September 10, 2021
Total			262,875,000	

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

11. PLANT AND EQUIPMENT

Plant and equipment as at December 31, 2021 and 2020 consists of:

	Consolidated financial statements						Unit : Million Baht
	Plant, machinery, factory, tools and equipment	Buildings and buildings improvement	Land improvement	Furniture, fixtures and office equipment	Vehicles	Assets under construction	Total
Cost							
As at January 1, 2020	9,033	740	50	18	32	263	10,136
Effect from first-time adoption of new accounting policy	-	-	-	(8)	(22)	-	(30)
Additions	11	-	-	4	-	310	325
Transfers	365	64	12	-	-	(441)	-
Disposals	(30)	-	-	-	-	(6)	(36)
As at December 31, 2020 and January 1, 2021	9,379	804	62	14	10	126	10,395
Additions	36	-	-	3	10	135	184
Transfers	88	1	-	-	-	(89)	-
Disposals	(9)	(1)	-	-	(8)	-	(18)
As at December 31, 2021	9,494	804	62	17	12	172	10,561
Depreciation							
As at January 1, 2020	(4,907)	(406)	(30)	(8)	(21)	-	(5,372)
Effect from first-time adoption of new accounting policy	-	-	-	3	11	-	14
Depreciation charge for the year	(429)	(38)	(3)	(2)	-	-	(472)
Disposals	11	-	-	-	-	-	11
As at December 31, 2020 and January 1, 2021	(5,325)	(444)	(33)	(7)	(10)	-	(5,819)
Depreciation charge for the year	(445)	(40)	(3)	(2)	(8)	-	(498)
Disposals	6	1	-	-	8	-	15
As at December 31, 2021	(5,764)	(483)	(36)	(9)	(10)	-	(6,302)

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements						Unit : Million Baht
	Plant, machinery, factory tools and equipment	Buildings and buildings improvement	Land improvement	Furniture, fixtures and office equipment	Vehicles	Assets under construction	Total
<i>Net book value</i>							
As at January 1, 2020							
Owned assets	4,126	334	20	5	-	263	4,748
Assets under finance leases	-	-	-	5	11	-	16
	<u>4,126</u>	<u>334</u>	<u>20</u>	<u>10</u>	<u>11</u>	<u>263</u>	<u>4,764</u>
As at December 31, 2020 and January 1, 2021							
Owned assets	4,054	360	29	7	-	126	4,576
Assets under finance leases	-	-	-	-	-	-	-
	<u>4,054</u>	<u>360</u>	<u>29</u>	<u>7</u>	<u>-</u>	<u>126</u>	<u>4,576</u>
As at December 31, 2021							
Owned assets	3,730	321	26	8	2	172	4,259
Assets under finance leases	-	-	-	-	-	-	-
	<u>3,730</u>	<u>321</u>	<u>26</u>	<u>8</u>	<u>2</u>	<u>172</u>	<u>4,259</u>

The gross amount of the Group's fully depreciated plant and equipment that was still in use as at December 31, 2021 amounted to Baht 1,317 million (2020: Baht 1,288 million).

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Separate financial statements						Unit : Million Baht
	Plant, machinery, factory tools and equipment	Buildings and buildings improvement	Land improvement	Furniture, fixtures and office equipment	Vehicles	Assets under construction	Total
Cost							
As at January 1, 2020	8,280	649	49	18	32	260	9,288
Effect from first-time adoption of new accounting policy	-	-	-	(8)	(22)	-	(30)
Additions	11	-	-	4	-	308	323
Transfers ⁽¹⁾	361	64	12	-	-	(437)	-
Disposals	(16)	-	-	-	-	(6)	(22)
As at December 31, 2020 and January 1, 2021	8,636	713	61	14	10	125	9,559
Additions	36	-	-	2	10	133	181
Transfers	87	-	-	-	-	(87)	-
Disposals	(9)	(1)	-	-	(8)	-	(18)
As at December 31, 2021	8,750	712	61	16	12	171	9,722
Depreciation							
As at January 1, 2020	(4,451)	(355)	(30)	(8)	(21)	-	(4,865)
Effect from first-time adoption of new accounting policy	-	-	-	3	11	-	14
Depreciation charge for the year	(396)	(33)	(2)	(2)	-	-	(433)
Disposals	9	-	-	-	-	-	9
As at December 31, 2020 and January 1, 2021	(4,838)	(388)	(32)	(7)	(10)	-	(5,275)
Depreciation charge for the year	(412)	(35)	(3)	(2)	(8)	-	(460)
Disposals	6	1	-	-	8	-	15
As at December 31, 2021	(5,244)	(422)	(35)	(9)	(10)	-	(5,720)

⁽¹⁾ On December 1, 2020, the Company's Refined Glycerine 2 project where is located at Thai Eastern Industrial Land, Ampoe Nong Yai, Chonburi has commenced the commercial operation with name plate capacity 20,000 tons per year.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Separate financial statements							Unit : Million Baht
	Plant, machinery, factory tools and equipment	Buildings and buildings improvement	Land improvement	Furniture, fixtures and office equipment	Vehicles	Assets under construction	Total
<i>Net book value</i>							
As at January 1, 2020							
Owned assets	3,829	294	19	5	-	260	4,407
Assets under finance leases	-	-	-	5	11	-	16
	<u>3,829</u>	<u>294</u>	<u>19</u>	<u>10</u>	<u>11</u>	<u>260</u>	<u>4,423</u>
As at December 31, 2020 and January 1, 2021							
Owned assets	3,798	325	29	7	-	125	4,284
Assets under finance leases	-	-	-	-	-	-	-
	<u>3,798</u>	<u>325</u>	<u>29</u>	<u>7</u>	<u>-</u>	<u>125</u>	<u>4,284</u>
As at December 31, 2021							
Owned assets	3,506	290	26	7	2	171	4,002
Assets under finance leases	-	-	-	-	-	-	-
	<u>3,506</u>	<u>290</u>	<u>26</u>	<u>7</u>	<u>2</u>	<u>171</u>	<u>4,002</u>

The gross amount of the Company's fully depreciated plant and equipment that was still in use as at December 31, 2021 amounted to Baht 1,186 million (2020: Baht 1,161 million).

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

12. RIGHT-OF-USE ASSETS

Right of use asset as at December 31, 2021 and 2020 consists of:

<i>Cost</i>	Consolidated financial statements					Unit : Million Baht	
	Land	Buildings	Plant, machinery, factory tools and equipment	Furniture, fixtures and office equipment	Vehicles	Total	
As at January 1, 2020	-	-	-	-	-	-	-
Effect from first-time adoption of new accounting policy	166	7	307	8	27	515	
Additions	14	10	184	-	7	215	
Termination and cancellation	-	-	(11)	(1)	-	(12)	
Modification	-	-	2	-	-	2	
As at December 31, 2020 and January 1, 2021	180	17	482	7	34	720	
Additions	-	-	4	-	24	28	
Termination and cancellation	-	-	-	-	(14)	(14)	
Modification	2	-	(25)	-	(1)	(24)	
As at December 31, 2021	182	17	461	7	43	710	

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements					Unit : Million Baht	
	Land	Buildings	Plant, machinery, tools and equipment	Furniture, fixtures and office equipment	Vehicles	Total	
Depreciation							
As at January 1, 2020	-	-	-	-	-	-	
Effect from first-time adoption of new accounting policy	-	-	-	(2)	(11)	(13)	
Depreciation charge for the year	(8)	(5)	(96)	(3)	(9)	(121)	
Termination and cancellation	-	-	2	1	-	3	
As at December 31, 2020 and January 1, 2021	(8)	(5)	(94)	(4)	(20)	(131)	
Depreciation charge for the year	(9)	(6)	(96)	(2)	(7)	(120)	
Termination and cancellation	-	-	-	-	13	13	
Modification	-	-	2	-	-	2	
As at December 31, 2021	(17)	(11)	(188)	(6)	(14)	(236)	
Net book value							
As at January 1, 2020	166	7	307	6	16	502	
As at December 31, 2020 and January 1, 2021	172	12	388	3	14	589	
As at December 31, 2021	165	6	273	1	29	474	

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Unit : Million Baht					
	Land	Buildings	Separate financial statements Plant, machinery, factory tools and equipment	Furniture, fixtures and office equipment	Vehicles	Total
Cost						
As at January 1, 2020						
Effect from first-time adoption of new accounting policy	-	-	-	-	-	-
Additions	161	7	306	8	27	509
Termination and cancellation	14	10	137	-	7	168
Modification	-	-	-	(1)	-	(1)
As at December 31, 2020 and January 1, 2021	175	17	445	7	34	678
Additions	-	-	4	-	24	28
Termination and cancellation	-	-	-	-	(14)	(14)
Modification	2	-	(17)	-	(1)	(16)
As at December 31, 2021	177	17	432	7	43	676
Depreciation						
As at January 1, 2020						
Effect from first-time adoption of new accounting policy	-	-	-	-	-	-
Depreciation charge for the year	-	-	-	(2)	(11)	(13)
Termination and cancellation	(8)	(5)	(85)	(3)	(9)	(110)
As at December 31, 2020 and January 1, 2021	(8)	(5)	(85)	(4)	(20)	(122)
Depreciation charge for the year	(9)	(6)	(87)	(2)	(7)	(111)
Termination and cancellation	-	-	-	-	13	13
As at December 31, 2021	(17)	(11)	(172)	(6)	(14)	(220)
Net book value						
As at January 1, 2020	161	7	306	6	16	496
As at December 31, 2020 and January 1, 2021	167	12	360	3	14	556
As at December 31, 2021	160	6	260	1	29	456

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Amount recognised in profit and loss for the year ended December 31, 2021 and 2020 is as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Depreciation expense on right-of-use assets	120	121	111	110
Interest expense on lease liabilities	17	22	16	21
Expense relating to short-term leases	9	20	7	17
Expense relating to leases of low value assets	1	1	1	1
Expense relating to variable lease payments not include in the measurement of the lease liability	4	4	2	2

The maturity analysis of lease liabilities is presented in Note 16.

13. INTANGIBLE ASSETS

Intangible assets as at December 31, 2021 and 2020 consist of:

	Unit : Million Baht Consolidated financial statements			
	Production license fees	Goodwill	Other intangible assets	Total
Cost				
As at January 1, 2020	88	33	12	133
Additions	-	-	5	5
Disposals	-	-	-	-
As at December 31, 2020 and January 1, 2021	88	33	17	138
Additions	-	-	4	4
Disposals	-	-	-	-
As at December 31, 2021	88	33	21	142
Amortisation				
As at January 1, 2020	(56)	-	(8)	(64)
Amortisation charge for the year	(4)	-	(1)	(5)
Disposals	-	-	-	-
As at December 31, 2020 and January 1, 2021	(60)	-	(9)	(69)
Amortisation charge for the year	(5)	-	(1)	(6)
Disposals	-	-	-	-
As at December 31, 2021	(65)	-	(10)	(75)
Net book value				
As at January 1, 2020	32	33	4	69
As at December 31, 2020 and January 1, 2021	28	33	8	69
As at December 31, 2021	23	33	11	67

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Unit : Million Baht		
	Separate financial statements		
	Production license fees	Other intangible assets	Total
<i>Cost</i>			
As at January 1, 2020	88	12	100
Additions	-	5	5
Disposals	-	-	-
As at December 31, 2020 and January 1, 2021	88	17	105
Additions	-	-	-
Disposals	-	-	-
As at December 31, 2021	88	17	105
<i>Amortisation</i>			
As at January 1, 2020	(56)	(8)	(64)
Amortisation charge for the year	(4)	(1)	(5)
Disposals	-	-	-
As at December 31, 2020 and January 1, 2021	(60)	(9)	(69)
Amortisation charge for the year	(5)	(1)	(6)
Disposals	-	-	-
As at December 31, 2021	(65)	(10)	(75)
<i>Net book value</i>			
As at January 1, 2020	32	4	36
As at December 31, 2020 and January 1, 2021	28	8	36
As at December 31, 2021	23	7	30

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

14. INCOME TAX EXPENSES (INCOME) AND DEFERRED TAX

Income tax expenses (income)

Income tax expenses (income) for the years ended December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
<i>Current tax (income) expense</i>				
Current year	45	-	-	-
Under provided in prior year	-	-	-	-
	<u>45</u>	<u>-</u>	<u>-</u>	<u>-</u>
<i>Deferred tax (income) expense</i>				
Movements in temporary differences	46	15	48	(4)
Total	<u>91</u>	<u>15</u>	<u>48</u>	<u>(4)</u>

Reconciliation of effective tax rate

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
	<i>Rate (%)</i>		<i>Rate (%)</i>	
Profit before income tax expense		421		575
Income tax using the Thai corporation tax rate	20.00	84	20.00	115
Income not subject to tax		(65)		(78)
Expenses deductible at a greater amount		(33)		(41)
Utilisation tax losses		(58)		(35)
Expenses not deductible for tax purposes		127		54
Share of net profits of investments in an associate and joint ventures		(15)		(12)
Temporary difference				
- Loss carry forward		60		35
- Others		(14)		(20)
Others		5		(3)
Income tax expenses	<u>21.62</u>	<u>91</u>	<u>2.61</u>	<u>15</u>

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Unit : Million Baht			
	Separate financial statements			
	2021		2020	
	Rate (%)		Rate (%)	
Profit before income tax expense		273		352
Income tax using the Thai corporation tax rate	20.00	54	20.00	70
Income not subject to tax		(104)		(76)
Expenses deductible at a greater amount		(30)		(33)
Utilisation tax losses		(44)		(17)
Expenses not deductible for tax purposes		123		56
Temporary difference				
- Loss carry forward		58		17
- Others		(9)		(21)
Others		-		-
Income tax expenses (income)	17.58	48	-	(4)

Deferred tax

Movements in total deferred tax assets and liabilities during the years are as follows:

	Unit : Million Baht			
	Consolidated financial statements			
	(Charged) / credited to:			
	As at January 1, 2021	Profit or loss	Other comprehensive income	As at December 31, 2021
Deferred tax assets				
Provision for employee benefits	22	(1)	(1)	20
Plant and equipment	20	12	-	32
Tax loss carry forward*	224	(60)	-	164
Allowance for impairment of investment	13	-	-	13
Others	1	4	-	5
Total	280	(45)	(1)	234
Deferred tax liabilities				
Plant and equipment	(8)	(1)	-	(9)
Provision for expenses from raw materials derogation	(43)	-	-	(43)
Other	(1)	-	-	(1)
Total	(52)	(1)	-	(53)
Net	228	(46)	(1)	181

*Included deferred tax asset arising from provision for estimated damage causing by lawsuit

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Million Baht			
Consolidated financial statements			
(Charged) / credited to:			
As at January 1, 2020	Profit or loss	Other comprehensive income	As at December 31, 2020
Deferred tax assets			
Provision for employee benefits	18	5 (1)	22
Plant and equipment	15	5 -	20
Tax loss carry forward	259	(35) -	224
Allowance for impairment of investment	-	13 -	13
Others	-	1 -	1
Total	292	(11)	280
Deferred tax liabilities			
Plant and equipment	(5)	(3) -	(8)
Provision for expenses from raw materials derogation	(43)	- -	(43)
Other	-	(1) -	(1)
Total	(48)	(4)	(52)
Net	244	(15)	228

Unit : Million Baht			
Separate financial statements			
(Charged) / credited to:			
As at January 1, 2021	Profit or loss	Other comprehensive income	As at December 31, 2021
Deferred tax assets			
Provision for employee benefits	22	(1) (1)	20
Plant and equipment	20	10 -	30
Tax loss carry forward*	222	(58) -	164
Allowance for impairment of investment	13	- -	13
Others	1	2 -	3
Total	278	(47)	230
Deferred tax liabilities			
Plant and equipment	(7)	(2) -	(9)
Provision for expenses from raw materials derogation	(43)	- -	(43)
Total	(50)	(2)	(52)
Net	228	(49)	178

*Included deferred tax asset arising from provision for estimated damage causing by lawsuit

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	As at January 1, 2020	Unit : Million Baht Separate financial statements (Charged) / credited to:		As at December 31, 2020
		Profit or loss	Other comprehensive income	
Deferred tax assets				
Provision for employee benefits	18	5	(1)	22
Plant and equipment	15	5	-	20
Tax loss carry forward	239	(17)	-	222
Allowance for impairment of investment	-	13	-	13
Others	-	1	-	1
Total	272	7	(1)	278
Deferred tax liabilities				
Plant and equipment	(4)	(3)	-	(7)
Provision for expenses from raw materials derogation	(43)	-	-	(43)
Total	(47)	(3)	-	(50)
Net	225	4	(1)	228

As at December 31, 2021 and 2020, the Company has total taxable loss carry forward of Baht 911 million and Baht 843 million, respectively which the Company has not yet recognised the deferred tax assets as the Company considered that no sufficient future taxable profit will be available to allow the related deferred tax assets to be utilised.

