

# GREENER & GREATER

## Annual Report 2019

Global Green Chemicals Public Company Limited



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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. Shareholders: Maximize sustainable value for shareholders 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

### 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, Biofuel, and Bioplastics.

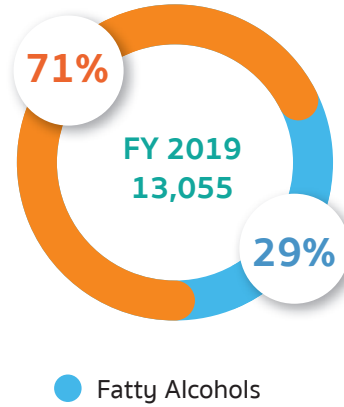
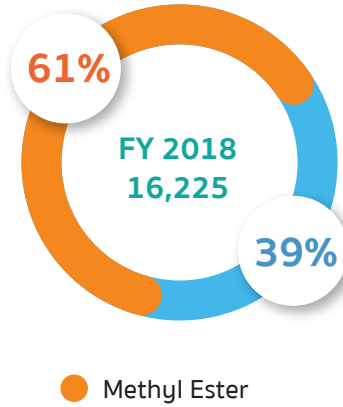
### 3. Continuously Pursuing Operational Excellences to Improve Profitability

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.

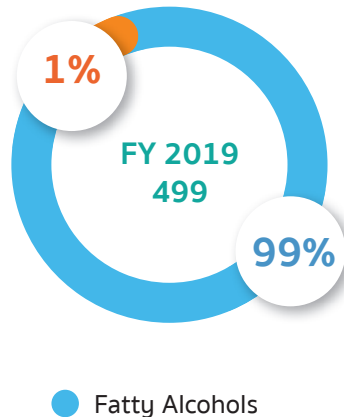
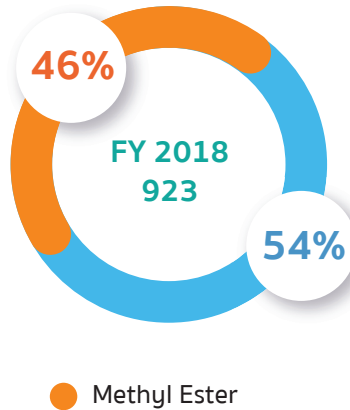


## Key Financial Highlights

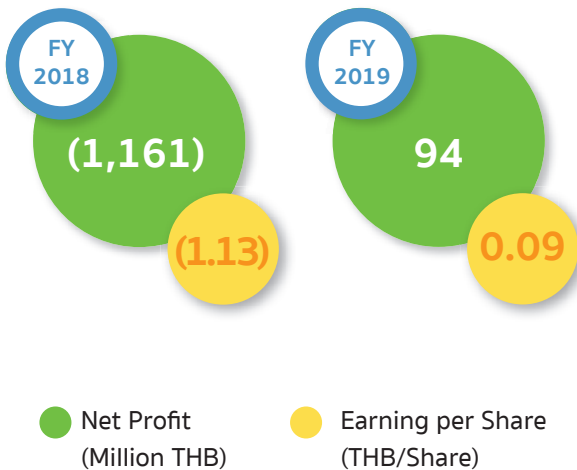
Sales Revenue  
(Unit : Million THB)



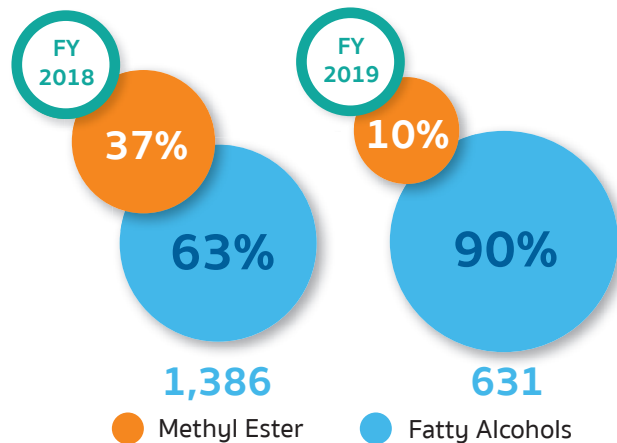
EBITDA <sup>(1)</sup>  
(Unit : Million THB)



Net Profit



Adjusted EBITDA <sup>(2)</sup> Breakdown  
by Business Group (Unit : Million THB)





Statement of Financial Position (Unit : Million THB)	FY 2017	FY 2018	FY 2019
<b>Total Assets</b>	<b>14,535</b>	<b>13,084</b>	<b>12,931</b>
Cash, Cash-Equivalent and Short-Term Investment	4,122	3,787	3,311
Other Current Assets	4,840	2,927	3,401
Property, Plants & Equipment	4,705	5,115	4,764
Other Non-Current Assets	868	1,255	1,455
<b>Total Liabilities</b>	<b>3,462</b>	<b>3,376</b>	<b>3,283</b>
Interest-Bearing Debts	2,400	2,120	1,790
Other Liabilities	1,062	1,256	1,493
<b>Total Equity</b>	<b>11,073</b>	<b>9,708</b>	<b>9,648</b>

Financial Ratios	FY 2017	FY 2018	FY 2019
Current Ratio (times)	6.9	4.4	3.6
EBITDA to Sales Revenue (%)	5.8	5.7	3.8
Net Profit to Sales Revenue (%)	2.7	(7.2)	0.7
Return on Total Assets (%)	4.7	(10.5)	2.3
Return on Equity (%)	5.5	(11.2)	1.0
Debt to Equity (times)	0.3	0.3	0.3
Interest-Bearing Debt to Equity (times)	0.2	0.2	0.2
Interest-Bearing Debt to EBITDA (times)	2.1	2.3	3.6

Dividend Paid (THB/Share)		Dividend Payout Ratio (%)
Year	Full Year	
2017 <sup>(3)</sup>	0.35	69
2018 <sup>(4)</sup>	-	-
2019 <sup>(5)</sup>	0.35	N/A

(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).

(3) The Board of Directors at its meeting No 2/2018 held on February 14, 2018 has approved the proposal to propose at the 2018 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2017 operating performance of THB 0.35 per share, of which THB 0.15 per share was paid as an interim dividend on September 7, 2017. The final dividend payment of year 2017 (July-December 2017) was paid of THB 0.20 per share on April 25, 2017.

(4) The Board of Directors at its meeting No 3/2019 held on February 19, 2019 has approved the proposal to propose at the 2019 Annual General Meeting of Shareholders to consider and approve on the omission of the dividend payment for year 2018 because the company has retained loss as stated in financial statements as of 31st December, 2018 due to the issue about procurement process of raw materials.

(5) 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 29, 2020, but the right to receive dividend is subject to the approval of shareholders at the 2020 Annual General Meeting.

## Message from the Chairman

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### Dear Shareholders

2019 has been a challenging year for Global Green Chemicals Public Company Limited (GGC) due to several factors, for instance, economic fluctuation, trade war, huge surplus of palm oil, PM2.5 and intense market competition of Methyl Ester, just to name a few, which affected the Company's business operations. The Company has managed business operations more effectively and continued playing a leading role in biochemicals business while strictly adhering to the sustainability development plan as well as building a sustainable and stable environment for all stakeholders.