15. BORROWINGS

Borrowings as at December 31, 2021 and 2020 are as follows:

	Unit : Million Baht Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Current				
Current portion of long-term borrowings from financial institutions				
Unsecured	765	567	765	567
Less Current portion of deferred financing service fee	(1)	(1)	(1)	(1)
Current portion of long-term borrowings	764	566	764	566
Total current borrowing	764	566	764	566
Non-current				
Long-term borrowings from financial institutions				
Unsecured	-	765	-	765
Less Deferred financing service fee	-	(1)	-	(1)
Long-term borrowings	-	764	-	764
Total non-current borrowing	-	764	-	764
Total	764	1,330	764	1,330

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

The periods to maturity of borrowings from financial institutions as at December 31, 2021 and 2020 are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Within one year	764	566	764	566
After one year but within five years	-	764	-	764
Total	764	1,330	764	1,330

Details of the Group's borrowings with 3 financial institutions as at December 31, 2021 and 2020 were as follows:

Currency	Facilities (in million)	Interest Rates (%) p.a	Repayment Terms
Baht	900	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 14 installment commencing from April 2016.
Baht	900	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 14 installment commencing from May 2016.
Baht	900	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 12 installment commencing from May 2017.
Baht	700	THOR plus margin	Principal is repayable on semi-annual basis, in 15 installment commencing on 6 months after first drawdown
Baht	700	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 12 installment commencing from April 2023.
Baht	400	MRL less discount rate	Principal is repayable on semi-annual basis, in 10 installment commencing from June 2024.

As at December 31, 2021, the Group had unutilised borrowing facilities totalling Baht 1,800 million (2020: Nil).

As at December 31, 2021, the Group had unutilised credit facilities totalling Baht 900 million (2020: Baht 400 million).

Under Credit Facilities Agreements, the Company is required to comply with certain procedures and covenants pertaining to maintenance of certain financial ratios, percentage of share held by the major shareholder and other conditions as specified in each agreement.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

16. LEASE LIABILITIES

The periods to maturity of lease liabilities as at December 31, 2021 and 2020 are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Within one year	133	152	125	141
After one year but within five years	150	245	141	224
After five years	320	349	317	344
	603	746	583	709
Less Deferred interest expense	(101)	(130)	(100)	(127)
Total	502	616	483	582
Classification				
- Current portion of lease liabilities	120	133	112	124
- Lease liabilities	382	483	371	458
	502	616	483	582

17. TRADE PAYABLES

Trade payables as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Related parties (see Note 23)	62	57	55	49
Other parties	1,164	756	1,161	753
Total	1,226	813	1,216	802

18. OTHER PAYABLES

Other payables as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Other payables	222	181	171	149
Accrued operating expenses	89	50	85	47
Advances received for goods	22	16	2	9
Value-added tax payable	35	5	35	5
Others	30	10	18	10
Total	398	262	311	220

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

19. PROVISIONS FOR EMPLOYEE BENEFITS

Provisions for employee benefits as at December 31, 2021 and 2020 consist of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Post-employment benefits	101	95	101	95
Other long-term employee benefits	19	18	19	18
Total	120	113	120	113

Movement in the present value of the defined benefit obligations:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
As at January 1,	113	90	113	90
Recognised in profit or loss:				
Current service costs	12	10	12	10
Interest on obligations	2	3	2	3
Past service cost	-	2	-	2
	14	15	14	15
Others				
Benefit paid by the plan	-	-	-	-
	-	-	-	-
As at December 31,	127	105	127	105
Recognised in other comprehensive income				
Actuarial (gain) loss	(7)	8	(7)	8
	(7)	8	(7)	8
As at December 31,	120	113	120	113

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
For the years ended December 31,				
Recognised in profit or loss:				
Post-employment benefits	12	11	12	11
Other long-term employee benefits	2	2	2	2
Actuarial (gain) loss	-	2	-	2
Total	14	15	14	15

The expense is recognised in the following line items in the statement of profit or loss:

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Cost of sales	8	4	8	4
Selling and distribution and administrative expenses	6	11	6	11
Total	14	15	14	15

Actuarial assumptions

Principal actuarial assumptions at the reporting date as at December 31, 2021 and 2020 (expressed as weighted averages) consists of:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
		(%)		
Discount rate	1.9	1.5	1.9	1.5
Future salary increases	5.0	5.0	5.0	5.0
Resignation rate	0 - 6.0	0 - 6.0	0 - 6.0	0 - 6.0
Retirement age	60 Years	60 Years	60 Years	60 Years

Assumptions regarding future mortality have been based on published statistics and mortality tables.

As at December 31, 2021, the weighted-average duration of the defined benefit obligation is 10 years (2020: 10 years).

Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	Increase	Decrease	Increase	Decrease
As at December 31, 2021				
Discount rate (1% movement)	(16)	19	(16)	19
Future salary growth (1% movement)	17	(14)	17	(14)
As at December 31, 2020				
Discount rate (1% movement)	(16)	19	(16)	19
Future salary growth (1% movement)	16	(13)	16	(13)

Although the analysis does not take into account the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Provident fund contributions for their employees and recorded as expense in the statements of profit or loss for the years ended December 31, are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Provident fund expense	18	14	18	14

20. SHARE CAPITAL

Share capital as at December 31, 2021 and 2020 consists of :

	2021			2020		
	Par value per share (in Baht)	Number (in million shares / million Baht)	Amount	Par value per share (in Baht)	Number (in million shares / million Baht)	Amount
<i>Authorised</i>						
As at January 1,						
- ordinary shares	9.5	1,024	9,725	9.5	1,024	9,725
As at December 31,						
- ordinary shares	9.5	1,024	9,725	9.5	1,024	9,725
<i>Issued and paid-up</i>						
As at January 1,						
- ordinary shares	9.5	1,024	9,725	9.5	1,024	9,725
As at December 31,						
- ordinary shares	9.5	1,024	9,725	9.5	1,024	9,725

21. LEGAL RESERVE

Section 116 of the Public Companies Act B.E. 2535 requires that a company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward (if any), to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorised capital. The legal reserve is not available for dividend distribution.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

22. DIVIDENDS PAID

At the Board of Directors' meeting held on February 14, 2020, the Board approved to set aside a legal reserve and to submit dividend payment approval for the year 2019 to the Annual General Meeting ("AGM") of the Shareholders at the rate of Baht 0.35 per share amounting to Baht 358.3 million, of which Baht 0.15 per share amounting to Baht 153.55 million was paid in October 2019. Thus, the remaining dividend will be at the rate of Baht 0.20 per share amounting to Baht 204.73 million to the shareholders entitled to receive dividends. This dividend is subject to the approval of the Shareholders at the Annual General Meeting to be held on April 2, 2020. Due to the Coronavirus Disease (COVID-19) Epidemic and the Bangkok Metropolitan Administration's announcement ordering the temporary closure of Meeting Facilities from March 28, 2020 to April 30, 2020, the Board of Directors at its meeting held on March 27, 2020 passed the resolutions to approve the postponement of the 2020 AGM of the Company indefinitely which was originally scheduled on April 2, 2020 to June 5, 2020 and approve the payment of interim dividends. Interim rate was paid to the shareholders who were listed on the record date on Friday, February 28, 2020. Such rate and such record date is the same as previously notified to the shareholders. The Company paid interim dividend on April 23, 2020.

At the Board of Directors' meeting held on February 10, 2021, the Board approved to set aside a legal reserve and to submit for dividend payment approval for the year 2020 to the Annual General Meeting of the Shareholders at the rate of Baht 0.35 per share amounting to Baht 358.28 million to the shareholders entitled to receive dividends. This dividend was approved by the Shareholders at the Annual General Meeting to be held on April 2, 2021. The Company paid dividend on April 21, 2021.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

23. TRANSACTION WITH RELATED PARTIES

A related party is as follows:

- An individual or an entity which has the ability, directly or indirectly, to control or joint control or exercise significant influence over the Group in making financial and operating decisions or;
- An individual or an entity which is subject to common control or common significant influence with the Group or
- The Group has the ability, directly or indirectly, to control or joint control or exercise significant influence over an individual or an entity in making financial and operating decisions.

Relationships with related parties are as follows:

Name of entities	Country of incorporation/ nationality	Nature of relationships
PTT Plc.	Thailand	Ultimate parent company and the Company's directors as managements
PTT Global Chemical Plc.	Thailand	Parent company and the Company's directors as managements
Thai Fatty Alcohols Co., Ltd.	Thailand	Subsidiary, 100% shareholding, some common directors and the Company's management as a director
GGC Biochemicals Co., Ltd.	Thailand	Subsidiary, 100% shareholding, some common directors and the Company's management as a director
Thai Eastern Top Seeds Oil Co., Ltd.	Thailand	Associate, 30% shareholding and the Company's management as a director
Thai Ethoxylate Co., Ltd.	Thailand	Joint venture, 50% shareholding and the Company's management as a director
GGC KTIS Bioindustrial Co., Ltd.	Thailand	Indirect joint venture, 50% shareholding by subsidiary and the Company's management as a director
GC Glycol Co., Ltd.	Thailand	Other related party, shareholding by parent company and some common directors
Solution Creation Co., Ltd.	Thailand	Other related party, shareholding by parent company and some common directors
Global Power Synergy Plc.	Thailand	Other related party, shareholding by parent company and some common directors
GC Maintenance & Engineering Co., Ltd.	Thailand	Other related party, shareholding by parent company
GC Logistics Solutions Co., Ltd.	Thailand	Other related party, shareholding by parent company
GC Estate Company Limited	Thailand	Other related party, shareholding by parent company

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Name of entities	Country of incorporation/ nationality	Nature of relationships
GC Polyols Co., Ltd.	Thailand	Other related party, shareholding by parent company
PTT Phenol Company Limited	Thailand	Other related party, shareholding by parent company
PTT Digital Solutions Co., Ltd.	Thailand	Other related party, shareholding by parent company
Eastern Fluid Transport Co., Ltd.	Thailand	Other related party, shareholding by parent company
NPC Safety and Environmental Service Co., Ltd.	Thailand	Other related party, shareholding by parent company
GC Oxirane Co., Ltd.	Thailand	Other related party, shareholding by parent company
Dhipaya Insurance Plc.	Thailand	Other related party, shareholding by the ultimate parent company until August 2021
Thai Oil Plc.	Thailand	Other related party, shareholding by the ultimate parent company
PTT Oil and Retail Business Plc.	Thailand	Other related party, shareholding by the ultimate parent company
Energy Complex Co., Ltd.	Thailand	Other related party, shareholding by the ultimate parent company
IRPC Plc.	Thailand	Other related party, shareholding by the ultimate parent company
Business Services Alliance Co., Ltd.	Thailand	Other related party, shareholding by the ultimate parent company and parent company
Sarn Palung Social Enterprise Company Limited	Thailand	Other related party, indirect shareholding by the ultimate parent company
NPC S&E Security Guard Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
Advance Biochemical (Thailand) Co., Ltd.	Thailand	Other related party, indirect shareholding by parent company
PTT International Trading Pte. Ltd.	Singapore	Other related party, shareholding by ultimate parent company
Emery Oleochemicals LLC	United States of America	Other related party, indirect shareholding by parent company

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

The pricing policies for particular types of transactions are explained further below:

Transactions	Pricing policies
Sale of goods	Contract price / Contract price determined based on reference market price
Rendering of services	Contract price
Purchase of goods / raw materials / services	Contract price / Market price
Interest on loan	Average cost of fund / Contractually agreed rate
Director allowance (Allowance/Bonus)	Approve by Board of director and Shareholder

Significant transactions for the years ended December 31, 2021 and 2020 with related parties are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Ultimate parent				
Purchases of goods or receiving of services	168	1	168	1
Other expense	3	5	3	5
Parent				
Sales of goods	1,792	1,574	1,792	1,574
Purchases of goods or receiving of services	163	186	152	174
Interest expense	8	11	8	11
Other expense	74	80	66	75
Dividend paid	259	148	259	148
Expense capitalised to fixed assets	-	1	-	-
Subsidiary				
Sales of goods	-	-	4,572	3,391
Purchases of goods or receiving of services	-	-	-	1
Other income	-	-	38	35
Dividend income	-	-	106	-
Associate				
Sales of goods	72	-	72	-
Purchases of goods or receiving of services	-	5	-	5
Joint ventures				
Sales of goods	1,495	1,268	-	-
Other income	23	20	23	20
Dividend income	-	-	91	66

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Other related parties				
Sales of goods	9,338	9,232	9,338	9,220
Purchases of goods or receiving of services	671	683	565	575
Other income	-	2	-	2
Interest expense	1	1	-	-
Other expense	65	47	56	38
Expense capitalised to fixed assets	7	27	7	27
Key management personnel				
Key management personnel compensation				
Short-term benefits	99	86	99	86

Balances as at December 31, 2021 and 2020 with related parties are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Trade receivables - related parties				
Parent	155	109	155	110
Subsidiaries	-	-	1,003	691
Joint ventures	348	304	-	-
Other related parties	724	569	724	564
Total	1,227	982	1,882	1,365
Less Allowance for expected credit loss	-	-	-	-
Net	1,227	982	1,882	1,365
Other receivables - related parties				
Parent	1	16	1	16
Subsidiaries	-	-	4	4
Joint ventures	8	4	8	4
Other related parties	3	22	3	19
Total	12	42	16	43
Less Allowance for expected credit loss	-	-	-	-
Net	12	42	16	43
Investments in subsidiaries (see Note 9)	-	-	3,006	2,735
Investments in an associate (see Note 10)	-	-	-	-
Investments in joint ventures (see Note 10)	648	602	691	691
Investments in indirect joint ventures (see Note 10)	1,233	1,021	-	-
Right-of-use asset - related parties				
Parent	257	300	252	295
Other related parties	19	40	6	13
Total	276	340	258	308

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Trade payables - related parties				
Parent	7	9	7	9
Other related parties	55	48	48	40
Total	62	57	55	49
Other payables - related parties				
Ultimate parent	2	3	2	3
Parent	35	24	31	22
Other related parties	47	37	42	30
Total	84	64	75	55
Payables to contractor - related parties				
Parent	-	1	-	1
Other related parties	2	9	2	9
Total	2	10	2	10
Current portion of lease liabilities - related parties				
Parent	15	19	15	18
Other related parties	12	15	4	6
Total	27	34	19	24
Lease liabilities - related parties				
Parent	253	286	249	281
Other related parties	10	27	3	7
Total	263	313	252	288

Significant agreements with related parties

The Group has significant agreements with related parties as at December 31, 2021 as follows:

Methyl Ester Purchase and Sales Agreements

The Company has 7 Methyl Ester Purchase and Sales Agreements with parent company and 4 related parties. Selling prices are determined based on B100 price announced by government and the adjustment as specified in each agreement. These agreements are for the periods from 1 month to 1 year commencing from the effective date as specified in each agreement and expiring in December 2021 and March 2022. These agreements are renewable until either party terminates the agreement. The Company currently is in the process of consideration for renewal of the expired agreements.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Fatty Alcohols Agreements

The Company has a Fatty alcohols Sales Agreement with a subsidiary. Selling prices are determined based on Average Fatty Alcohols Weekly Prices published by ICIS and the adjustment as specified in the agreement. This agreement is for the period of 5 years commencing from the effective date as specified in agreement and expiring in December 2023.

The Group has a Fatty alcohols Sales Agreement with a joint venture. Selling prices are determined based on Average Fatty Alcohols Weekly Prices published by ICIS and the adjustment as specified in each transportation types. This agreement is for a year commencing from the effective date as specified in agreement and expiring in October 2022.

Glycerine Sales Agreements

The Company has a Glycerine Sales Agreement with a related party. Selling prices are determined based on Average Drum Refined Glycerine FOB SEA Weekly Spot Prices published by ICIS pricing Glycerine (Asia Pacific). This agreement is for the period of 3 years commencing from the effective date as specified in the agreement and expiring in December 2023. This agreement is renewable until either party terminates the agreement.

Utilities Purchase and Sales Agreements and Other Services Agreements

The Company has Hydrogen Purchase and Sales Agreement with parent company. Selling price is determined based on Natural Gas price for the industry. This agreement is for the period of 9 years 6 months, commencing from the effective date as specified in the agreement and expiring in December 2028.

The Group has 3 Utilities Purchase Agreements covering steam, electricity and water with a related party at the agreed quantities and prices as stipulated in the agreements. These agreements are for the period 15 years, commencing from the effective date as specified in each agreement and expiring in June 2023.

The Company has Tank Farm Storage and Service Agreement with parent company covering tank storage, utilities for product warehouse and transportation of Methanol. This agreement is for the period of 20 years, commencing from the effective date as specified in the agreement and expiring in March 2039, with the service charge as stipulated in the agreement.

The Company has Pipe rack Maintenance Agreement with a related party. The agreement is for the period of 15 years, commencing from the effective date as specified in the agreement and expiring in August 2022, with the service charge as stipulated in the agreement.

The Company has Right to use pipe rack Agreements with ultimate parent company and parent company. These agreements are for the periods of 15 years, commencing from the effective date as specified in each agreement and expiring in April 2022 and August 2022, respectively, with the service charge as stipulated in each agreement.

The Group has Tank Farm Storage and Service Agreement with a related party covering tank storage, utilities for product warehouse and transportation of Fatty Alcohol. This agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and automatically renew for every 2 years unless otherwise terminated by manually agreed of both parties, with the service charge as stipulated in the agreement.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Service Agreements

The Company has Shared Service agreements with 2 subsidiaries for the provision of general services. This agreement is for the period of 1 year, commencing from the effective date as specified in the agreement and expiring in December 2021, with the service charge as stipulated in the agreement. The Company currently is in the process of consideration for renewal of the expired agreements.

The Group has Share Service Agreements with parent company for the provision of administration office, lab and quality service and general services. This agreement is for the period of 1 year, commencing from the effective date as specified in the agreement and expiring in December 2021, with the service charge as stipulated in the agreement. The Company currently is in the process of consideration for renewal of the expired agreements.

The Company has Building Maintenance Services Agreement with a related party. This agreement is for the period of 5 years, commencing from the effective date as specified in the agreement and expiring in June 2023 with the service charge as stipulated in the agreement.

The Company has Security and Fire Protection Agreement with a related party for receiving security and fire protection service to assets, employees, and visitors in the Company's location. The agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2022, with the service charge as stipulated in the agreement.

The Company has Safety Inspector Agreement with a related party. The agreement is to inspect during working and in the Company's location. The agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2022, with the service charge as stipulated in the agreement.

The Company has 2 Emergency Control and Management Agreements with a related party for consulting and safety training, occupational health & safety and environment, and set up emergency control centre. The agreements are for the period of 3 years, commencing from the effective date as specified in the agreements and expiring in March 2022 and December 2023, with the service charge as stipulated in the agreements.

The Company has agreement with related party for Manpower rescue team during plant shutdown to have manpower rescue team and equipment. The period for this agreement is 3 years, commencing from the effective date as specified in the agreement to January 2022, with the service charge stipulated in the agreement.

The Company has Fire Fighting water agreement with related party for Fire Fighting Water, Fire Fighting Facility and Maintenance of Fire Fighting at Plant 1. The period for this agreement is 15 years, commencing from the effective date as specified in the agreement to December 2034, with the service charge stipulated in the agreement.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Rental Agreement

The Group has Land Lease Agreements with parent company, for the period of 30 years, commencing from the effective date as specified in each agreement and expiring in July 2036 with rental rate as stipulated in the agreements. The agreements can be extendable for another 20 years by providing not less than 1 year prior written notice to the lessor.

The Company has Office Rental and Service agreements with 2 related companies. The agreements are for the period of 3 years and will expire in September 2022 and August 2023 with rental and service rate and conditions as stipulated in the agreements.

Borrowing and Lending Agreements

The Company has an uncommitted and unsecured short-term borrowing and lending agreement with a subsidiary with the borrowing and lending credit facility of Baht 500 million and Baht 200 million, respectively. The agreement is for the period of 3 years and will expire in December 2023. This facility bears interest based on market rate referenced to BIBOR or LIBOR plus margin.

24. BASIC EARNINGS PER SHARE

The calculations of basic earnings per share for the years ended December 31, 2021 and 2020 were based on the profit for the period attributable to ordinary shareholders of the Company and the number of weighted average number of ordinary shares outstanding during the years.

	Consolidated financial statements		Separate financial statements	
	2021	2020	2021	2020
Profit attributable to ordinary shareholders of the Company (Basic) (million Baht)	330	560	225	355
Weighted average number of ordinary shares outstanding (million shares)	1,024	1,024	1,024	1,024
Basic earnings per share (Baht)	0.32	0.55	0.22	0.35

25. FINANCIAL INFORMATION BY SEGMENT

The Group has significant business segments which offer different products and services, and are managed separately. For each of the business segments, the chief operating decision maker (CODM) reviews internal management reports on at least a quarterly basis. The operations in each of the Group's reportable segments have 2 reportable segments as described below.

Segment 1	Methyl ester
Segment 2	Fatty alcohols
Other	Other segment

Other operations in 2021 and 2020, none of these segments meets the quantitative thresholds for determining additional reportable segments.

Performance information of each reportable segment is measured based on segment profit (loss) before interest expense, tax, depreciation and amortisation which as included in the internal management reports that are reviewed by the Group's CODM. Management believes that using profit (loss) before interest expense, tax, depreciation and amortisation to measure performance is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Information about reporting segments for the year ended December 31, 2021

	Unit : Million Baht			
	Methyl ester	Fatty alcohols	Other	Total
External revenues				
- At a point in time	15,308	5,615	-	20,923
Total segment revenues	15,308	5,615	-	20,923
Cost of sales	(14,151)	(4,558)	-	(18,709)
Selling and distribution expenses and administrative expenses	(644)	(554)	(1)	(1,199)
Profit (loss) before interest expense, income tax, depreciation amortisation and others	541	541	(1)	1,081
Interest income	3	3	-	6
Finance costs	(38)	(11)	-	(49)
Depreciation and amortisation	(388)	(320)	-	(708)
Share of profit (loss) of investments in an associate and joint ventures	-	136	(49)	87
Others	7	(3)	-	4
Profit (loss) before tax	125	346	(50)	421
Net profit (loss) for reportable segment	99	281	(50)	330

Information about reporting segments for the year ended December 31, 2020

	Unit : Million Baht			
	Methyl ester	Fatty alcohols	Other	Total
External revenues				
- At a point in time	14,278	3,925	-	18,203
Total segment revenues	14,278	3,925	-	18,203
Cost of sales	(12,799)	(3,418)	-	(16,217)
Selling and distribution expenses and administrative expenses	(512)	(275)	(1)	(788)
Profit (loss) before interest expense, income tax, depreciation amortisation and others	1,007	231	(1)	1,237
Interest income	7	12	-	19
Finance costs	(47)	(22)	-	(69)
Depreciation and amortisation	(361)	(322)	-	(683)
Share of profit (loss) of investments in an associate and joint ventures	-	67	(5)	62
Allowance for impairment investment	-	(9)	-	(9)
Others	1	17	-	18
Profit (loss) before tax	607	(26)	(6)	575
Net profit (loss) for reportable segment	614	(48)	(6)	560

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Methyl ester	Fatty alcohols	Other	Unit : Million Baht Elimina- tion	Total
As at December 31, 2021					
Investments in associate and joint ventures	-	648	1,233	-	1,881
Segment assets	6,509	5,734	1,240	34	13,517
Change in non-current assets	(279)	(132)	216	-	(195)
Segment liabilities	2,766	780	-	-	3,546
As at December 31, 2020					
Investments in associate and joint ventures	-	602	1,021	-	1,623
Segment assets	6,763	5,421	1,021	34	13,239
Change in non-current assets	486	(97)	518	-	907
Segment liabilities	2,262	984	-	-	3,246

Geographical segments

In presenting information on the basis of geographical segments, segment sales and service revenues are based on the geographical location of customers. Segment non-current assets (exclude derivatives and deferred tax) are based on the geographical location of the assets.

Geographical information

	Unit : Million Baht Revenues	
	2021	2020
Thailand	16,955	15,558
The People's Republic of China	1,410	681
India	848	441
Korea	241	222
Other countries	1,469	1,301
Total	20,923	18,203

The Group is managed and operates principally in Thailand and no assets located in foreign countries.

Major customers

The Group's sales and service revenues for the year ended December 31, 2021 mainly comprise of revenue from a customer of Methyl ester segment represents Baht 4,144 million (2020: amounting to Baht 6,465 million).

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

26. SELLING AND DISTRIBUTION EXPENSES

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Distribution expense	321	334	126	197
Promotional expense	17	13	-	2
Total	338	347	126	199

27. ADMINISTRATIVE EXPENSES

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Personnel expense	204	157	204	157
Secondment fee	43	43	43	43
Share service fees	39	38	31	32
Depreciation and amortisation	20	19	20	19
Professional and consultancy fee	51	33	50	33
Others	99	191	95	168
Total	456	481	443	452

28. EXPENSES BY NATURE

The statements of income include an analysis of expenses by function. Expenses by nature disclosed in accordance with the requirements of various TFRS are as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Changes in inventories of finished goods and work in progress	(70)	(136)	(53)	(44)
Raw materials and consumables used	18,023	15,644	17,843	15,583
Depreciation and amortisation	708	683	662	633
Employee benefit expenses	455	372	455	372
Distribution expenses	300	312	114	186
Others	757	813	676	749
Total cost of sales of goods, selling and distribution expenses and administrative expenses	20,173	17,688	19,697	17,479

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

29. FINANCE COSTS

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
<i>Interest expense:</i>				
Bank loans	29	45	29	45
Lease liabilities	17	22	16	21
Total interest expense	46	67	45	66
Other finance costs	4	2	4	2
Total	50	69	49	68

30. PROMOTIONAL PRIVILEGES

By virtue of the provisions of the Industrial Investment Promotion Act of B.E. 2520, the Company has been granted privileges by the Board of Investment relating to production and distribution of Methyl ester, Fatty alcohols, Glycerin and Potassium sulfate. The privileges granted include:

- Exemption from payment of import duty and tax on machinery approved by the Board of Investment;
- Exemption from payment of income tax for net income of certain operations which total amount is not over than investment excluded land and working capital for a period of eight years from the date on which the income is first derived from such operations and;
- A 50% reduction in the normal income tax rate on the net profit derived from certain operations for a period of five years, commencing from the expiry date in (b) above.

As promoted companies, the Company must comply with certain terms and conditions prescribed in the promotional certificates.

Summary of revenues from promoted and non-promoted businesses in the separate financial statements:

	Unit : Million Baht Separate financial statements					
	2021			2020		
	Promoted Businesses	Non- promoted businesses	Total	Promoted businesses	Non- promoted businesses	Total
Export sales	49	293	342	64	272	336
Local sales	6,617	13,188	19,805	5,592	11,876	17,468
Total revenue	6,666	13,481	20,147	5,656	12,148	17,804

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

31. FINANCIAL INSTRUMENTS

Financial risk management policies

The Group is exposed to normal business risks from changes in market interest rates and currency exchange rates and from non-performance of contractual obligations by counterparties. The Group does not hold or issue derivatives for speculative or trading purposes.

Risk management is integral to the whole business of the Group. The management continually monitors the Group's risk management process to ensure that an appropriate balance between risk and control is achieved.

Capital management

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor, partners and other stakeholders. In addition, the Board monitors the return on capital, and the level of dividends to ensure business sustainability.

Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's operations and its cash flows because the Group's loan interest rates for their operations. The Group has managed this risk to ensure the appropriateness to the business operation.

The interest rates of interest-bearing liabilities as at December 31, 2021 and 2020 and the periods in which those liabilities mature or re-price were disclosed in Note 15.

Interest rate sensitivity analysis

The sensitivity analyses below have been determined based on the exposure to interest rates for financial liabilities at the reporting date. For floating rate liabilities, the analysis is prepared assuming the amount of liability outstanding at the reporting date was outstanding for the whole year and using an increase or decrease rate by considering the reasonably possible change in interest rates.

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	Increase	Decrease	Increase	Decrease
As at December 31, 2021				
Interest rates change by 1%				
Finance costs	5	(2)	5	(2)
As at December 31, 2020				
Interest rates change by 1%				
Finance costs	17	(5)	17	(5)

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Foreign currency risk

The Group is exposed to foreign currency risk relating to purchases and sales which are denominated in foreign currencies. The Group primarily utilizes forward exchange contracts to hedge such financial assets and liabilities denominated in foreign currencies. The forward exchange contracts entered into at the reporting date also relate to anticipated purchases and sales, denominated in foreign currencies, for the subsequent period.

As at December 31, the Group and the Company were exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2021	2020	2021	2020
USD				
Cash and cash equivalents	355	181	62	43
Trade accounts receivables	525	233	15	5
Other receivables	29	-	29	-
Trade accounts payables	(8)	(96)	(8)	(96)
Other payables	(7)	(4)	(1)	(1)
Payable to contractor	(9)	(13)	(9)	(13)
Gross statement of financial position exposure	885	301	88	(62)
Currency forwards	(1,084)	(136)	(30)	-
Euro				
Trade accounts payables	-	(15)	-	(15)
Other payables	(1)	(1)	-	-
Payable to contractor	(2)	(19)	(2)	(20)
Gross statement of financial position exposure	(3)	(35)	(2)	(35)
Currency forwards	-	2	-	2

As at December 31, 2021, the Company had sold forward contracts of USD 32 million equivalent to Baht 1,084 million (2020: USD 4.50 million equivalent to Baht 136.07 million and EUR 0.05 million equivalent to Baht 1.81 million). However, the Group does not use hedge accounting for such financial instruments.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Foreign currency sensitivity analysis

The following table details the Group's sensitivity to an increase and decrease in THB currency against USD currency. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and foreign exchange forward contracts applied cash flow hedges accounting for USD currency at the reporting date and using an increase or decrease rate by considering the reasonably possible change in foreign exchange rates.