**Ways to Overcome Challenges**

GGC has dealt with all problems and challenges through several approaches, for example, cost-cutting measures and enhancement of Methyl Ester productivity. In April 2019, Methyl Ester Plant 2 in Chon Buri province has commenced its commercial operations. The advanced technologies that are implemented at the plant have helped save a significant amount of cost and enhance product quality that is in line with the higher standard of biodiesel B10. GGC has also collaborated with the public sector to support the government's policy to promote the use of B20 and B10 in order to save energy and preserve environment, which reflects the Company's priority to solve the balance problem between supply and demand of domestic palm oil and PM2.5 crisis. Furthermore, the Company fully supported the government's announcement to set B10 as the primary biodiesel which aims to create benefits throughout the supply chain of Palm Oil and Methyl Ester of Thailand in a sustainable way. On 1 January 2019, the Thai government announced that B10 would be set as the primary biodiesel and be available at petrol stations nationwide.

**Build on Growth Strategy**

The first phase of the Nakhon Sawan Biocomplex (NBC) has been implemented as planned and the commercial operations are expected to begin in the first quarter of 2021. Ethanol Plant at the NBC, with a capacity of 186 million liters per year or 600,000 liters per day, can push forward the government's policy to promote the use of ethanol and E20 as the primary petro while the Company is able to strive to provide an integrated biochemical business.

**Build Up Confidence in Business Management**

GGC has strongly upheld good corporate governance and sustainable development to boost confidence among stakeholders by improving whistleblower system, raising awareness of regulatory compliance, developing internal control, regularly monitoring and controlling risk, and achieving risk management measures, creating corporate culture among the employees, and strengthening internal audit. Regarding the inventory shortfall incident, GGC has closely followed up and regained the remaining portion of raw materials from the suppliers. At the same time, a complaint has been filed against the wrongdoers.

In 2019, GGC has been honored with the Thailand Sustainability Investment Award (THIS), reflecting the Company's responsibility towards society and environment as well as a strong commitment towards corporate governance as stipulated by the Stock Exchange of Thailand (SET) through tangible ways. The award boosted morale and encouraged our employees to go extra miles in their job.

Lastly, on behalf of the Board of Directors, I would like to extend my deepest gratitude to the shareholders and all stakeholders for your trust and continuous support. We will continue to carry out business activities in accordance with the Company's Vision, Missions and work plans to build a sustainable value in the long run.



**(Mr. Supattanapong Punmeechaow )**  
**Chairman**

# Business Overview





## Policy and Business Overview

### 1.1 Corporate Strategy

GGC's business directions and strategic plans focus on establishing and maintaining competitiveness, sustainable growth in biochemical business and other organizational developments to support the future growth plans to achieve both short-term and long-term goals. The key strategies are as follows:

#### 1. Maintain and Strengthen Business Strategy

In order to maintain and strengthen GGC's competitiveness from the current platform, the Company focuses on improving the productivity by taking two approaches which are:

- 1) **Enhance Operational Excellence:** GGC pursues operational excellence throughout supply chain management from raw material procurement which is stable in terms of price, quality and quantity, adequate inventory, productivity improvement to maximize stability and efficiency of product, quality of product, reliable raw materials, inventory management and reliable and on time product delivery including safety and working conditions of workers as taking environmental factors into consideration.
- 2) **Enhance End-to-End Internal Work Process:** GGC follows the investment plan and the business expansion to pave the way for smooth, concise and effective internal control. Moreover, GGC has the revision plan and internal control improvement, including the Good Corporate Governance and Code of Conduct.

#### 2. Marketing Excellence Strategy

GGC plans to maximize returns from sales and marketing through 2 approaches which are:

- 1) **Strengthen Market Excellence on Existing Business:** GGC grows together with customers while looking for new market opportunities that will bring higher and sustainable profit growth and increasing brand awareness to boost confidence in the Company's products and services among customers.
- 2) **Develop New Market for Growth:** GGC prepares information and support system, including market analysts and marketing strategy that is suitable for downstream businesses and generate maximum profits to the Company.

#### 3. Innovation and Product Development Strategy

GGC recognizes the sustainable business, creativity, and innovation development which are the key factors for value-added products and difference from competitors. Thus, the Company has created and improved innovation in human resources and budget. One of key approaches is research and development (R&D) that has been adjusted to fit the business.

GGC also designates Technology Development Department to cooperate with other units within the Company to push for greater innovation and gather ideas to draw up an innovation development plan while building up external network to develop new technology and innovation. The cooperation with PTT and GC Group will enhance synergy benefit among groups for technology and product development. Moreover, the cooperation networks outside the Company and R&D will help the Company meet customer demand and pave the way for the Company to become a total solution provider in line with sales and marketing strategies.

GGC has divided innovation development into 2 groups in accordance with nature of business which are:

- 1) **Innovation for BAU Enhancement:** Innovation is created to support 'Business as Usual (BAU)' that uses Palm Oil as raw material for increasing value on by-products of the existing production and improve waste quality in the manufacturing process that will enter into emerging markets (Extract Value from BAU Residues).
- 2) **Innovation for Business Growth:** Innovation is created to support growth business that covers 3 categories of natural raw materials which are as follows:
  - I. **Innovation from Palm Based:** Actively promote existing products, including Methyl Ester, Fatty Alcohols and Glycerine to expand into high value product of downstream oleochemical through establishing a joint R&D of PTT Group and collaboration with universities, institutions and business partners.
  - II. **Innovation from Sugarcane Based:** Expand sugarcane-based products to end-use markets, including biofuels, bioplastics, food & feed, and home & personal care (HPC) through establishing a joint R&D of PTT Group and collaboration with universities, institutions and business partners.
  - III. **Innovation from Other Bio Based:** Explore opportunities to improve high value-added products that are derived from materials of biological origin such as biomass and animal fats.

#### 4. Green Growth Strategy

In addition to be a leading player in existing business, GGC is looking for new business opportunities in environmental friendly products through 3 ways which are mentioned as follows:

- 1) **Strengthen Palm Based Business:** GGC has planned to strengthen palm oil-based business in both of investment projects to enhance Business as Usual (BAU) and expansion products to Home and Personal Care Business.
- 2) **Set up Sugarcane Biocomplex:** GGC is conducting a feasibility study to improve competitiveness in Biochemicals/Bioplastics using sugarcane as raw material in order to suitably effectiveness and ensure long-term sustainability in business, the Company has invested in production plants linked to the raw material usage and public facility management which provide synergy benefits between manufacturers and sugarcane industry.

- Cost saving in raw materials, products and infrastructure sharing.
- Cost saving in delivery of raw materials from factory to raw material source are closely.
- Energy Saving decreased by 30-40 percent derived from crop residues and biogas from wastewater.

Due to the fact that sugarcane industry uses considerable raw materials from the agricultural sector which are renewable feedstocks and Thailand has ability to produce raw materials as a result, Thailand will have opportunity to be the industry's leader and will be the part of technology provider.

Thanks to the above advantages, costs of investing will drop, compared with other industrial estates. Development of sustainable and competitive biocomplex consist of key products and by-products have 4 components.