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	Strengthens	Weakens	Strengthens	Weakens
As at December 31, 2021				
Exchange rate change by 10%				
Net gain (loss) on foreign exchange rate	20	(20)	(6)	6
As at December 31, 2020				
Exchange rate change by 10%				
Net gain (loss) on foreign exchange rate	(17)	7	6	(6)

The Group performs foreign currency risk management on assets and liabilities held in USD. The Group has net liabilities under USD currency. The Group manages net USD liabilities by naturally hedged USD portion of net profit to minimise the impact from fluctuations in foreign currency to the Group's performance.

Credit risk

Credit risk is risk of failure from a customer or a counterparty to settle its obligations to the Group as and when they fall due.

Management has a policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. At the reporting date, there were no significant credit risk and the concentration of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, the majority of the customers are on the long-term contracted commitment and parts of them are the Company's shareholders which the company has consistently collected from them. For the customers who do not have the long-term contracted commitments, the Group monitors the risk on an ongoing basis and would do the business only with the credible customers by limiting the credit lines and requesting the guarantee on some cases. For the export, the credit of counterparty will be considered. The Group will demand a payment on a case to case basis and also has commercial credit insurance. Management anticipates no material losses from its debt collection.

- For trade receivables, the Group apply simplified approach in accordance with TFRS 9 to measure lifetime expected credit loss. The Group consider expected credit loss by using trade receivables provision table which estimate historical credit loss. The overdue circumstance adjusted to reflect current situation of receivables and the future economic conditions were taken into account. Therefore, credit risk of these financial assets is presented by consideration of overdue status in provision by aging table set out in note 6.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

- The Group has deposits and investments in financial assets with financial institutions and companies which are rated at investment grade. The Group constantly assesses the financial status and stability of those financial institutions and companies to manage risks from deposit and investing.

Liquidity risk

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

The following tables detail the Group's remaining contractual maturity for its non-derivative financial liabilities with agreed repayment periods. The tables have been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay.

Unit : Million Baht					
Consolidated financial statements					
Notes	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2021					
Trade payables	17	1,226	-	-	1,226
Other payables		314	-	-	314
Payables to contractors		61	-	-	61
Long-term borrowings from financial institutions	15	764	-	-	764
Lease liabilities	16	120	47	67	502

Unit : Million Baht					
Consolidated financial statements					
Notes	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2020					
Trade payables	17	813	-	-	813
Other payables		232	-	-	232
Payables to contractors		111	-	-	111
Long-term borrowings from financial institutions	15	566	764	-	1,330
Lease liabilities	16	133	99	99	616

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Unit : Million Baht						
Separate financial statements						
	Notes	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2021						
Trade payables	17	1,216	-	-	-	1,216
Other payables		258	-	-	-	258
Payables to contractors		61	-	-	-	61
Long-term borrowings from financial institutions	15	764	-	-	-	764
Lease liabilities	16	112	40	67	264	483

Unit : Million Baht						
Separate financial statements						
	Notes	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2020						
Trade payables	17	802	-	-	-	802
Other payables		197	-	-	-	197
Payables to contractors		110	-	-	-	110
Long-term borrowings from financial institutions	15	566	764	-	-	1,330
Lease liabilities	16	124	89	87	282	582

The following table details the Group's liquidity analysis for its derivative financial instruments based on contractual maturities. The table has been drawn up based on the undiscounted net cash inflows and outflows on derivative instruments.

Unit : Million Baht					
Consolidated financial statements					
	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2021					
Cash inflows from Foreign exchange forward contracts	1,075	-	-	-	1,075
Cash outflows from Foreign exchange forward contracts	(1,084)	-	-	-	(1,084)

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

	Consolidated financial statements				Unit : Million Baht
	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2020					
Cash inflows from Foreign exchange forward contracts	140	-	-	-	140
Cash outflows from Foreign exchange forward contracts	(137)	-	-	-	(137)

	Separate financial statements				Unit : Million Baht
	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2021					
Cash inflows from Foreign exchange forward contracts	30	-	-	-	30
Cash outflows from Foreign exchange forward contracts	(30)	-	-	-	(30)

	Separate financial statements				Unit : Million Baht
	Less than 1 year	1 - 2 years	2 - 5 years	Over 5 years	Total
As at December 31, 2020					
Cash inflows from Foreign exchange forward contracts	2	-	-	-	2
Cash outflows from Foreign exchange forward contracts	(2)	-	-	-	(2)

Fair values of financial assets and liabilities

Carrying amount of cash and cash equivalents, current investments in financial assets, trade receivables, other receivables, value-added tax receivable, trade payables, other payables and payables to contractors measured at amortised cost which are reasonable approximation of fair value due to the short maturity period.

Carrying amounts of long-term borrowings from financial institutions with floating interest rate and lease liabilities measured at amortised cost which are approximate of fair value.

As at December 31, 2021 and December 31, 2020, the Group primarily utilises forward exchange contracts. The Group recognised financial assets and liabilities denominated in the consolidated and the separate statements of financial position fair value level 2.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Measurement of fair values

Level 2 fair values for simple over-the-counter derivatives are based on broker quotes. Those quotes are tested for reasonableness by discounting expected future cash flows using market interest rate for a similar instrument at the measurement date. Fair values reflect the credit risk of the instrument and include adjustments to take account of the credit risk of the Company and counterparty as appropriate.

32. COMMITMENTS, PROVISIONS AND CONTINGENT LIABILITIES WITH NON-RELATED PARTIES

32.1 Commitments

As at December 31, 2021 and 2020, the Company and its subsidiaries had commitments with non-related parties as follows:

	Consolidated financial statements		Unit : Million Baht Separate financial statements	
	2021	2020	2021	2020
Capital commitments				
Contracted but not provided for plant, machinery and equipment	93	22	84	22
Total	93	22	84	22
Other commitments				
Unused letters of credits	-	1	-	1
Bank guarantees	24	53	24	53
Other agreements	30	24	22	19
Total	54	78	46	73

Utilities and Other Services Agreements with minimum purchase quantity

The Company has 1 Utility and other services agreements which have minimum purchase quantity with a party. This agreement is for the periods from November 1, 2007 to October 31, 2022. The minimum purchase quantity, the purchasing price of products and the renewal of the contract will be subject as specified in the agreement.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

32.2 Provisions and contingent Liabilities

Expenses from raw materials derogation and relevant lawsuit

As the raw materials used in the production process are the volatile commodity materials, the Company has policy to manage inventory to be at an appropriate level in order to mitigate the impacts from raw material price volatility. During second quarter of 2018, the Company found that the quantity of raw materials recorded in the system was higher than actual quantity stored at the suppliers' facilities. In addition, this also includes the case that the Company delivered the raw materials to the supplier for refining, however, the supplier neither returned back the refining products according to the contract nor the raw materials to the Company.

The Company conducted an in-depth investigation and found the misconduct among certain suppliers and some employees in the relevant functions of the Company, in which certain suppliers are related. The Company had already taken legal actions against involved parties (both external and internal) as well as the disciplinary actions against every involved employee.

In consequence, the Company recognized expenses from raw materials derogation in the consolidated and separate statements of profit or loss for the year ended December 31, 2018 amounting to Baht 2,004 million. However, the Company is legally entitled to claim from those involved.

In 2019, the suppliers delivered the pending raw materials of Baht 16 million to the Company as per the settlement agreements. In addition, such suppliers registered a mortgage on land to the Company with fair value of Baht 217 million. Consequently, the Company reviewed the provision for expenses from raw materials derogation and reversed such provision amounting to Baht 233 million.

Moreover, on March 23, 2021 the Securities and Exchange Commission ("SEC") files a criminal complaint to the Economic Crime Suppression Division of the Royal Thai Police against 11 offenders, namely a former director and a former executive of the Company and nine suppliers, for acting with dishonest intent regarding the Company's raw material management to seek unlawful benefits from the Company, which resulted in losses incurred to the Company. In any case, filing a criminal complaint is merely the commencement of the criminal procedure whereby the inquiry official will perform an investigation before recommending case to the public attorney who has authority for prosecution. The power to adjudicate whether any person is guilty or not is, however, vested on the court of justice.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Relevant lawsuits arising from raw materials derogation

On August 18, 2017, Anatta Green Company Limited (“Anatta”), later changed its name to Thai Bio Innovation Company Limited, the Company and Asia Capital Group Public Company Limited (“ACAP”) entered a tripartite MOU where Anatta agreed to responsible for supplying crude palm oil to the Company and ACAP agreed to provide financial support to Anatta for payment to its suppliers. On the same day, Anatta entered into a loan agreement with ACAP and transferred its right to receive payment for raw materials to ACAP, along with notifying the transfer of such claim to the Company and the Company has given consent to such transfer.

During the 2nd quarter of 2018, the Company disclosed the material event of inventory issue to the Stock Exchange of Thailand. At the same time, ACAP has demanded that the Company pay for the raw materials purchased from Anatta under the transfer of claim, a total of 11 items. The Company considered the documents received and clarified to ACAP that such documents were not in the Company's system and did not find evidence of the delivery of the raw materials from Anatta as specified.

Subsequently, on August 20, 2018, ACAP filed a lawsuit in the Civil Court, claiming Anatta and the Company jointly to pay damages totalling 324.65 million Baht and 15% interest per annum. The Company's legal advisor had considered the relevant facts and evidences and provided opinion that the Company is not liable for allegation. Therefore, the Company appointed a lawyer and submitted a statement to defend.

The Court of First Instance issued its judgement on June 10, 2020, requiring the Company to compensate ACAP in the amount of 289.56 million Baht plus interest of 15% per annum from the date of default until the payment is complete. If the Company does not pay the said debt in full, Anatta shall pay the remaining balance. The Company filed a legal appeal on November 25, 2020.

On January 20, 2022, the Appeal Court upheld the judgment of the Court of First Instance. However, the Company did not agree with the Appeal Court's decision and will submit a request for a petition to the Supreme Court. The Company believes that its defenses in facts, laws, and the exercising rights in court in good faith, in the end, the Supreme Court will consider evidences in the case and adjudicate the Company not to be liable for payment of debts according to the judgments of the Court of First Instance and the Court of Appeal because there is clear evidence that there is no such sales and purchase transaction and no delivery of the raw materials to the Company. The Company also believes that evidences from Department of Internal Trade, Ministry of Commerce and third party attested in the trial of the Court of First Instance, including evidences that the Company has submitted additionally in the Court of Appeal as important evidences, directly related to the issue of the case, and is new evidence that the inquiry official in criminal cases has gathered and prepared from the investigation after the Court of First Instance decided the case, are solid evidences that will make the Supreme Court hear that the transaction documents prepared by Anatta, assisted by former employees of the Company, and used by ACAP as evidences for filing against the Company, are dishonest and unlawful acts. This is consistent with the fact that the SEC has found fraudulent acts related to inventory issue and unlawful exploitation which caused the Company to be damaged. It is considered as an offense under the Securities and Exchange Act B.E. 2535. The inquiry official has made recommendation to pursue prosecution in some criminal cases and submitted the investigation documents to the public prosecutor already, therefore, the Company believes that the Company has no debts to be liable to ACAP under the contracts arising from dishonest and unlawful acts. However, the Company has considered to record a reserve for damages from the said case in the amount of Baht 444 million.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

Civil lawsuit from a former supplier of the Company

In addition, a former supplier of the Company, filed lawsuit against the Company in 3 cases as follows:

- 1) On September 8, 2020, the Company received a summons and a copy of a Civil Court plaint, in which such company filed a civil lawsuit against the Company regarding the breach of agreements concerning the reclaiming of purchase price on raw materials and claiming damages in the amount of Baht 470.03 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 595.10 million starting from the date of the lawsuit until the date of completion of payment. The witness hearing will be held in June 2022.
- 2) On November 8, 2020, the Company received a summons and a copy of a Civil Court plaint, in which such company filed a civil lawsuit against the Company as the first defendant and two other companies as joint defendants regarding the breach of agreements, agent and claiming damages in the amount of Baht 92.29 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 109.42 million starting from the date of the lawsuit until the date of completion of payment. The witness hearing will be held in June 2022 and July 2022.
- 3) On December 25, 2020, the Company received a summons and a copy of a Civil Court plaint, in which such company filed a civil lawsuit against a supplier and the Company as the second defendant regarding the breach of agreements concerning the reclaiming of purchase price on raw materials and claiming damages in the amount of Baht 305.26 million with interest at the rate of 7.5% per annum on the principal, totaling Baht 364.71 million starting from the date of the lawsuit until the date of completion of payment. The witness hearing will be held in July 2022 and August 2022.

The Company's legal advisor has considered relevant facts and evidence in all three cases and provided the opinion that the Company has not breached the agreements and has no obligation to pay as claimed. Therefore, the Company has appointed a lawyer and filed testimony with defense in accordance with the applicable law. In addition, the Company is in the process of filing a counterclaim amounting to Baht 551 million. Therefore, the Company has not recorded any provision against any losses from such case.

Other lawsuits

1. Civil plaint regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2020

On June 5, 2020, the Company received a summons and a copy of a civil plaint, in which a company filed a lawsuit against the Company with the Civil Court regarding breach of agreements, tort and claiming damages in the amount of Baht 22.94 million with interest at the rate of 7.5% per annum. The Company and legal advisor of the Company considered relevant facts and evidence and provided the opinion that the Company has no obligation to pay such claims including the plaintiff's claims are precluded by prescription. Therefore, the Company appointed a lawyer and submitted a file testimony with its defense including a counterclaim regarding undue enrichment, amounting to Baht 8.29 million, which the witness hearing will be held during April 19 - 22, 2022. Therefore, the Company has not recorded any provision against any losses from such case.

Notes to the Financial Statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2021

2. Civil plaintiff regarding tort, breach of agreements, breach of promise and claiming damages occurred in year 2021

On June 28, 2021, the Company received a summons and a copy of the civil plaintiff in which a company filed a lawsuit against the Company in the Civil Court regarding tort, breach of agreements, breach of promise and claiming damages in the total amount of Baht 449.77 million, together with interest at the rate of 7.5% per annum. The Company and legal advisor of the Company considered relevant facts and evidences and provided the opinion that the issue of this lawsuit is the same as the case that the Company had filed against such company and the Company has not committed a wrongful act and has not breached the agreements against the plaintiff as claimed. The Company appointed a lawyer and submitted a file testimony with its defense. The witness hearing will be held during March 1 - 4, 2022. Therefore, the Company has not recorded any provision against any losses from such case.

33. EVENTS AFTER THE REPORTING PERIOD

- 33.1 On January 13, 2022, the Company entered into a feed stock sourcing and Crude Palm Kernel Oil purchase agreement which have minimum supply quantity and purchase quantity with a domestic company. This agreement is for the period of 5 years, commencing from February 1, 2022 to January 31, 2027. The minimum supply quantity and purchase quantity, the selling and purchasing price of products, conditions and the renewal of the contract will be subject as specified in the agreement.
- 33.2 At the Board of Directors' meeting held on February 11, 2022, the Board approved to submit for legal reserve and dividend payment approval for the year 2021 to the Annual General Meeting of the Shareholders at the rate of Baht 0.35 per share amounting to Baht 358.28 million to the shareholders entitled to receive dividends. This dividend is subject to the approval of the Shareholders at the Annual General Meeting to be held on April 1, 2022.

34. APPROVAL OF THE FINANCIAL STATEMENTS

These financial statements have been approved for issuance by the Board of Directors of the Company on February 11, 2022.

APPENDIX 1

Details of the Board of Directors, Management, Controllers,
assigned Top Executives of the finance and accounting function,
assigned personnel directly in charge of account preparation
and Company Secretary

The Board of Directors

(as of 16 February 2022)

Mr. Kongkrapan Intarajang
Chairman

Age: 54

Date of Appointment:

6 November 2019

21 October 2020 (Appointed as Chairman of the Board of Directors)

Education/Training:

- Doctor of Philosophy (Ph.D.) in Chemical Engineering, University of Houston, U.S.A.
- Bachelor of Engineering (Chemical Engineering) (Second-class Honors), Chulalongkorn University
- Executive Development Training Program, The Royal Thai Police
- Capital Market Leader Program (Class 30), Capital Market Academy
- Leadership Development Program (LDP 3) Class 4, PTT Leadership and Learning Institute
- The Executive Program in Energy Literacy for a Sustainable Future, Class 14, Thailand Energy Academy (TEA)
- Diploma, National Defence College, The National Defence Course Class 60, National Defence College of Thailand (NDC)
- Breakthrough Program for Senior Executives, IMD Business School

Director Training:

- Role of the Chairman Program (RCP) Class 21/2009, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 119/2009, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 4

- Chairman, Global Green Chemicals Public Company Limited
- Senior Executive Vice President reporting to Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited
- Director and Secretary to the Board of Directors, Director to the Risk Management Committee and Chief Executive Officer & President, PTT Global Chemical Public Company Limited
- Director and Member of the Risk Management Committee, Global Power Synergy Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 3

- Chairperson of Advisory Committee in relation to its investment in Allnex, PTTGC International (Netherlands) B.V
- Chairman, PTTGC International (Netherlands) B.V
- Chairman, PTTGC International Private Limited

Positions in Other Company/Organization/Insitution / Remarkable Positions: 11

- Director and Member of the Nomination Committee and Remunerating Committee,
- Thai Institute of Directors Association (IOD)
- Director, Association of Capital Market Academy Alumni
- Advisor of the Member Relations, the Federation of Thai Industries
- Director, the Federation of Thai Industries
- Vice President (Supporting), Thailand Swimming Association
- Member of Vidyasirimedhi Institute Council, Vidyasirimedhi Institute of Science and Technology (VISTEC)
- Member of Trustee, The Petroleum Institute of Thailand (PTIT)

- Council of Trustee, Thailand Business Council of Sustainable Development (TBCSD)
- Executive Director, Thailand Energy Academy
- Director, Kamnoetvidya Science Academy (KVIS)
- Co-Chairman, France-Thailand Business Forum

Work Experience (in the Last 5 Years):

1 Sep 2020 – 15 Feb 2022	Chairman, GC International Corporation
1 Jul 2015 – 15 Feb 2022	Chairman, PTTGC America Corporation
1 Jul 2015 – 15 Feb 2022	Chairman, PTTGC America LLC
24 Aug 2020 – 25 Mar 2021	Committee Member of Sustainable Energy Foundation
6 Nov 2019 – 20 Oct 2020	Director, Global Green Chemicals Public Company Limited
Nov 2019 – Sep 2020	Director, Power of Innovation Foundation
Oct 2019 – Sep 2020	Director, Power of Learning Foundation
31 Oct 2019 – 31 Aug 2020	Director, GC International Corporation
9 Sep 2008 – 31 Aug 2020	Director, PTTGC International Private Limited
May 2017 – Jan 2020	Director, Thai Tank Terminal Limited
Apr 2017 – 30 Sep 2019	Chief Operating Officer - Upstream Petrochemical Business, PTT Global Chemical Public Company Limited
Jul 2015 – Sep 2019	Director and President & CEO, PTTGC America Corporation
Apr 2015 – Sep 2019	Director, PTTGC Innovation America Corporation
Feb 2015 – Sep 2019	Director, PTTGC International (Netherlands) B.V.
Jan 2015 – Sep 2019	Director, Vencorex Holding
Nov 2008 – Sep 2019	Director, Emery Oleochemicals (M) Sdn. Bhd.
Nov 2008 – Sep 2019	Director, Emery Specialty Chemicals Sdn. Bhd
Sep 2014 – Dec 2018	Director and Vice President, GC International Corporation (formerly, PTTGC International (USA) Inc.)
Sep 2014 – Dec 2018	Director, NatureWorks LLC
Oct 2014 – Mar 2017	Executive Vice President - International Business Operations, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Prof. Dr. Kumchai Jongjakapun

Age: 61

Chairman of Independent Directors / Chairman of Audit Committee**Date of Appointment:**

17 February 2016

15 March 2016 (1st re-elected)2 April 2019 (2nd re-elected)**Education/Training:**

- Ph.D. King's College London (KCL), University of London, United Kingdom
- LL.M. in International Business Law (with Merit), University College London (UCL), University of London, United Kingdom
- LL.B., 2nd Class Honors, Thammasat University
- B.A. (Political Science), Ramkhamheang University
- Barrister-at-law, The Thai Bar under the Royal Patronage
- Diploma, National Defence College (The Joint State-Private Sector Class 20, The National Defence Course Class 50), National Defence College of Thailand (NDC)
- Juridical Executives Program (National Juridical Academy Class 15), Juridical Training Institute
- Capital Market Academy Leadership Program (Class 9), Capital Market Academy
- Corporate Governance Program for Directors and Executive of State Enterprises and Public Organizations (Class 12), King Prajadhipok's Institute, State Enterprise Policy Office and Office of the Public Sector Development Commission

Director Training:

- Role of the Chairman Program (RCP) Class 34/2014, Thai Institute of Directors Association (IOD)
- Audit Committee Program (ACP) Class 38/2012, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 128/2010, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Chairman of Independent Directors and Chairman of Audit Committee, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Positions in Other Company/Organization/Insitution / Remarkable Positions: 3**

- Chairman, Pearl S. Buck Foundation (Thailand)
- Legal Sub-committee, Electronic Transactions Development Agency (ETDA)
- Member of the Committee of Council of State, Office of the Council of State

Work Experience (in the Last 5 Years):

2014 – 2015 Legal Expert Director, Securities and Exchange Commission

2011 – 2014 Chairman, Audit Committee, Expressway Authority of Thailand

Shareholding: 15,000 shares held by Spouse (accounting for 0.0014653% of the total shares as of 31 December 2021)**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries:** None

Mrs. Kannika Ngamsopee

Age: 65

Independent Director / Director to Audit Committee / Chairman of Risk Management Committee**Date of Appointment:**

17 February 2016

21 March 2017 (1st re-elected)5 June 2020 (2nd re-elected)**Education/Training:**

- MM. Sasin Graduate Institute of Business Administration of Chulalongkorn University
- M.Acc. (Accounting), Thammasat University
- LL.B. (Law), Thammasat University
- BBA (Accounting), Second-class Honors, Thammasat University
- Capital Market Academy Leadership Program (Class 3), Capital Market Academy
- Diploma, National Defence College, The National Defence Course (Class 52), National Defence College of Thailand (NDC)
- Administration of Public and Private Management Program (Class 1), Royal Thai Police
- Advanced Strategic Management, IMD, Swiss Confederation (2012)
- Certified Public Accountant Licence No. 3156
- Certificate of International Trade Law (Class 1), The Thai Bar Association under the Royal Patronage
- Certification Course in Good Governance for Medical Executives, Class 8, King Prajadhipok's Institute and The Medical Counsel of Thailand

Director Training:

- Director Certification Program (DCP) Class 21/2002, Thai Institute of Directors Association (IOD) and Refreshing Program 2019
- Risk Management Program for Corporate Leaders (RCL) Class 13/2018, Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP) Class 7/2019, Thai Institute of Directors Association (IOD)
- Advanced Audit Committee Program (AAP) Class 36/2020, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 5

- Independent Director, Director to Audit Committee and Chairman of Risk Management Committee, Global Green Chemicals Public Company Limited
- Independent Director, Chairman to Audit Committee, Chairman of the Nomination, Remuneration and Corporate Governance Committee and Director to Risk Management Committee, Scan Inter Public Company Limited
- Independent Director, Chairman to Audit Committee and Director to Risk Management Committee, Thonburi Healthcare Group Public Company Limited
- Independent Director and Director to Audit Committee, Siam Makro Public Company Limited
- Director, Bangkok Aviation Fuel Services Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 2

- Independent Director, Thonburi Wellbeing Company Limited (An affiliate of Thonburi Healthcare Group)
- Independent Director, Thonburi Canabiz Public Company Limited (An affiliate of Thonburi Healthcare Group)

Positions in Other Company/Organization/Insitution / Remarkable Positions: 6

- Honorary Director (Finance, Accounting and Budgeting, Auditing and Evaluation and Risk Management) and Chairman of Audit Committee, Digital Government Development Agency (Public Organization) (DGA)
- Member, Finance and Budget Sub-Committee, Equitable Education Fund
- Director, ARYU International Hospital, Republic of the Union of Myanmar
- Honorary Member, Financial Institutions Policy Committee, Bank of Thailand
- Sub-Committee Member, Audit and Assessment of Public Sector Administrative Work, Office of Public Sector Development Commission
- Member, Asset Management Committee, Vajiravudh College

Work Experience (in the Last 5 Years):

2016 – 2021	Director, Audit Committee, Social Security Office
2015 – 2021	Member, Finance and Property Management Committee, Chulabhorn Royal Academy
2019	Sub-Committee member, Audit and Corporate Governance, Thai Arbitration Institute
2017 – 2019	Independent Director, Bumrungruang Plaza Limited (an affiliate of Thonburi Healthcare Group)
2017	Independent Director, Director to Audit Committee and Director to Corporate Governance and CSR Committee, Thai Credit Guarantee Corporation
2016 – 2017	Advisor, Internal Control Improvement, Siam Commercial Bank Public Company Limited
2015 – 2016	Director and Director to Audit Committee, Sukhumvit Asset Management Company Limited
2015 – 2016	First Executive Vice President, Head of Audit Group, Siam Commercial Bank Public Company Limited

Shareholding: 20,000 shares held by Spouse (accounting for 0.0019538% of the total shares as of 31 December 2021)

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

ACM Songtam Chokkanapitag **Age: 67**
Independent Director / Chairman of Nomination and Remuneration Committee

Date of Appointment:

17 February 2016

21 March 2017 (1st re-elected)

5 June 2020 (2nd re-elected)

Education/Training:

- Air Command and Staff College (Class 35), Air War College
- Royal Thai Air Force Academy (Class 21)
- Armed Forces Academies Preparatory School (Class 14)
- Diploma, National Defence College, The National Defence Course Class 50, National Defence College of Thailand (NDC)

Director Training:

- Director Certification Program (DCP) Class 227/2016, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director and Chairman of Nomination and Remuneration Committee, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Positions in Other Company/Organization/Insitution / Remarkable Positions: 1

- Member, the National Legislative Assembly

Work Experience (in the Last 5 Years):

2013 – 2015 Deputy Permanent Secretary for Defence, Office of the Permanent Secretary of Defence

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Police General Suchart Theerasawat

Age: 60

Independent Director / Chairman of Corporate Governance and Sustainable Development Committee**Date of Appointment:**

23 December 2020

2 April 2021 (1st re-elected)**Education/Training:**

- Bachelor's degree, Police Cadet Academy (Batch 36)
- Master's degree of Sociology in Criminology and Justice, Mahidol University
- Course of Police Superintendent (Batch 29)
- Course of Senior Police Administration (Batch 25), Department of Police Development
- Diploma, National Defence College, The National Defence Course Class 59, National Defence College of Thailand (NDC)
- Course of LA Sheriff SWAT, U.S.A.
- Course of Counterattack Technique and Strategy

Director Training:

- Director Accreditation Program (DAP) Class 184/2021, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company - The Stock Exchange of Thailand: 1

- Independent Director and Chairman of Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company - The Stock Exchange of Thailand: None**Positions in Other Company/Organization/Insitution / Remarkable Positions: 6**

- Director of Deforestation, Natural Resources Prevention and Suppression Centre, Royal Thai Police
- Director of Narcotics Prevention and Suppression Centre, Royal Thai Police
- Director of Centre for Children, Women, Family Protection and Anti-Trafficking in Persons, Royal Thai Police
- Director of Royal Thai Police Operation Centre
- Deputy Director of Transnational Crimes Centre, Royal Thai Police
- Deputy Director of Gunman and Influential Person Centre, Royal Thai Police

Work Experience (in the Last 5 Years):

Oct 2019 – Present	Deputy Commissioner General, Royal Thai Police
Oct 2017 – Sep 2019	Senior Inspector General, Royal Thai Police
Oct 2016 – Sep 2017	Advisor (Commissioned 10) (Security and Special Affairs), Royal Thai Police
Oct 2015 – Sep 2016	Assistant Commission General, Royal Thai Police

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Mr. Sarawut Benjakul **Age: 56**
Independent Director / Director to Audit Committee

Date of Appointment:

2 April 2021

Education/Training:

- Master of Laws (Commercial Law), University of Bristol, U.K.
- Master of Laws (International Legal Studies), American University, U.S.A.
- Master of Comparative Jurisprudence, Howard University, U.S.A.
- Barrister-at-Law, Institute of Legal Education, Thai Bar Association
- Bachelor of Laws (Honors), Ramkhamhaeng University
- Capital Market Leader Program (Class 5), Capital Market Academy

Director Training:

- Corporate Governance for Directors and Senior Executives of Regulators, State Enterprises and Public Organizations (Class 3), King Prajadhipok's Institute, State Enterprise Policy Office and Office of the Public Sector Development Commission
- Director Certification Program (DCP) Class 108/2008, Thai Institute of Directors Association (IOD)
- Risk Management Program for Corporate Leaders (RCL) Class 8/2017, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Independent Director and Director to Audit Committee, Global Green Chemicals Public Company Limited
- Chairman and Independent Director, Airports of Thailand Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 1

- Board of Directors, The Metropolitan Electricity Authority

Positions in Other Company/Organization/Insitution / Remarkable Positions: 12

- Special Advisor to the Office of the Judiciary
- Member of the Board and Registrar, Thai Bar under the Royal Patronage
- Chairman, Mahasarakham University Council
- Honorary Member, Prince of Songkla University Council
- Honorary Member, Council of King Mongkut's Institute of Technology Ladkrabang
- Chairman of the Transaction Committee, the Anti-Money Laundering Office
- Expert Member, Securities and Exchange Commission
- Expert Member (Monetary and Banking), the Special Case Committee, Department of Special Investigation, Ministry of Justice
- Vice President of the Subcommittee on Appeal, the Office of Police Commission
- Committee of the Commission for Judicial Service
- Special Lecturer, The Faculty of Law, Thammasat University and Ramkhamhaeng University
- Chairman of Legal Sub-committee, Electronic Transactions Development Agency (ETDA)

Work Experience (in the Last 5 Years):

2017 – 2020 Secretary-General of the Office of the Judiciary
 2013 – 2016 Secretary-General of Institute of Legal Education of the Thai Bar
 2006 – 2017 Deputy Secretary-General, Office of the Judiciary

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jarun Wiwatjesadawut Age: 58
Independent Director / Director to Risk Management Committee

Date of Appointment:

2 April 2021

Education/Training:

- Bachelor of Political Science, Chulalongkorn University
- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives Class 13, King Prajadhipok's Institute
- Capital Market Leader Program Class 9, Capital Market Academy
- Senior Executive on Criminal Justice Administration Class 15, Judicial Training Institute
- Advanced Security Management Program Class 3, The Association of National Defence College
- Power of the Kingdom Class 1, Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 26, National Defence College of Thailand (NDC)
- Certificate Course in Good Governance for Medical Executives Class 3, King Prajadhipok's Institute and The Medical Council of Thailand
- The Executive Program in Energy Literacy for a Sustainable Future, Class 14, Thailand Energy Academy (TEA)