- Biofuels as Ethanol
- Biochemicals as several types of biochemical products are developed into downstream products such as food, animal feed and nutraceuticals.
- Bioplastics
- Electric power and steam derived for internal use in the biocomplex while the remainder will be sold to Provincial Electricity Authority (PEA) grid Electricity Generating Authority of Thailand (EGAT) and/or other buyers.

- 3) **Consolidation:** GGC plans to expand its business through consolidation while conducting a feasibility study to find synergy benefits in four key areas which are 1. Process Technology, 2. Market Development, 3. Knowledge Sharing 4. Production Integration. The Company cooperates with GC to study 'Synergy Valuation'. Meanwhile, the Company is looking for opportunities to merge and acquisition with other companies and conduct business to align with the business plan of the Company.

## 5. Capability Build Up Strategy

GGC has created guidelines to build up capabilities that are necessary to drive present and future business growth. In order to achieve this goal, the Company has drawn 2 measures which are as follows:

- 1) **Enabler Effectiveness:** In order to GGC's successful execution of its strategic plans need 4 aspects of efficient support from internal units which are:

### I. Strategy of Human Resources for Growth

It can be divided into two parts which are people and capability development and corporate culture development. The Company puts emphasis on human resources to support core business and implement the strategy to promote new growth by developing well-rounded employees, their skills, and their ability to align with corporate culture.

## II. Strategy of Share Service Management for Procurement & IT

GGC pays attention to efficient procurement in order to promote goods and services that are appropriate, reasonable and reliable with fairness, transparency, accountability and anti-corruption efforts in accordance with the business ethics. Thus, GGC cooperates in procurement process through a service agreement with GC, which commands modern technology such as e-Sourcing, e-Auction and e-Networking to connect with its business partners in a faster, more transparent and accountable way. Also, GC holds high bargaining power for benefits to the Company.

GGC has employed advanced digital technology through a service agreement with GC and PTT Digital Solutions Company Limited (PTT Digital). Due to their great expertise in information technology and standard system that can respond to demand in a timely manner, information storage and security, effective control measures and tight cyber security measures, GGC will be able to gain benefits in terms of investment saving in human resources, systems and tools. Enterprise Resource Planning (ERP) software has also been implemented in the key areas of customer relations, operational excellence and corporate functions efficiency to sustain growth and support continuous expansion of existing business both in domestic and international. Furthermore, information technology infrastructure has been upgraded to support operational excellence of upcoming projects that located outside operating areas. To make sure high performance of those services, the Company regularly monitors and evaluates the performance of the services.

## III. Strategy of Corporate Social Responsibility and Public Recognition

### Corporate Social Responsibility and Public Recognition Strategy

GGC has committed to the principles and the practices of corporate social responsibility (CSR) that truly aid economy, society and environment through meaningful activities and field visits to communities around its plants in Map Ta Phut industrial complex, located in Rayong's Ban Chang district and other areas that are earmarked for the Company's plants. However, the Company has created a better framework for corporate social responsibility to achieve sustainable success.

### Public Recognition Strategy

GGC stresses the importance of reputation and communication management that are considered as the core of the corporate strategy to build a good reputation, trust and public recognition. To this end, GGC plans to implement quality communication strategy both inside and outside of the Company, put corporate reputation management in place to upgrade the communication efficiency and build good relations with stakeholders and press to pave the way for wider public recognition.



#### IV. **Support Government Policy and Measurement External Relationship**

The Company's business at the present and future covers the creation of value-added and processed products from economic crops, technology development, measures to promote investment in New S-Curve industries and measures in domestic and international markets. It clearly shows that a change in the government's policy and industries both in domestic and international affect the Company's implementation in investment and business expansion. In order to run business smoothly follow with the corporate strategy while maintaining competitive edge, the Company stresses the importance of networking and partnership in the same business that can lead to the setup of a joint public-private committee to support and provide information to the government to promote bioindustries as well as a working group who work on behalf of GGC Group and represent the private sector in the industry and coordinate with governments in domestic and international at policy level.

- 2) **Sustainability Development:** GGC has committed to become one of the global's role models in sustainability as listed on the Dow Jones Sustainability Indices (DJSI). The Company is ramping up efforts to gain wider acceptance from stakeholders in the key areas of economy, society and environment in a balanced manner through the participation of the employees to move forward towards sustainability. The Company's Corporate Governance and Sustainable Development Committee submitted a roadmap and related reports to be named a member of the DJSI. Currently, the Company has set up Sustainability Committee to push forward the sustainability progress and support works of Corporate Governance and Sustainability Committee to ensure the Company is in compliance with the corporate policy and international principles.

## 1.2 Key Developments and Important Changes in 2019

### 11 January 2019 : Establishment of GGC KTIS Bio Industrial Company Limited (GKBI)

GGC KTIS Bio Industrial Company Limited (GKBI) was found to introduce the project called “Nakhon Sawan Biocomplex” (NBC). GKBI is a joint venture of GGC and Kaset Thai International Sugar Corporation Public Company Limited (KTIS). Each holds a 50% stake.

### 27 March 2019 : The Signing of Loan Agreement for “Nakhon Sawan Biocomplex”

GGC and KTIS signed a loan agreement with Krungthai Bank Public Company Limited (KTB) to finance Nakhon Sawan Biocomplex, which nurtures the country’s bioeconomic industrial complex, with the expectation to commencing commercial operations in the first quarter of 2021.

### May 2019 : Submission of Progress Report to the United Nations Global Compact (UNGC)

GGC has moved up from Active to Advance level in the United Nation Global Compact (UNGC) membership, reflecting the Company’s commitment to be economically, socially and environmentally responsible. GGC has submitted Communication on Progress (COP) report in accordance with 21 principles of the UNGC and adopt the principles into the business activities to sustainability effectively.

### June 2019 : Export of Biodiesel B100

GGC has shipped more than 6,800 tons of Methyl Ester or B100 which is comprised of 4,300 tons to the People’s Republic of China and 2,300 tons to Europe – in line with the Thai government’s policy to absorb excess domestic crude palm oil (CPO) supply and to boost domestic fresh fruit bunch (FFB) price for small-scale palm oil farmers.

### 28 June 2019 : The Registration of Reduction of the Registered and Paid Up Capital and Amendment of the Memorandum of Association

The 2019 Annual General Meeting of Shareholders of the Company held on April 2, 2019 passed the resolutions of the approval of the reduction of the Company’s registered and paid-up capital from THB 10,236,667,000 to THB 9,724,833,650 by reducing the par value of shares from THB 10 per share to THB 9.50 per share and amendment to clause 4 of the Company’s Memorandum of Association to be consistent with the reduction of the registered capital.

### 4 July 2019 : Inno BioPlast 2019

GGC joined in panel discussion on the topic “Thailand Biorefinery for Sustainability Development” at Inno Bioplastic 2019 : Circular Economy Opportunities for Bioplastics, hosted by the Thai Bioplastics Industry Association (TBIA) to exchange experience and view on direction and development of the bioplastics industry with veteran academics from several institutions.

### **30 September 2019 : First Piling Ceremony for “Nakhon Sawan Biocomplex”**

The first piling ceremony was held by GGC and KTIS for the “Nakhon Sawan Biocomplex” or shortly called NBC that occupies a 2,000-rai plot in Nong Pho sub-district, Takhli district, Nakhon Sawan province. The NBC with an investment of THB 7,500 million is the first bioeconomy industrial complex of Southeast Asia and Thailand’s first biocomplex where sugarcane will be the primary raw material.

### **28 October 2019 : Campaign to Promote the Use of Biodiesel B10 and Set Up B10 to Be Biodiesel Mandate of Thailand**

GGC, as a member of the Thai Biodiesel Producer Association (TBA), together with Ministry of Energy, vehicle manufactures, refinery plants, fuel traders who are under Section 7 and Oil Palm Growers Federation have cooperated to promote the use of biodiesel B10 and announce it as primary diesel of the country from 1 January 2020 onwards, replacing B7. Biodiesel B10 will be available at petrol stations nationwide by March 2020 with the aim of reducing the high PM2.5 levels and cutting down the imported oil. The increase in B10 use will also strengthen energy security and strike a balance in sustainable palm oil.

### **Awards and Recognitions Received in 2019**

#### **28 February 2019 : Halal Award 2019**

GGC won the Halal Awards for its Halal business excellence from the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The ceremony was organized by the Central Islamic Committee of Rayong and the committee’s development division. The award targets the certificated companies that comply with halal standard and apply the standard into manufacturing process of Fatty Alcohols and Glycerine. GGC has been well recognized for its practices and has sold its products to several foreign customers to be used as ingredients in medicine, cosmetic and personal care products.

#### **25 March 2019 : White Flag – Green Star Award 2019**

GGC was presented with the White Flag – Green Star Award 2019 for seven consecutive years and the White Flag – Gold Star Award 2019 for two consecutive years by the Industrial Estate Authority of Thailand (IEAT), reflecting the Company’s strong commitment to environmental good governance, confidence and coexistence among communities, society and industrial sector.

#### **30 July 2019 : Authorized Economic Operator (AEO) Certificate 2019**

GGC was awarded with the Authorized Economic Operator (AEO) certification from the Customs Department. The AEO is mutual recognition program and is a force driving the economy. It aims to encourage private sector to be aware of safety and international standards for import and export. At the present, there are 74 AEO- certified countries around the world.

**21 August 2019 : Award for Being an Excellent Role Model on Safety, Occupational Health and Working Environment (Diamond Level)**

GGC was presented with the diamond-level award for excellent establishment on safety, occupational health and working environment for six consecutive years from the Department of Labor Protection and Welfare under Ministry of Labor. The award demonstrates GGC's full compliance with Thai laws and international safety standards.

**5 September 2019 : Green Industry Level 5: Green Network award**

GGC was honored with the Green Industry label Level 5 from the Department of Industrial Works for two consecutive years, meaning the Company is eco-friendly not just within the Company but also with stakeholders across the supply chain.

**23 September 2019 : CSR-DIW Continuous Award 2019**

GGC received the CSR-DIW award for the fifth consecutive years from Industry Ministry's Department of Industrial Works (DIW) of Thailand. The award reflects the Company's tremendous efforts and determination to comply with laws and regulations that related to social responsibility, community development while upholding social responsibility policy.

**1 October 2019 : Green Meeting Certification from TBCSD**

GGC won a Green Meeting Certificate from the Thailand Business Council for Sustainable Development (TBCSD) and Thailand Environment Institute Foundation (TEI) in recognition of the Company's efforts to use resources effectively and reduce environmental impact.

**17 October 2019 : Gold Award for Infographic for Annual Reports at the 2019 International ARC Awards**

GGC received the Gold Award for 'infographic' in its 2018 Integrated Sustainability Report at the International ARC Awards in Seoul, South Korea in recognition of the Company's outstanding infographics that described the report's information covering social, environmental and economic issues.

**26 November 2019 : Thailand Sustainability Investment Award 2019**

GGC won the Thailand Sustainability Investment Award 2019 (THIS) from the Stock Exchange of Thailand (SET) and Money & Banking Magazine. GGC was one among 98 SET-listed companies that received the award for being inspiring role models for sustainable business performance and applying environmental, social and governance issues as mechanisms to effectively develop sustainable business. GGC was categorized in SET Group 3 with market capitalization of THB 10 billion - 30 billion.



### 1.3 Business Overview: Shareholding Structure of GGC and Subsidiaries

Global Green Chemicals Public Company Limited (GGC) is a producer of green chemicals business. The current products include Methyl Ester, Fatty Alcohols and Refined Glycerine as well as the product of Ethylene Oxide product group such as Fatty Alcohol Ethoxylates.

Methyl Ester or “B100” is a blending agent in high-speed diesel for the domestic retail market. In 2018, according to the Company’s sales volume of Methyl Ester and the statistics from the Department of Energy Business, GGC’s Methyl Ester blended in high-speed diesel accounted for 26% of the total Methyl Ester sold to domestic customers, the majority of whom were producers and blenders of high-speed diesel. The customers usually mix Methyl Ester with diesel fuel to get high-speed diesel and sell it at petrol stations. GGC owns two Methyl Ester plants – Methyl Ester Plant 1 and Methyl Ester Plant 2 – with a total nameplate capacity of 500,000 tons per year.

Furthermore, GGC is the sole producer of Fatty Alcohols in Thailand with nameplate capacity of 100,000 tons per year. Fatty Alcohols are used as key ingredients in cosmetics, surfactants and other pharmaceutical products.

GGC also produces Refined Glycerine with a total nameplate capacity of 31,000 tons per year. Refined Glycerine is commonly used as an ingredient in cosmetics, pharmaceutical products and other byproducts such as Crude Glycerine, Yellow Glycerine, Potassium Sulfate, Methyl Ester Residue, and Fatty Alcohols Residues.