Director Training:

- Director Certification Program (DCP) Class 9/2004, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 98/2008, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company - The Stock Exchange of Thailand: 3

- Independent Director and Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- Director and Chief Executive Officer, J.R.W. Utility Public Company Limited
- Director and Chairman of Director of the Recruitment Committee, Sikarin Public Company Limited

Board member / Management in Non-Listed Company - The Stock Exchange of Thailand: None

Positions in Other Company/Organization/Insitution / Remarkable Positions: 3

- Member, Srinakarin Garden Foundation Under the patronage HRH Princess Srinagarindra
- Member, The Roster Directors Enterprises
- Chairman of The Committee for Promotion of Mahasarakham University Affairs and Member of Mahasarakham University Council

Work Experience (in the Last 5 Years):

- 2019 – 2021 Member of Social Security Fund, Social Security Office
- 2018 – 2020 Board of Directors, The Metropolitan Electricity Authority
- 1994 – 2020 Director, Sarnti Green Pack Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Suphit Suwagul

Age: 65

Independent Director / Director to Corporate Governance and Sustainable Development Committee**Date of Appointment:**

1 January 2018

2 April 2019 (1st re-elected)**Education/Training:**

- Master's Degree, Development Economics, National Institute of Development Administration
- B.Econ., Thammasat University

Director Training:

- Board Matters and Trends (BMT) Class 8/2019, Thai Institute of Directors Association (IOD)
- Ethical Leadership Program (ELP) Class 13/2018, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 177/2013, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director and Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Positions in Other Company/Organization/Insitution / Remarkable Positions: None****Work Experience (in the Last 5 Years):**

2010 – 2016	Chairman, Business Services Alliance Company Limited (BSA)
2013 – 2016	Director, PTT Green Energy Company Limited (PTTGE)
2010 – 2016	Director, Energy Complex Company Limited (EnCo)
2010 – 2016	Director, Sustainable Energy Foundation
2014 – 2016	Managing Director, Energy Complex Company Limited (EnCo)

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Maj.Gen. Titawat Satiantip

Age: 52

Independent Director / Director to Nomination and Remuneration Committee / Director to Corporate Governance and Sustainable Development Committee

Date of Appointment:

11 September 2019

2 April 2021 (1st re-elected)**Education/Training:**

- Master of Defense Studies, The University of New South Wales of Australian Defense Force Academy, Australia
- B.Sc. (Mechanical Engineering), Chulachomklao Royal Military Academy
- Command And General Staff College, Class 80
- Intelligence Analysis Course, the Federal Republic of Germany
- Advanced Security Cooperation (ASC) Course, Asia-Pacific Center for Security Studies (APCSS), U.S.A
- Asia-Pacific Program for Senior National Security Officers (APPSNO) Course, Singapore
- Executive CISO, Class 1, National Cyber Security Agency (NCSA)

Director Training:

- Director Certification Program (DCP) Class 285/2019, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Independent Director, Director to Nomination and Remuneration Committee and Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Positions in Other Company/Organization/Insitution / Remarkable Positions: 1**

- Director, Prime Minister Operation Center (PMOC)

Work Experience (in the Last 5 Years):

2019 – 2021 Senior Staff Office for Ministry of Defence

2016 – 2017 Director, Information Division, Directorate of Intelligence, Royal Thai Army

2015 – 2016 Director, Military Attaché Affairs Division, Directorate of Intelligence, Royal Thai Army

2012 – 2015 Military Attaché, Royal Thai Embassy, Kuala Lumpur, Malaysia

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Mr. Patiparn Sukorndhaman

Age: 60

Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee

(as of 31 December 2021)

Date of Appointment:

17 February 2016

21 March 2017 (1st re-elected)5 June 2020 (2nd re-elected)

(Resigned from Director of the Board of Directors effective on January 1, 2022)

Education/Training:

- Master of Business Administration (Finance), The American University, U.S.A.
- Bachelor of Arts in Political Science (Public Administration – Public Finance), (Second-Class Honors), Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 59 - 2016, National Defence College of Thailand (NDC)
- The Executives Program in the Energy Literacy for a Sustainable Future Class 7 - 2015, Thailand Energy Academy (TEA)
- Leadership Development Program (LDP 3) Class 3 - 2014, PTT Leadership and Learning Institute
- Breakthrough Program for Senior Executives, International Leading Business School (IMD) 2014, Switzerland
- PTT Executive Leadership Program, General Electric 2012, GE, U.S.A.
- Certification Program for Senior Management 5 (Ex-PSM 5 - 2009), Fiscal Policy Research Institute Foundation
- Graduated Diploma in Public Law and Management (PLM 8), King Prajadhipok's Institute

Director Training:

- Director Certification Program (DCP) Class 73/2006, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Director, Director to Nomination and Remuneration Committee and Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- President, PTT Global Chemical Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 6

- Chairman, GC Marketing Solution Company Limited
- Chairman, GC Polyols Company Limited
- Chairman, GC-M PTA Company Limited
- Chairman, Thai PET Resin Company Limited
- Chairman, HMC Polymers Company Limited
- Chairman, PTT Asahi Chemical Company Limited

Positions in Other Company/Organization/Insitution / Remarkable Positions: None**Work Experience (in the Last 5 Years):**

Jan 2016 – 21 Feb 2021	Chairman, Solution Creation Company Limited
Jun 2017 – Nov 2019	Chairman, GC Oxirane Company Limited
Jan 2016 – Sep 2019	Chairman, GC Glycol Company Limited
Jan 2012 – Sep 2019	Director, PTT Phenol Company Limited
Feb 2016 – May 2019	Chairman, GC Styrenics Company Limited

Jan 2016 – 30 Sep 2019	Chief Operation Officer, Downstream Petrochemical Business, PTT Global Chemical Public Company Limited
2015 – Jul 2017	Director and Director to Nomination and Remuneration Committee, Global Power Synergy Company Limited
Oct 2009 – Jan 2016	Director, Thai Fatty Alcohols Company Limited
Sep 2012 – 2015	Director, PTTGC International Private Limited
19 Oct 2011 – 31 Dec 2015	Executive Vice President, Finance & Accounting, PTT Global Chemical Public Company Limited

Shareholding: 23,000 shares (accounting for 0.0022468% of the total shares as of 31 December 2021)

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Varit Namwong

Age: 58

Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee**Date of Appointment:**

19 January 2022

Education/Training:

- Master of Business Administration, Business Administration (International Program), Ramkhamhaeng University
- Bachelor of Business Administration, Marketing, Assumption Business Administration College
- Diploma, National Defence College, The National Defence Course Class 61, National Defence College of Thailand (NDC), 2018
- The Executive Program in Energy Literacy for a Sustainable Future, Class 10, Thailand Energy Academy (TEA), 2017
- Advanced Human Resource Executive Program, The Stephen M. Ross School of Business, University of Michigan, 2014
- Leadership Development Program (LDP 3), PTT Leadership and Learning Institute, 2014
- Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration of Chulalongkorn University

Director Training:

- Director Accreditation Program (DAP) Class 91/2011, Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 160/2012, Thai Institute of Directors Association (IOD)
- Role of the Chairman Program (RCP) Class 47/2021, Thai Institute of Directors Association (IOD)
- Director's Legal Liabilities, Ethical Leadership for New Era and High Performing, and Board Effectiveness 2021 (In-house Programs by GC)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Director, Director to Nomination and Remuneration Committee and Director to Risk Management Committee, Global Green Chemicals Public Company Limited
- Chief Operating Officer - Value Added Products, PTT Global Chemical Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 2

- Chairman, HMC Polymers Company Limited
- Director, GC Marketing Solutions Company Limited

Positions in Other Company/Organization/Insitution / Remarkable Positions: None**Work Experience (in the Last 5 Years):**

21 Nov 2016 – 16 Feb 2022	Chairman, GC Maintenance and Engineering Company Limited
13 Nov 2016 – 16 Feb 2022	Chairman, NPC Safety and Environmental Service Company Limited
2016 – 2022	Director, PTTGC America Corporation
2016 – 2022	Director, PTTGC America LLC
2016 – 30 Sep 2019	Director, PTT Energy Solutions Company Limited
Apr 2012 – Jan 2019	Director, Sport Services Alliance Company Limited
19 Oct 2011 – Aug 2016	Executive Vice President, Organizational Effectiveness, PTT Global Chemical Public Company Limited
2014 – 2016	Director, Vencorex Holding
2011 – 2016	Director, Eastern Fluid Transport Company Limited
2011 – 2016	Director, PTT Digital Solutions Company Limited
2011 – 2016	Director, Solution Creation Company Limited
2016	Director, GC Glycol Company Limited

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Mr. Piroj Samutthananont

Age: 59

Director / Director to Risk Management Committee / Managing Director**Date of Appointment:**

1 May 2021

Education/Training:

- Master of Business Administration (Business Administration), Queen's University, Canada
- Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University

Director Training:

- Director Certification Program (DCP) Class 291/2020, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 2

- Director, Director to Risk Management Committee and Managing Director, Global Green Chemicals Public Company Limited
- Senior Vice President, Reporting to Downstream Petrochemical Business, PTT Global Chemical Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 3

- Chairman, GGC Biochemicals Company Limited
- Director, GGC KTIS Bio Industrial Company Limited
- Director, Thai Ethoxylate Company Limited

Positions in Other Company/Organization/Insitution / Remarkable Positions: None**Work Experience (in the Last 5 Years):**

16 Mar – 30 Apr 2021	Senior Vice President, Downstream Petrochemical Business, PTT Global Chemical Public Company Limited, secondment in Global Green Chemicals Public Company Limited
1 Jan 2020 – 15 Mar 2021	Senior Vice President, Center of Excellence, PTT Global Chemical Public Company Limited
1 Jan 2020 – 15 Mar 2021	Director and Managing Director, GC Maintenance and Engineering Company Limited
1 Sep – 31 Dec 2019	Senior Vice President, Center of Excellence, PTT Global Chemical Public Company Limited
1 Jul – 31 Aug 2019	Senior Vice President, Procurement, PTT Global Chemical Public Company Limited
1 Jul 2017 – 30 Jun 2019	Head of Procurement, PTT Global Chemical Public Company Limited
1 Jan 2014 – 30 Jun 2017	Vice President, Supply Chain Global Solution, PTT Exploration and Production Public Company Limited

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None**

Executives

(as of 14 January 2022)

Mr. Piroj Samutthananont
Managing Director

Age: 59

Date of Appointment:

1 May 2021

(Details are disclosed in the Board of Directors Information)

Mr. Kumpol Chaikitkosi

Age: 61

Deputy Managing Director, Operational Excellence

Date of Appointment:

1 January 2021

Education/Training:

- B.Eng. (Chemical Engineering), Chulalongkorn University
- Program for Executive Development, IMD, Switzerland
- Executive Development Program, Thai Listed Companies Association (TLCA)
- Director Certification Program (DCP) Class 219/2016, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Deputy Managing Director, Operational Excellence, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 1

- Director, GGC KTIS Bioindustrial Company Limited

Work Experience (in the Last 5 Years):

Aug 2021 – Jan 2022	Director, Thai Eastern Top Seeds Oil Company Limited
2019 – 2020	Director, GC Oxirane Company Limited
2019 – 2020	Director, GC Styrenics Company Limited
2019 – 2020	Executive Advisor, Thai Ethoxylate Company Limited
2019 – 2020	Senior Vice President, EO-Based Performance Business Unit, PTT Global Chemical Public Company Limited
2019 – 2020	Director and Managing Director, GC Glycol Company Limited
2015 – 2019	Senior Vice President, Phenol Business Unit, PTT Global Chemical Public Company Limited
2015 – 2019	Director and Managing Director, PTT Phenol Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Warophat Kimchuwanit

Age: 50

Deputy Managing Director, Commercial Excellence / Acting Vice President, Business and Product Development**Date of Appointment:**

21 January 2021

Education/Training:

- Master of Science in Petrochemical, The Petroleum and Petrochemical College, Chulalongkorn University
- Bachelor of Science in Chemical Technology, Chulalongkorn University
- Senior Executive Program (SEP-28), Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Thai-Chinese Leadership Program 2, Thai-Chinese Leadership Institute, Huachiew Chalermprakiet University
- Director Accreditation Program (DAP) Class 180/2021, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Deputy Managing Director, Commercial Excellence and Acting Vice President, Business and Product Development, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 2

- Chairman, Thai Fatty Alcohols Company Limited
- Director and Managing Director, GGC Biochemicals Company Limited

Work Experience (in the Last 5 Years):

2019 – 2020 Vice President, Production Planning and Sale & Marketing, GC Glycol Company Limited

2016 – 2019 Vice President, Production Planning and Sale & Marketing, PTT Phenol Company Limited

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries:** None**Mrs. Kunakorn Witthayapaisarn**

Age: 55

Vice President, Internal Audit**Date of Appointment:**

1 January 2018

Education/Training:

- B.A. (Accounting), Thammasat University
- Certified Internal Auditor, Institute of Internal Auditors, U.S.A.
- Accreditation in Quality Assessment, Institute of Internal Auditors, U.S.A.