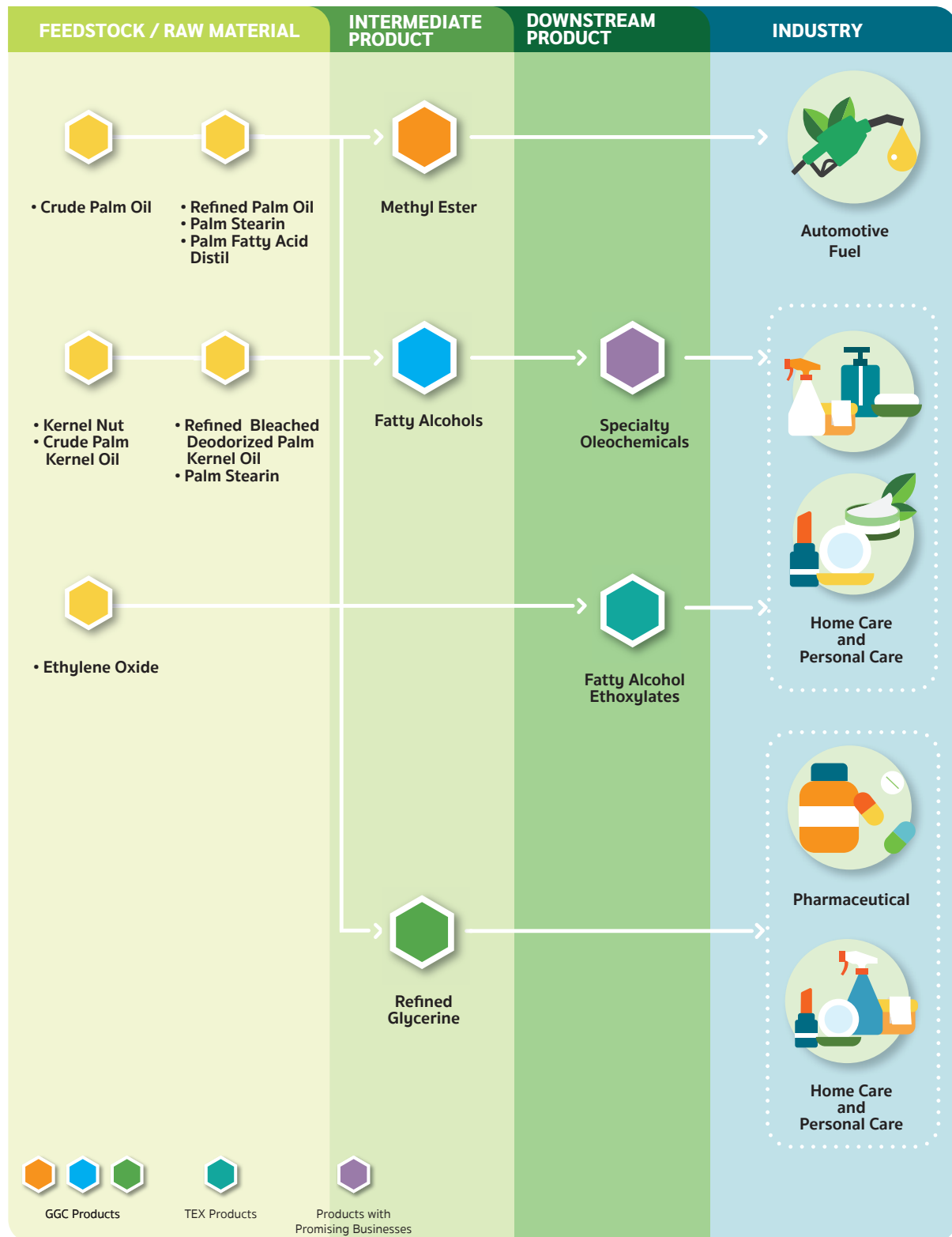
GGC and Thai Fatty Alcohols Company Limited. (TFA) produce Methyl Ester, Fatty Alcohols and Refined Glycerine, while Thai Ethoxylate Company Limited. (TEX) is Thailand’s sole manufacturer of Fatty Alcohol Ethoxylates, which are widely used in a wide range of products, including home and personal care, scouring agent and fabric softener. TEX is a major domestic customer of GGC’s Fatty Alcohols product and has nameplate capacity of 124,000 tons per year of Fatty Alcohol Ethoxylates. TEX is a 50:50 joint venture between GGC and BASF (Thai) Company Limited.

Besides, GGC also holds 30 percent of the shares in Thai Eastern Top Seeds Oil Company Limited. (TETSO), a joint venture with Eastern Palm Oil Company Limited (EPO) to operate extraction of Kernel Nut. TETSO has already completed commercial operation with a nameplate capacity of 90,000 tons per year for Crude Palm Kernel Oil.

GGC holds a 100% stake in GGC Biochemicals Company Limited (GGC Bio), which is a holding company operating and investing in green chemicals business. GGC Bio was established on December 24, 2018.

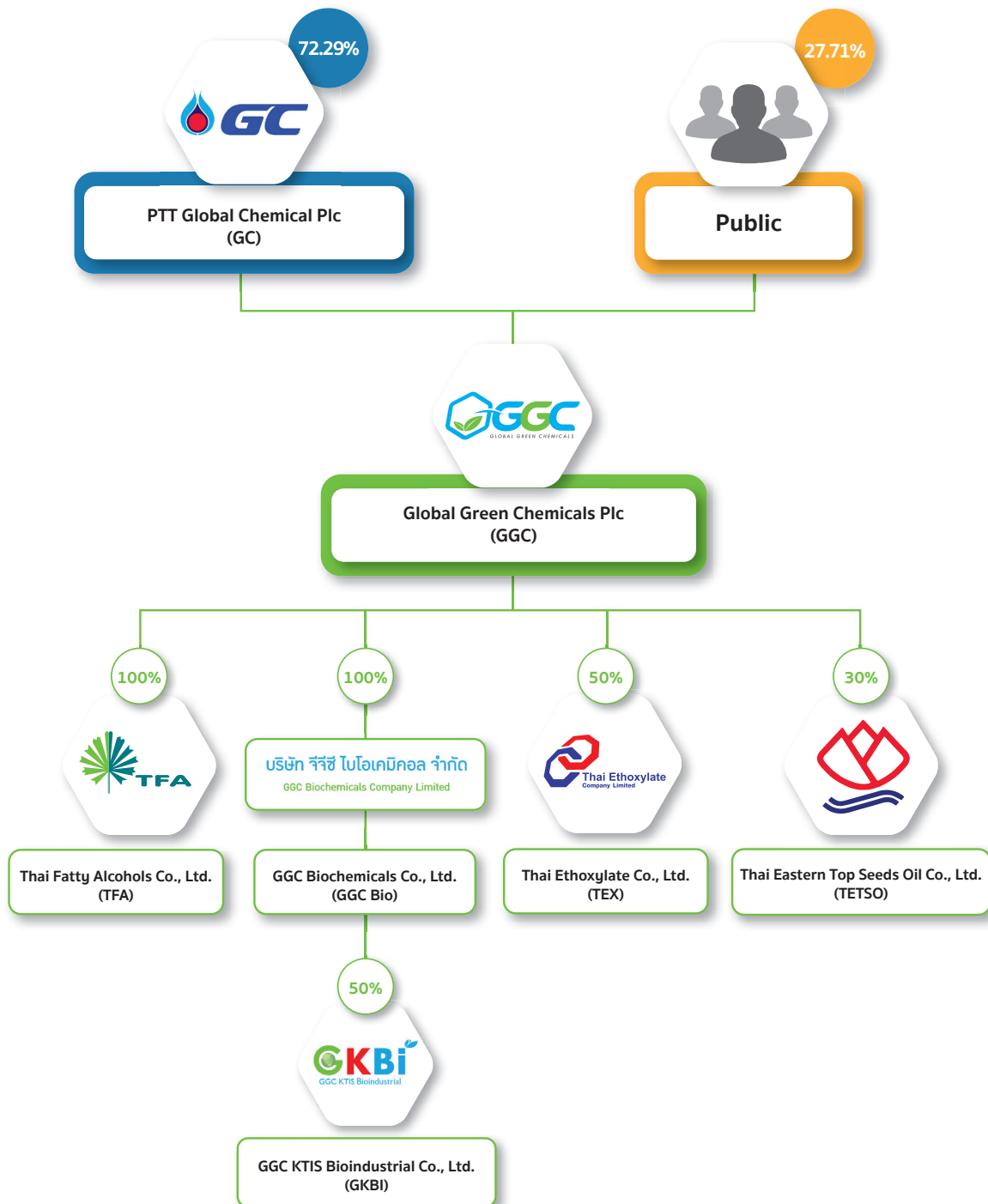
GGC KTIS Bio Industrial Company Limited (GKBI), a 50:50 joint venture between GGC Bio and KTIS Bioethanol Company Limited (KTBE) was established on 11 January 2019 to invest in (1) Sugarcane crushing mill (2) Ethanol plant (3) Biomass power plant with options to sell power to Provincial Electricity Authority (PEA), Electricity Generating Authority of Thailand (EGAT) and/or other buyers and (4) Industrial estate, facilities and infrastructures for bioindustry business operation.

## Business Value Chain



## 1.4 Relations with Investors & Major Shareholders

### Shareholder Structure



#### NOTE :

##### Subsidiaries

- Thai Fatty Alcohols Company Limited (TFA)
- GGC Biochemicals Company Limited (GGC Bio)
- Thai Ethoxylate Company Limited (TEX) represents a joint venture formed by GGC and BASF (Thai) (a subsidiary of BASF SE), which holds 50% shares in TEX

##### Joint Ventures

- Thai Eastern Top Seeds Oil Company Limited (TETSO) represents a joint venture formed by GGC and Eastern Palm Oils Company Limited (EPO), which holds 70% shares in TETSO and operates Palm Kernel Oil extraction business
- GGC KTIS Bioindustrial Company Limited (GKBI) represent a joint venture formed by GGC Biochemicals Company Limited (GGC Bio) and KTIS Bioethanol Company Limited (KTBE) which GGC Bio holds 50% shares in GKBI

## Nature of Business and Performance

Revenue is generated from selling goods consisting of Methyl Ester, Fatty Alcohols and Refined Glycerine as well as byproducts 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 year ended December 31

Year	2017		2018		2019	
	Revenue from Product Sales	% of Total Revenue	Revenue from Product Sales	% of Total Revenue	Revenue from Product Sales	% of Total Revenue
Product	(Million THB, except percentage ratio)					
Methyl Ester	9,825.6	50.5%	8,594.5	53.0%	8,582.4	65.7%
Fatty Alcohols	6,792.6	34.9%	5,686.6	35.0%	3,706.4	28.4%
Refined Glycerine	881.0	4.5%	1,048.2	6.5%	565.9	4.4%
Others <sup>(1)</sup>	1,973.1	10.1%	895.3	5.5%	200.0	1.5%
Total	19,472.3	100.0%	16,224.6	100.0%	13,054.7	100.0%

<sup>(1)</sup> Mainly included Crude Glycerine, Yellow Glycerine, Potassium Sulfate, Methyl Ester Residues and Fatty Alcohols Residues and income from sales of raw materials.

## 2.2 Methyl Ester

### 2.2.1 Nature of Product

Methyl Ester (also known as B100) is referred to as basic oleochemicals. It is environmentally friendly enough to be used as a blending agent in high diesel fuel to produce biodiesel that meets the European standard (EN 14214). Methyl Ester also enhances diesel fuel performance. It does not only offer enhanced lubricity but also provides a more efficient combustion, resulting in extended life of diesel engines and reductions in pollution for instate PM2.5 Problem or environmental impacts.

### 2.2.2 Market and Competition

#### a) Policy and Nature of Market

Methyl Ester is sold to those who produce and blend the high-speed diesel, the majority of whom are domestic customers. Sale agreements for a specific period of time are usually signed between the Company and customers.

#### b) Market Overview and Trends

##### 2019 Market Overview

In 2019, demand for Methyl Ester for the year reached 1.56 million tons, up by 0.22 million tons or 16% from the same period in 2018 due to the Thai government's policy to absorb excess domestic Crude Palm Oil (CPO) supply.



The Ministry of Energy has determined B20 as an alternative fuel for diesel engines since the end of 2018, which the government has subsidized on B20 price, through the state of oil fund at a price lower than the price of regular-grade biodiesel (B7) at 5 baht per liter, to support the diesel vehicle manufacturers in using the B20 as an alternative fuel for diesel engines. As a result, the demand for B20 has increased to 7 million liters per day which is higher than the government target at 5 million liters per day. However, to encourage the use of B10, the government plans use as mandate instead B7. The price of B10 is to be lower than B7 of 3 baht per liter which has affected from October 1, 2019.

The Government has continuously encouraged the use of B10 as mandate, B10 was determined as an alternative fuel for diesel engine since May 2019, and the price was lower than the price of B7 at 1 baht per liter adjusting to lower than B7 at 2 baht per liter effective from October 1, 2019, which encouraged the usage of B10. Moreover, Methyl Ester Plant 2 has commenced the commercial operation in the year 2019 and is ready to support the production of biodiesel for B10 according to the government's standards.

In 2019, the competition market has still remained high and fluctuation of raw material and products as well as oversupply from the major and established companies. GGC has an incremental capacity up 0.2 million tons, adding the industrial sector's production capacity to 2.6 million tons, up 0.53 million tons from last year. Due to an increase in production capacity, an average utilization rate dropped and stood at 60%.

Domestic price of Methyl Ester is expected to surge responding to fluctuation in the domestic price of Crude Palm Oil. The 2019 price dropped from 27.91 THB per kilograms in 2018 to 25.85 THB per kilogram, falling 2.07 THB per kilogram or 7% from last year.

#### 2020 Market Trends

Demand for Methyl Ester in 2020 is expected to raise to 2.13 million tons, up 0.58 tons or 37% due to the government's initiative to shift to biodiesel B10, replacing the use of B7 to absorb over 3.2 million tons of surplus Crude Palm Oil. In addition, the move to encourage B20 for diesel-power cars and public transportation is aimed to saving transportation cost as well as boosting the use of Methyl Ester. However, demand for B10 during the initial stage does not grow at a fast pace since its availability does not cover all petrol stations and lack of confidence among motorists that old vehicles are compatible with B10.

Price of Methyl Ester in 2020 may be more attractive and increase following demand of Crude Palm Oil price increase.

#### **2.2.3 Procurement**

Palm Oil is a main raw material for Methyl Ester production. The Company, thus, procures domestic Palm Oil in order to support the country's agricultural and industrial sectors. GGC has two Methyl Ester Plants – Methyl Ester Plant 1 with a nameplate capacity of 300,000 tons per year, while Methyl Ester Plant 2, started commercial operation on 5 April 2019 with a nameplate capacity of 200,000 tons per year.

## 2.3 Fatty Alcohols

### 2.3.1 Nature of Product

Fatty Alcohols are considered to be environmentally friendly and basic oleochemicals that are among the most commonly used ingredients in personal care and home care formulations. Fatty Alcohols are also mainly used in a wide range of products, including surfactants, plasticizers, solvents, flavorings, fragrances, detergents, foam stabilizers, lubricants, cosmetics, plastic intermediates, shampoo, paint and coatings, textile and leather auxiliaries and inks.