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Internal Audit, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Work Experience (in the Last 5 Years):**

2020 – Present Member, Audit Committee, National Higher Education Science Research and Innovation Policy Council

2015 – 2018 Member, Audit Committee, National Science Technology and Innovation Policy Office

1992 – 2017 Senior Assistant Director, Internal Audit, Securities and Exchange Commission

Shareholding: None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries:** None

Mrs. Boonsada Seema **Age: 53**
Vice President, Corporate Affairs and Corporate Secretary

Date of Appointment:

1 October 2021

Education/Training:

- Master of Art, Language and Communication, National Institute of Development Administration
- Bachelor of Education, Secondary Education (English–French), Chulalongkorn University
- Corporate Secretaries Professional Development Program Class 1/2021, Thai Listed Companies Association
- Advances for Corporate Secretaries 2020, Thai Listed Companies Association
- Board Reporting Program (BRP) Class 11/2013, Thai Institute of Directors Association (IOD)
- Effective Minutes Taking (EMT) Class 3/2006, Thai Institute of Directors Association (IOD)
- Company Secretary Program (CSP) Class 18/2006 and Company Secretary Refreshment Training Program (RFP) Class 4/2021, Thai Institute of Directors Association (IOD)
- APCG & Anti-Corruption Working Paper Briefing, Director's Legal Liabilities, and Ethical Leadership for New Era 2021 (In-house Programs by GC)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2019 – 2021 Division Manager, Subsidiary Board Management, PTT Global Chemical Public Company Limited

2011 – 2019 Division Manager, Corporate Secretarial Management, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Ms. Wanlapa Sophiskhaunkhant **Age: 42**
Vice President, Corporate Finance and Accounting

Date of Appointment:

24 August 2015

Education/Training:

- M.Eng. (Chemical Engineering), King Mongkut's University of Technology Thonburi
- B.Eng. (Chemical Engineering), King Mongkut's Institute of Technology Ladkrabang
- CFO Orientation Course, Stock Exchange of Thailand
- Strategic CFO Course, Stock Exchange of Thailand
- CFO Certification Program, Federation of Accounting Professions
- Director Certification Program (DCP) Class 270/2019, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Finance and Accounting, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 1

- Director and Managing Director, Thai Fatty Alcohols Company Limited

Work Experience (in the Last 5 Years):

April 2021 – Present	Member of Industrial Advisory Board, Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang
2018 – 2020	Director, GGC Biochemicals Company Limited
2018 – 2020	Director, Thai Eastern Top Seeds Oil Company Limited
2014 – 2015	Division Manager, Strategic Partnership and Business Administration, International Business Administration Unit, PTT Global Chemicals Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Jakrit Rungsimanop

Age: 46

Vice President, Corporate Strategy**Date of Appointment:**

1 June 2020

Education/Training:

- M.Eng. (Chemical Engineering), Chulalongkon University
- B.Eng. (Chemical Engineering), Khon Kaen University

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Strategy, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: 2

- Director, Thai Fatty Alcohols Company Limited
- Director, GGC Biochemicals Company Limited

Work Experience (in the Last 5 Years):

2016 – 2020	Division Manager, Strategy, Planning and Portfolio Management, Global Green Chemicals Public Company Limited
2015 – 2016	Division Manager, Strategy and Business Development, PTT Global Chemicals Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Sansern Sujitjorn Age: 59
Vice President, Human Resource and Corporate Support

Date of Appointment:

1 February 2021

Education/Training:

- Master of Science in Public and Private Management, National Institute of Development Administration (NIDA)
- LL.B. (Law), Chulalongkorn University

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Human Resource and Corporate Support, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2018 – 2021 Vice President, Human Resources Business Partner, PTT Global Chemical Public Company Limited

2013 – 2017 Vice President, Human Resources Strategy and Policy, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Ekaphong Govitgoongrai Age: 49
Vice President, Supply Planning and Feedstock Sourcing

Date of Appointment:

1 December 2019

Education/Training:

- MBA, Chulalongkorn University
- B.Eng. (Chemical Engineering), Chulalongkorn University
- Director Certification Program (DCP) Class 298/2020, Thai Institute of Directors Association (IOD)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Supply Planning and Feedstock Sourcing, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

Dec 2019 – Jan 2022 Director, Thai Eastern Top Seeds Oil Company Limited

2020 – 2021 Director, GGC KTIS Bio Industrial Company Limited

2020 Director and Managing Director, Thai Fatty Alcohols Company Limited

Jun – Nov 2019 Vice President, reporting to the Managing Director,
Global Green Chemicals Public Company Limited

2018 – 2019 Deputy General Manager (DGM), Supply Planning and Oil Trading Business,
BCP Trading Pte. Ltd., Singapore

2006 – 2017 Vice President, Oil Trading Business and Acting Senior Manager,
Crude Oil Procurement and Trading Division, Bangchak Corporation Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Suchet Deemangmee
Vice President, Marketing and Sale

Age: 48

Date of Appointment:

1 April 2019

Education/Training:

- MBA (Business Administration and Marketing), Ramkhamhaeng University
- B.Sc. (General Science), Chulalongkorn University

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Marketing and Sale, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

Apr – Nov 2019 Vice President, Marketing, Commercial and Supply, Global Green Chemicals Public Company Limited
 2015 – 2019 Acting Vice President, Global Commercial and Marketing, Thai Ethoxylate Company Limited
 2011 – 2015 Department Manager, Home and Personal Cares APAC region, BASF (Thai) Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Thodsaphorn Phienchob
Vice President, Operations

Age: 54

Date of Appointment:

1 January 2020

Education/Training:

- B.Econ., Sukhothai Thammathirat Open University

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Operations, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2015 – 2019 Division Manager, Plant Technical, PTT Global Chemical Public Company Limited
 2013 – 2015 Division Manager, Plant Operation, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Ms. Chompunuch Liamprawat
Vice President, Process Technology

Age: 43

Date of Appointment:

31 January 2020

Education/Training:

- MBA, National Institute of Development Administration
- M.Eng. (Chemical Engineering), King Mongkut's University of Technology Thonburi
- B.Sc. (Chemical Industrial), 2nd Class Honors, Chiang Mai University
- Certificate Event Marketing, William Angliss Institute, Melbourne, Australia
- Financial Statement for Directors (FSD), 2555

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Process Technology, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2014 – 2019 Consultant / Senior Consultant, Master Planning, Product Development and Technical Training Academy, Knowledge Excellence unit, PTT Energy Solution Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Suriyawut Rawdkrajab

Age: 53

Vice President, Engineering and Maintenance

Date of Appointment:

1 June 2020

Education/Training:

- B.Sc. (Industrial Electrical Technology), Rajabhat Rajanagarindra University
- Process Safety Management Internal Auditor
- IMS Internal Auditor

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Engineering and Maintenance, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2020 Division Manager, Refinery Movement and Dispatching Maintenance,
 PTT Global Chemical Public Company Limited

2014 – 2019 Division Manager, Refinery Maintenance, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Sayan Saesue Age: 50
Vice President, Project Management

Date of Appointment:

1 June 2020

Education/Training:

- M.Eng. (Industrial Engineering), King Mongkut's university of Technology North Bangkok
- B.Eng. (Control Systems and Instrumentation Engineering), King Mongkut's Institute of Technology Ladkrabang

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Project Management, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2020	Vice President, Engineering and Maintenance, Global Green Chemicals Public Company Limited
2015 – 2019	Vice President, Operations, Global Green Chemicals Public Company Limited
2011 – 2015	Division Manager, Plant Operations, Thai Oleochemicals Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

Mr. Chanasiri Vanit Age: 51
Vice President, Reporting to the Deputy Managing Director, Operational Excellence

Date of Appointment:

1 January 2021

Education/Training:

- M.A. (Economics), Kasetsart University
- B.Eng. (Chemical Engineering), Kasetsart University

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, reporting to the Deputy Managing Director, Operational Excellence, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2020	Vice President, reporting to the Managing Director, Global Green Chemicals Public Company Limited
2018 – 2019	Vice President, Engineering and Maintenance/Project Management, Global Green Chemical Public Company Limited
Jan – Jul 2019	Director, GGC KTIS Bio Industrial Company Limited
2018 – 2019	Director, Thai Eastern Top Seeds Oil Company Limited
2016 – 2018	Vice President, Projects, Global Green Chemicals Public Company Limited
2015 – 2016	Division Manager, Quality, Safety, Occupational Health and Environment, Global Green Chemicals Public Company Limited

Shareholding: 3,000 shares (accounting for 0.0002931% of the total shares as of 31 December 2021)

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

1. Mr. Piva Suri

Secondment as Managing Director, Thai Ethoxylate Company Limited

Vice President, Reporting to Managing Director

Secondment as Managing Director, GGC KTIS Bio Industrial Company Limited

GGC assigned Mrs. Nuttaya Wudtisuk, Division Manager Accounting and Budgeting since October 1, 2019 to oversee the Company's accounting and ensure its compliance with relevant standards, laws and regulations.

Age: 42

Division Manager, Accounting and Budgeting

1 October 2019

- Master of Business Administrative, Thammasat University
- Bachelor of Accountancy (Second-class Honors), Chulalongkorn University
- Thai Financial Reporting Standards Workshop, 2021, Federation of Accounting Professions
- The Seminar Regarding the Changing of TFRS for PAEs in 2021, The Stock Exchange of Thailand
- Trend of M&A and the strategy for M&A, The Stock Exchange of Thailand
- The Theory of Cost Accounting, Department of Business Development, Ministry of Commerce Revolutionary Agent

- Division Manager, Accounting and Budgeting, Global Green Chemicals Public Company Limited

Work Experience (in the Last 5 Years):

1 Oct 2019 – Present	Division Manager, Accounting and Budgeting, Global Green Chemicals Public Company Limited
1 Aug 2017 – 30 Sep 2019	Senior Commercial Analyst, Global Green Chemicals Public Company Limited
16 Feb 2017 – 31 Jul 2017	Senior Financial Anyalyst, Global Green Chemicals Public Company Limited
1 Jan 2016 – 15 Feb 2017	Senior Accountant, LIXIL (Thailand) Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

APPENDIX 2

Directorship of Subsidiaries / Joint Venture / Related Companies

Directorship of Subsidiaries/Joint Ventures/Related Companies

Directorship of Subsidiaries/Joint Ventures/Related Companies																
Name-Surname		Subsidiaries		Joint Ventures	Indirect Joint Venture	Related Companies										
	GGC	TFA	GGC Bio	TEX	GKBI	PTT	GC	GPSC	GCM	GCP	GC-M PTA	TPRC	GC Inter	PTTGC Netherlands	HMC	PTTAC
1. Mr. Kongkrapan Intarajang	<div></div>					<div></div>	<div></div> <div></div>	<div></div>					<div></div>	<div></div>		
2. Mr. Patiparn Sukorndhaman	<div></div>						<div></div>		<div></div>	<div></div>	<div></div>	<div></div>			<div></div>	<div></div>
3. Mr. Varit Namwong	<div></div>						<div></div>		<div></div>						<div></div>	
4. Mr. Piroj Samutthanant	<div></div> <div></div>		<div></div>	<div></div>	<div></div>		<div></div>									
5. Mr. Kumpol Chaikitkosi	<div></div>				<div></div>											
6. Mr. Warophat Kimchuwanit	<div></div>	<div></div>	<div></div> <div></div>													
7. Ms. Wanlapa Sophiskhaunkhant	<div></div>	<div></div> <div></div>														
8. Mr. Jakrit Rungsimanop	<div></div>	<div></div>	<div></div>													
9. Mr. Piya Suri	<div></div>			<div></div> <div></div>												
10. Mr. Dumrong Putiput	<div></div>				<div></div> <div></div>											

Remark:

* The Directors/Executives No.1 and No.3-10 have held the position in subsidiaries, joint venture and related companies as of 16 February 2022 and the Director No.2 has hold the position in subsidiaries, joint venture and related companies as of 31 December 2021.

Subsidiaries

TFA = Thai Fatty Alcohols Co., Ltd.
GGC Bio = GGC Biochemicals Co., Ltd.

Joint Ventures

TEX = Thai Ethoxylate Co., Ltd.

Indirect Joint Venture

GKBI = GGC KTIS Bio Industrial Co., Ltd.

Related Companies

PTT = PTT Plc
GC = PTT Global Chemical Plc.
GPSC = Global Power Synergy Plc.
GCM = GC Marketing Solutions Co., Ltd
GCP = GC Polyols Co., Ltd

GC-M PTA = GC-M PTA Co., Ltd.

TPRC = Thai Pet Resin Co., Ltd.

GC Inter = PTTGC International Private Limited

PTTGC Netherlands = PTTGC International (Netherlands) B.V.

HMC = HMC Polymers Co., Ltd.

PTTAC = PTT Asahi Chemical Co., Ltd.

Remarks:

● = Chairman
● = Director
● = Management

APPENDIX 3

Vice President of Internal Audit
and Vice President of Corporate Affairs (Compliance)

Vice President of Internal Audit and Vice President of Corporate Affairs

(1) Vice President, Internal Audit

The Audit Committee No. 8/2017 held on 21 December 2017 has approved the appointment of Vice President Internal Audit and Secretary to the Audit Committee, Mrs. Kunakorn Witthayapaisarn. Her appointment has been effective since 1 January 2018. Mrs. Kunakorn Witthayapaisarn is exceptionally well qualified to perform the duties due to her extensive experience in internal audit, internal control and risk management since 1992. She also attended a comprehensive internal auditor training course which was considered essential to performance of the job.

Thus, the appointment, removal and transfer of an internal auditor will be forwarded to the Audit Committee for consideration and approval as stated in the Charter of the Audit Committee.

Mrs. Kunakorn Witthayapaisarn **Age: 55**
Vice President, Internal Audit

Date of Appointment:

1 January 2018

Education/Training:

- B.A. (Accounting), Thammasat University
- Certified Internal Auditor, Institute of Internal Auditors, U.S.A.
- Accreditation in Quality Assessment, Institute of Internal Auditors, U.S.A.

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Internal Audit, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None

Work Experience (in the Last 5 Years):

2020 – Present	Member, Audit Committee, National Higher Education Science Research and Innovation Policy Council
2015 – 2018	Member, Audit Committee, National Science Technology and Innovation Policy Office
1992 – 2017	Senior Assistant Director, Internal Audit, Securities and Exchange Commission

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

(2) Vice President, Corporate Affairs

GGC has appointed Mrs. Boonsada Seema as Vice President of Corporate Affairs and Corporate Secretary with effect from 1 October 2021, replacing Mrs. Uramanee Puttong who held the position from 1 January 2018 to 30 September 2021. Her main responsibilities are to build the corporate profile as a listed company and make sure the Company follow rules and regulations of the Securities and Exchange Commission (SEC), the Stock Exchange of Thailand (SET), Public Limited Companies Act, B.E. 2535 (1992) and Securities and Exchange Act, B.E. 2535 (1992).

Mrs. Boonsada Seema **Age: 53**
Vice President, Corporate Affairs and Corporate Secretary

Date of Appointment:

1 October 2021

Education/Training:

- Master of Art, Language and Communication, National Institute of Development Administration
- Bachelor of Education, Secondary Education (English–French), Chulalongkorn University
- Corporate Secretaries Professional Development Program Class 1/2021, Thai Listed Companies Association
- Anti-Corruption the Practical Guide (ACPG), Thai Institute of Directors Association (IOD)
- Board Reporting Program (BRP) Class 11/2013, Thai Institute of Directors Association (IOD)
- Effective Minutes Taking (EMT) Class 3/2006, Thai Institute of Directors Association (IOD)
- Company Secretary Program (CSP) Class 18/2006 and Company Secretary Refreshment Training Program (RFP) Class 4/2021, Thai Institute of Directors Association (IOD)
- APCG & Anti-Corruption Working Paper Briefing, Director's Legal Liabilities, and Ethical Leadership for New Era 2021 (In-house Programs by GC)

Board member / Management in Listed Company – The Stock Exchange of Thailand: 1

- Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemicals Public Company Limited

Board member / Management in Non-Listed Company – The Stock Exchange of Thailand: None**Work Experience (in the Last 5 Years):**

2019 – 2021 Division Manager, Subsidiary Board Management, PTT Global Chemical Public Company Limited
 2011 – 2019 Division Manager, Corporate Secretarial Management, PTT Global Chemical Public Company Limited

Shareholding: None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries: None

APPENDIX 4

Asset in Business and Valuation

Asset in Business

Key fixed assets of GGC and its subsidiaries

As of December 31, 2021, the following items and book values after cumulative depreciation and losses resulting from impairment of their buildings and equipment appeared in the financial statements as detailed below.

Key permanent asset	Ownership	Net book value as of		
		December 31, 2020 (Baht)	December 31, 2021 (Baht)	Obligation (Baht)
Plants, machinery, equipment, and plant apparatus	Business-owned	4,053,519,168	3,730,074,364	-None-
Buildings and building addenda	Business-owned	360,307,082	320,538,776	-None-
Relandscaping	Business-owned	29,335,429	26,595,414	-None-
Fixtures and office equipment	Business-owned/ leased assets	7,220,347	7,189,836	-None-
Vehicles	Business-owned/ leased assets	146,473	2,141,817	-None-
Assets under construction	Business-owned	125,947,347	172,273,596	-None-
Total net book value		4,576,475,846	4,258,813,803	

Land lease rights

Below is a list of GGC's and subsidiaries' land lease rights as of December 31, 2021.