### 2.3.2 Market and Competition

#### a) Policy and Nature of Market

Thai Fatty Alcohols Company Limited (TFA) produces and sells Fatty Alcohols to domestic as well as foreign customers. The major customers are consumer goods manufacturers, oleochemical companies, traders and distributors. Thai Ethoxylate Company Limited (TEX) is the main domestic customer, while overseas markets include Asia, Europe, South Africa and South America.

#### b) Market Overview and Trends

##### 2019 Market Overview

In 2019, global market of natural Fatty Alcohols saw stable growth because the price was more attractive than synthetic Fatty Alcohols and also a balanced supply of the industry that brought purchasing power. However, China's purchasing power has diminished due to the US-China trade war and the depreciation of the Yuan against the US dollar.

Supply for Fatty Alcohol also dropped due to the shutdown of a major producer in the United Kingdom that has a total production capacity of 120,000 tons per year of synthetic Fatty Alcohols. While the implementation of strict environmental regulations in China has forced several local manufacturers to temporarily halt their operations, Indian manufacturers also suffered from sharply Palm Oil prices caused by tariff barrier. Due to these factors, production capacity of Fatty Alcohols remained stable.

In 2019, falling price of Crude Palm Kernel Oil (CPKO) caused Fatty Alcohols price to tumble, down 301 USD per ton or 19% from 1,568 USD per tons in 2018 to 1,267 USD per ton.

##### 2020 Market Trends

Demand in 2020 for natural Fatty Alcohols is expected to decrease from 2019 but the price of natural Fatty Alcohols is still more attractive price comparing to synthetic Fatty Alcohols. However, the US-China trade war and the depreciation the Yuan against the US dollar may be factors to weaken power purchasing of China, the major customer. In addition, Major Producer which located in USA has planned to operate synthetic Fatty Alcohols with capacity 250,000 tons per year in third quarter of 2020 which causes buyers to gain more bargaining power in Fatty Alcohols market.

The average price of Fatty Alcohols in 2020 is expected to rise to 1,339 USD per ton, up 89 USD per ton or 7% following rising of Crude Palm Kernel Oil (CPKO) price.

### 2.3.3 Procurement

GGC and TFA use Crude Palm Kernel Oil (CPKO) as feedstock and procure it mainly from domestic markets in order to support the country's agricultural and industrial sectors. For a certain period of time, the Company imports Crude Palm Kernel Oil (CPKO) and refined coconut oil from Malaysia and Indonesia due to a shortage in domestic supply. However, procurement priority is given to local raw materials.

GGC is the sole producer of Fatty Alcohols in Thailand with a nameplate capacity of 100,000 tons per year for commercial operation.

## 2.4 Glycerine

### 2.4.1 Nature of Product

Glycerine is a major byproduct in the manufacturing process of Methyl Ester and Fatty Alcohols. It is commonly used as an ingredient in pharmaceutical, food and personal care product industries.

### 2.4.2 Market and Competition

#### a) Policy and Nature of Market

GGC sells Refined Glycerine to health and personal care product manufacturers and supplier both domestic and international mainly through distributors while some are sold directly to customers such as multinational corporations (MNCs) in the medical industry, personal care domestic manufacturers and pharmaceutical manufacturers in South Asia. Epichlorohydrin manufacturers also purchase Glycerine from GGC through direct sales.

#### b) Market Overview and Trends

##### 2019 Market Overview

The Refined Glycerine market slowed down as a result of rising of Methyl Ester supply from the policy to promote the use of biodiesel from increasing biodiesel blending rate of leading biodiesel producers in global market for example Malaysia's announcement to replace biodiesel B10 as the primary diesel, replacing B7, Brazil's move to increase its mandate from B10 to B11 and the Thai government's decision to make B10 and B20 alternatives for motorists. Due to these factors, the price trend for Refined Glycerine was declining to 540 USD per ton, falling 291 USD per ton or 34% following higher market competition.

##### 2020 Market Trends

In 2020, the Refined Glycerine market will continue to have intense competition due to an increase in Glycerine volume from the production process of making B10 as the mandatory diesel instead of B7 from 1 January 2020 onwards. Meanwhile, the global market competition also will be in the same direction because of rising of supply that actions taken by the governments of vegetable oil producing-countries such as Malaysia's announcement to replace B10 with B20 as fundamental diesel, the Indonesian government's announcement to promote B30 as the primary biodiesel, replacing B20 and Brazil's move to increase its mandate from B11 to B12.

### 2.4.3 Procurement

Glycerine is a major byproduct in the manufacturing process of Methyl Ester and Fatty Alcohols. GGC produces Glycerine with a nameplate capacity of 31,000 tons per year for commercial operation.

## 2.5 Fatty Alcohol Ethoxylates

### 2.5.1 Nature of Product

Fatty Alcohol Ethoxylates is produced from Ethylene Oxide (EO) and Fatty Alcohols. Thai Ethoxylate Company Limited (TEX) is Thailand's sole manufacturer of Fatty Alcohol Ethoxylates, which are widely used in a wide range of products, including personal care products (e.g. shampoo) and home care products (e.g. dishwashing liquid and cleaning agents), scouring agent and fabric softener.

### 2.5.2 Market and Competition

#### a) Policy and Nature of Market

TEX has a policy to maintain and increase the Company's market share in Fatty Alcohol Ethoxylates in domestic while exporting Fatty Alcohol Ethoxylates to overseas markets, Southeast Asia in particular since the region is a production base for personal care and homecare products. However, TEX is eager to expand its business to other regions such as South Asia, Middle East and Africa to get maximum returns.

#### b) Market Overview and Trends

##### 2019 Market Overview

Fatty Alcohol Ethoxylates market has seen gradual growth compared with last year due to economic decline caused by the trade war. Consumer goods industry, including personal care and home care products, also saw sluggish growth. Moreover, the market had intense price competition with Southeast Asian players. The market was also afflicted by external factors such as exchange rate fluctuations, especially the baht appreciated against the US dollar and that of neighboring countries that remain a pain point for the export and might affect competition in the market. Natural Fatty Alcohols price fluctuations gave a direct impact on product cost management.

##### 2020 Market Trends

In 2020, the growth of Fatty Alcohol Ethoxylates is expected to rise at an above-average rate of target markets such as personal care and home care industries in Southeast Asia that grow at an average rate of 3-4 percent and even emerging markets that have a growth forecast of 6-7 percent despite unfavorable external factors including high fluctuations in production cost that is likely to pose a challenge to market price forecasts and cause intense competition, compared with last year. In addition, Fatty Alcohols manufacturers are now new players with strong potential in Ethoxylates market with production cost advantage. Nevertheless, TEX has a strong customer base at national market that the company plans to snap up market share and expand its business to fast-emerging markets.

### 2.5.3 Procurement

Ethylene Oxide (EO) and Fatty Alcohols are major feedstocks to produce 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.

## Development of Key Projects

In 2019, GGC's projects in progress and projects under study were as follows:

### Methyl Ester Plant 2 Project

The Methyl Ester Plant 2 project with a nameplate capacity of 200,000 tons per year (TPA), designed to capture growth opportunities in the biodiesel industry in Thailand. The construction was started in March 2017 with the total investment cost of THB 1,650 million, located at Thai Eastern Industrial Land in Nongyai district Chonburi province and already completed 2018. The plant was commercial operation on date 5 April 2019. The product can be blended with diesel oil for biodiesel to support rapidly growth of transportation sector. Moreover, it can be used as a main solution for producing other products for agricultural sector.