- (1) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 27 rai 3 ngan 13.598 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1
- (2) Title deed No. 123254 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 9 rai 3 ngan 43.9 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Methyl Ester Plant 1.
- (3) Title deed No. 126435 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 28.70 sq. wah, owned by PTT Global Chemical Plc. Lease period of 16 years 7 months 15 days from December 17, 2019, to July 31, 2036. Location of Methyl Ester Plant 1.
- (4) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 27 rai 2 ngan, owned by Thai Eastern Industrial Land Co., Ltd. Lease period of 30 years from April 1, 2006, to March 31, 2046. Location of Methyl Ester Plant 2.
- (5) Title deed No. 6150 in Tambon Khao Sok, Amphoe Nong Yai, Chon Buri, occupying 2 rai 2 ngan, owned by Thai Eastern Industrial Land Co., Ltd. Lease period of 30 years from March 1, 2018, to February 29, 2048. Location of Refined Glycerine Plant 2.
- (6) Title deed No. 111033 in Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, occupying 2 rai 86.402 sq. wah, owned by PTT Global Chemical Plc. Lease period of 30 years from August 1, 2006, to July 31, 2036. Location of Fatty Alcohols Plant (TFA).

Other lease rights not recorded with other land lease rights as of December 31, 2021.

- (1) Space lease contract for offices and service contracts with Energy Complex Co., Ltd., at 555/1 Energy Complex, Building A, 4th Floor. Contract period of 3 years from October 1, 2018, to September 30, 2021. Lease area of 1,070 sq. m.
- (2) Space lease contract rent for offices with GC Estate Co., Ltd., at 888, 3rd Floor, Map Chalut-Laem Son Road, Tambon Huai Pong, Amphoe Mueang Rayong, Rayong. Contract period of 3 years from September 1, 2020, to August 31, 2023. Lease area of 750 sq. m.
- (3) Land lease contract with Pure Biodiesel Co., Ltd., at 7/4 Pakorn Songkraw Rat Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong. Contract period of 8 months from April 1 to December 31, 2021. Lease area of 1 rai 4 ngan.

Intangible assets

Below are details of GGC's and subsidiaries' intangible assets as of December 31, 2021.

Unit: Baht

Intangible asset	Net value after cumulative amortization and provision for asset impairment
Production process patent fees	22,700,078
Goodwill	33,527,418
Other intangible assets	10,587,019
Total net book value	66,814,515

Trademarks and service marks

As of December 31, 2021, GGC subsidiaries owned key trademarks detailed below:

Trademarks/ Service marks	THAIOL	For industrial application of Fatty Alcohols
Country	Period	
Thailand	August 21, 2017 – August 21, 2027	
India	August 22, 2017 – August 22, 2027	
South Africa	September 7, 2017 – September 7, 2027	
Mexico	August 23, 2017 – August 23, 2027	
New Zealand	August 20, 2017 – August 20, 2027	
Indonesia	September 7, 2017 – September 7, 2027	
Malaysia	September 19, 2017 – September 19, 2027	
Venezuela	Under application for trademark renewal	
Chile	February 27, 2018 – February 27, 2028	
Philippines	March 10, 2018 – March 10, 2028	
Columbia	April 30, 2018 – April 30, 2028	
Argentina	Under application for trademark renewal	
Brazil	March 24, 2015 – March 24, 2025	
Canada	March 21, 2016 – March 21, 2025	

Trademarks/ Service marks		For application of Chemical Fertilizer (Potassium Sulfate)
Country	Period	
Thailand	September 23, 2019 – September 22, 2029	

Other intellectual property rights

GGC holds no current intellectual property.

GGC engaged in a licensing agreement with UHDE GMBH (Uhde), with effect from September 7, 2006, under which Uhde licensed the application of Agrar Technik's technology in GGC's methyl ester plants through the plants' operating periods. GGC has paid the full sum for this license as laid out in such agreement.

GGC also engaged in a licensing agreement with a leading German technology firm for technological application in its fatty alcohols plant through its operating period. Development of technology for fatty alcohols production belongs solely to this company; in return, GGC is eligible for the rights to upgraded technology in its processes, but such rights are non-transferable and not limited to GGC. GGC has paid the full sum for this license as laid out in such agreement.

Investment promotion certificates

GGC and subsidiaries earned investment promotion certificates from the Office of the Board of Investment of Thailand (BOI) in the form of tax privileges, including corporate income tax rebates for net profits applicable to income generation of the business.

Below are details of GGC's and subsidiaries' certificates valid as of December 31, 2021.

No.	Promoted project number	Promotion date	Product and capacity	Expiry of income tax privileges	Remarks
1.	Production of methyl ester, fatty alcohols, glycerine, and potassium sulfate Certificate No. 1547(2)/2549	May 30, 2006	<ul style="list-style-type: none"> • Methyl ester, about 384,000 tons/year • Fatty alcohols, about 120,000 tons/year • Glycerine, about 38,400 tons/year • Potassium sulfate, about 5,400 tons/year 	December 31, 2020	Former name: TOL
2.	Production of biodiesel Certificate No. 59-1251-1-00-1-0	September 28, 2016	<ul style="list-style-type: none"> • Biodiesel or methyl ester, about 346,820,810 liters/year (300,000 tons/year) 	November 17, 2026	
3.	Refined glycerine, Certificate Certificate No. 60-1232-1-18-1-0	October 10, 2017	<ul style="list-style-type: none"> • Refined glycerine (99.5% purity or more), about 45,000 tons/year 	November 23, 2033	
4.	Fatty alcohols, Certificate No. 1068(2)/2550 (other chemicals)	January 31, 2007	<ul style="list-style-type: none"> • Fractionated fatty alcohols, about 120,000 tons/year • By-products (light-ends hydrocarbons, about 1,700 tons/year, and residue, about 1,250 tons/year) 	May 25, 2021	

APPENDIX 5

Good Corporate Governance Report

Global Green Chemicals Public Company Limited (GGC) is committed to conforming to the Good Corporate Governance principles, which are in compliance with the Principles of Corporate Governance of the Organization for Economic Co-operation and Development (OECD), the Securities and Exchange Commission (SEC), and the Stock Exchange of Thailand (SET).

This is to ensure that the GGC Group's businesses are conducted responsibly, ethically, fairly, transparently and accountably, with a clear focus on the creation of utmost benefits for the shareholders and stakeholders, towards mutual trust and sustainable growth.

GGC disclosed its information via <https://www.ggcplc.com/th/corporate-governance/handbooks>.

APPENDIX 6

The Audit Committee Report

(GGC disclosed its information in page 149)

Abbreviations

SET	The Stock Exchange of Thailand
The Company	(1) Global Green Chemicals Public Company Limited or (2) Global Green Chemicals Public Company Limited and TFA (as the case may be)
PTT Group, PTT affiliates	PTT and its subsidiaries or associates
GC Group, GC affiliates	GC and its subsidiaries or associates
PTT	PTT Public Company Limited
Securities and Exchange Act	Securities and Exchange Act B.E. 2535 (A.D. 1992) (and its amendment)
SEC	The Securities and Exchange Commission, Thailand
EPPO	Energy Policy and Planning Office
ONEP	Office of Natural Resources and Environmental Policy and Planning
Advanced Biochemical	Advanced Biochemical (Thailand) Company Limited
Agrar Technik	Agrar Technik GmbH & Co. KG
B5	Having a biodiesel content of 5% and diesel 95%
B6	Having a biodiesel content of 6% and diesel 94%
B7	Having a biodiesel content of 7% and diesel 93%
B10	Having a biodiesel content of 10% and diesel 90%
B20	Having a biodiesel content of 20% and diesel 80%
B25	Having a biodiesel content of 25% and diesel 75%
Bangchak Biofuel	Bangchak Biofuel Company Limited
BASF (Thai)	BASF (Thai) Company Limited
BCP	Bangchak Corporation Public Company Limited
BSA	Business Services Alliance Company Limited
Biocomplex	Biochemical Industrial Estate Project
BOI	The Board of Investment Thailand
Cargill	Cargill Incorporated
CCSA	The Center for COVID-19 Situation Administration
Chevron	Chevron (Thailand) Limited

Dhipaya	Dhipaya Insurance Public Company Limited
EIA	Environmental Impact Assessment
EFT	Eastern Fluid Transport Company Limited
Emery	Emery Oleochemicals (M) Sdn. Bhd. and Emery Specialty Chemicals Sdn. Bhd.
EPO	Eastern Palm Oil Company Limited
EPS	Eastern Pipeline Services Company Limited
ESSO	Esso (Thailand) Public Company Limited
GCPTT	Global Chemical Public Company Limited
GlycolGC	Glycol Company Limited
GCL	GC Logistics Solutions Company Limited
GCME	GC Maintenance and Engineering Company Limited
GGC Bio	GGC Biochemicals Company Limited
GPSC	Global Power Synergy Public Company Limited
HPC	Home and Personal Care products
ICIS	Independent Chemical Information Service, a unit of Reed Business Information Limited, a service provider of intelligence on chemical market prices and analyses, including those of petrochemicals and oleochemicals
IRPC	IRPC Public Company Limited
KTIS	Kaset Thai International Sugar Corporation Public Company Limited
Linde	Linde (Thailand) Public Company Limited
LMC International	LMC International Limited
MD & A	Management discussion and analysis
NatureWorks	NatureWorks LLC
NPC S&E	NPC Safety and Environmental Service Company Limited
NPCSG	NPC S&E Security Guard Company Limited
PTTEP	PTT Exploration and Production Public Company Limited
PTT Digital	PTT Digital Solutions Company Limited
PTT MCC	PTTMCC Biochem Company Limited
PPCL	PTT Phenol Company Limited

Shell	The Shell Company of Thailand Limited
SPRC	Star Petroleum Refining Public Company Limited
SUN	Solution Creation Company Limited
TEX	Thai Ethoxylate Company Limited
TETSO	Thai Eastern Top Seeds Oil Company Limited
TFA	Thai Fatty Alcohols Company Limited
TOP	Thai Oil Public Company Limited
TOP Solvent	TOP Solvent Company Limited
TOP Solvent Vietnam	TOP Solvent (Vietnam) Limited Liability Company
TTT	Thai Tank Terminal Limited
Uhde	Uhde GmbH Germany, now known as ThyssenKrupp Industrial Solutions
Unilever	Unilever Thai Holdings Company Limited

Glossary

Palm Fatty Acid Distillate (PFAD)	By-product of the RBD Palm Oil refining process and the Methyl Ester process.
Palm Kernel Fatty Acid Distillate	By-product of the Crude Palm Kernel Oil refining process.
Free Fatty Acid (FFA)	Fatty acid that is not a molecular composition of Triglyceride.
Hydrogenation	Process of adding hydrogen to precursors, part of the Fatty Alcohols process.
Trans-esterification	Chemical reaction between fat or oil with alcohols to obtain Methyl Ester and Glycerine in the presence of catalysts.
Crude Glycerine	By-product of the process for Methyl Ester and Fatty Alcohols.
Refined Glycerine	Refined Crude Glycerine that is a precursor of personal care products.
Yellow Glycerine	Refined Crude Glycerine with impurities and a low boiling point.
Fatty Alcohol Residue	Product derived at the bottom of the Fatty Alcohols distillation tower, with a higher boiling point than those of C18 Fatty Alcohols.
Methyl Ester Residue	Product derived at the bottom of the Methyl Ester distillation tower, consisting of partially reacted oil, Methyl Ester with longer molecules than C18, and other impurities.
Debottlenecking	Processes designed to solve problems or limitations for a given piece of machinery or equipment or a given procedure, resulting in greater capacity.
Base Diesel Fuel or Petroleum Diesel Fuel	Diesel obtained from Crude Oil (Petroleum) refining.
High-Speed Diesel or Retail Diesel or Diesel	Diesel meant for domestic retail sale, a blend between base diesel and Methyl Ester at a proportion announced by the Department of Energy Business for use in high-revolution diesel engines, including passenger cars, trucks, tractors, and heavy machinery with over 1,000 revolutions per minute.
Crude Palm Oil (CPO)	Oil obtained from the pressing of fresh fruit bunches, a raw material for Methyl Ester or RBD Palm Oil.
RBD Palm Oil or RBDPO	Oil obtained from CPO refining, a raw material for Methyl Ester.
Crude Palm Kernel Oil (CPKO)	Oil obtained from Palm Kernel Extraction, refinable into RBD Palm Kernel Oil.
RBD Palm Kernel Oil (RBDPKO)	Oil obtained from RBD palm kernel refining, a raw material for Fatty Alcohols.

Lauric Oil	Oil whose main composition contains lauric acid, a saturated fatty acid with 12 carbon atoms, commonly found in Crude Palm Kernel Oil and coconut oil.
Biodiesel	Fuel obtained from natural products like vegetable oil and animal fats, whether used or new, for use in diesel engines. Biodiesel bears similar physical characteristics to petroleum diesel, but is classified as an alternative energy. As a rule, it may include Methyl Ester (called B100).
Palm Stearin	Edible palm fat derived from the separation of grease from the Palm Oil process, used for consumption.
Fatty Acid	Basic Oleochemicals that are acidic, a precursor for many downstream industries, including food and personal-care industries (like soaps and cosmetics) and the rubber industry.
Fatty Alcohols	Basic Oleochemicals that are alcohol, a precursor of surfactants and personal-care products.
Pre-Cut Fatty Alcohols	Fatty Alcohols with short molecule chains, consisting of C6 - C10 Fatty Alcohols, that are not yet refined into grades of pure Fatty Alcohols.
Main-Cut Fatty	AlcoholsFatty Alcohols with C12 - C18 molecule chains, consisting of C12 - C14 (medium-long) and C16 - C18 (long), that are not yet refined into grades of pure Fatty Alcohols.
Short-Chain Fatty Alcohols	Refined Fatty Alcohols containing short molecule chains. Upon refining, they yield C6, C8, and C10 Fatty Alcohols.
Mid-Chain Fatty Alcohols	Refined Fatty Alcohols containing Medium-long molecule chains. Upon refining, they yield C12 -C14 Fatty Alcohols.
Long-Chain Fatty Alcohols	Refined Fatty Alcohols containing long molecule chains.Upon refining, they yield C16, C18, or C16 -C18 Fatty Alcohols.
Methyl Ester	Also called B100, Methyl Ester can blend with basic diesel into retail diesel as announced by the Department of Energy Business, and canbe processed into downstream Oleochemicals.
Main-Cut Crude Methyl Ester	Medium-long and long-molecule Methyl Ester (C12 - C18), an intermediate product group derived from Methyl Ester distillation for Fatty Alcohols.
Methanol	Chemical used in the Trans-esterification process.
Raw Materials	Palm product, including Crude Palm Oil, RBD Palm Oil, Palm Kernel Oil, Crude Palm Kernel Oil, or RBD Palm Kernel Oil for production processes. Raw materials include chemical precursors, namely Hydrogen and Methanol.

Catalyst	Chemical used in the Methyl Ester process, namely Potassium Hydroxide or Sodium Methylate, designed to speed up Trans-esterification, and used in the Fatty Alcohols process, namely Hydrogenation Catalysts to speed up Hydrogenation.
Trans-esterification Unit	Methyl Ester production unit, where Palm Oil or Palm Kernel Oil reacts with Methanol in the presence of catalysts (Potassium Hydroxide or Sodium Methylate).
Utilization Rate	Actual capacity in percent of the nameplate capacity.
Oleochemicals	Chemicals derived from oil or natural fats (plant and animal fats). Oleochemicals, including Methyl Ester and Fatty Alcohols, can be converted into assorted downstream products.
RSPO (Roundtable on Sustainable Palm Oil)	Standard for sustainable palm oil production that is environmentally friendly and responsible to communities.



Global Green Chemicals Public Company Limited



555/1 Energy Complex Building A, 4th Floor, Vibhavadi-Rangsit Road,
Chatuchak, Chatuchak, Bangkok 10900 Thailand



Phone :
+66 (0) 2558-7300



Fax :
+66 (0) 2558-7301



Website :
www.ggcplc.com



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