### Refined Glycerine Plant 2 Project

The purpose of the Refined Glycerine Plant 2 Project is to expand the Glycerine market share and capture market growth of high-volume industries. The feedstock of this project is Crude Glycerine from Methyl Ester Plant 2. Refined Glycerine serves as feedstock or an additive in various industries. Refined Glycerine Plant 2 with an investment of THB 363 million has a total nameplate capacity of 20,000 tons per year (TPA). The construction is under way and expected to start commercial operation in the fourth quarter of 2020.

### Nakhonsawan Biocomplex Project

The Nakhonsawan Biocomplex Project was initiated in line with the Development of Bioeconomy in Thailand Policy and Promotional Measures 2018-2027. The joint venture agreement between GGC Biochemicals Company Limited (GGC Bio), a wholly owned subsidiary of the Company and KTIS Bioethanol Company Limited (KTBE), a wholly owned subsidiary of Kaset Thai International Sugar Corporation Public Company Limited (KTIS) had been signed on 24 December 2018. Later, GGC KTIS Bioindustrial Company Limited (GKBI), a 50:50 joint venture company between GGC Bio and KTBE was found on 11 January 2019. The first phase of "Nakhonsawan Biocomplex" (NBC), is located in Takhli district, Nakhonsawan province with an investment of THB 7,500 million. The NBC project will be developed into two phases which are:

- The 1<sup>st</sup> Phase of the project consists of:
  - (1) A sugarcane mill producing sugarcane syrup and High Test Molasse with a capacity of 2.4 million tons per year
  - (2) An ethanol plant with a capacity of 186 million liters per year or 600,000 liters per day based on sugarcane syrup or High Test Molasse from the sugarcane mill.
  - (3) A biomass power plant and steam generator with registered capacity of 85 MW and steam with rate of 475 tons per hour for internal use with a potential to export the excess capacity
  - (4) Infrastructure for supporting Nakhonsawan Biocomplex project.
- The 2<sup>nd</sup> Phase of the project is an extension project to Bioplastics and Biochemicals industries. Currently, the Company is in the process of screening an appropriate technology and partners.

In March 2019, The Board of Directors has approved the first phase of the NBC. The first pilling ceremony was held on 30 September 2019. The construction is in the process which is expected to start the commercial operation in the first quarter of 2021.

GGC believes that this investment will increase the Company's capabilities for future investment in biofuels, 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.

## Risk Management and Risk Factors

### 3.1 Risk Management

Global Green Chemicals Public Company Limited (GGC) remains fully committed to effective risk management with enterprise risk management (ERM) as a core driver. GGC has set up the Risk Management Committee which is defined at Board of Directors level and deployed top down through all levels of the Company. The Company also assigns units responsible for managing risks and assessing them based on internal as well as external risks that pose various threats to the Company's business operations. The risk assessment is an important part of the Company's corporate strategy as well as investment and business planning that cover short-term risks, long-term risks and emerging risks. In order to meet the Company's objectives and goals, the risk mitigation measures are merged with the corporate strategy. GGC also manages risks across the Company as stated in the risk management policy and the enterprise risk management framework as well as guideline which have been approved and reviewed periodically by the Board of Director in line with current and future business conditions.

GGC remains fully committed to enterprise risk management at the Board of Directors level and all levels of the Company. To this end, the Company promotes knowledge and understanding of risk management to employees, so they will consider the matter as one of their duties.

#### Risk Management Standards

GGC has adopted international standards such as the Committee of Sponsoring Organizations of the Treadway Commission (COSO), the International Standardization Organization (ISO 31000) and the Company's Corporate Governance Code of Conduct. GGC's enterprise risk management policy and guideline are also fully aligned with its Corporate Governance Policy by taking part in the Collective Action Coalition Against Corruption (CAC).

#### Risk Management Structure

GGC has established the risk management structure and divided it into three levels as follows:

1. The Board of Directors: The Board of Directors has formed the Risk Management Committee (RMC) to review the Risk Management Policy, objectives and framework. The Board of Directors also voices opinions and provides recommendations on the enterprise risk management and make it in line with the Company's objectives and strategies.
2. Executives: GGC has appointed the Enterprise Risk Management Committee (ERMC), which comprises Managing Director who acts as Chairman and top Executives of all departments as the Committee's members. The functions of the ERMC include identifying the direction of risk management, its scope and working process, giving recommendations on risk management plan and regularly monitoring related works.
3. Department Level: GGC has assigned the Enterprise Risk Management Committee (ERMC), a unit under the Company's Corporate Strategy, and risk coordinators of each department to jointly identify as well as assess the risks, determine risk management measures and submit a report to the Risk Management Committee (RMC) in order to ensure consistent risk management practice.

In order to improve raw materials and products management as well as foreign exchange risks effectively, GGC has set up the Value Chain Management (VCM) to review and approve a marketing plan, procurement of raw materials, distribution of products, inventory management, product management, price risk management, difference between the price of products and raw materials, financial risk. The duties shall be performed under the risk management framework, including monitoring economic and industrial factors as well as any situations that could pose a threat to GGC's products.

### **Risk Management Tools and Monitoring**

GGC analyses and evaluates risks that could threaten the business operations and has also developed a risk map and a mitigation plan. The Key Risk Indicators (KRIs) are applied in the early warning system to be used as a mechanism to monitor the risk management. Furthermore, the Company places importance on the long-term risk as well as emerging risk management in order to prepare measures to brace for such risks. The results from the risk assessment are included in the monthly reports which are submitted later to the Risk Management Committee while the Committee's report is forwarded to the Board of Directors every quarter. To this end, the Enterprise Risk Management Committee (ERMC) and the Risk Management Committee assign every working group or any department responsible for managing risks to propose a prevention plan as warnings increase or such risks pose a significant threat to the business operations.

### **Risk Management Culture**

GGC continues to focus on instilling a risk-aware culture throughout the organization at all levels through the Enterprise Risk Management (ERM) in order to pave the way for steady and sustainable growth for the business. To this end, GGC has taken steps which are mentioned as follows:

- To specify a risk management approach through risk management policy and scope and regularly communicate with the employees.
- To monitor the progress of risk management and report it to top Executives, the Risk Management Committee and the Board of Directors.
- To regularly review and improve roles, duties and responsibilities of those who are responsible for risk management.
- To build a risk awareness company that encourages employees to include risk management as part of their responsibilities and follow the risk management policy and risk management system at corporate and departmental levels. To this end, risk management has been part of the job description of all employees.

GGC offers experts from academic institutes for a series of trainings on risk management for top Executives and all employees. The trainings aim to build understanding of the enterprise risk management among the employees and make them realize its importance. The employees are expected to assess and integrate risk management into their department's development plan by establishing the Key Risk Indicators (KRIs). The Board of Directors places great importance on the enterprise risk management at all levels, including top Executives in order to ensure consistent risk management practice across the Company.



### 3.2 Risk Factors

GGC has determined external and internal factors of the Company that could affect the business operations, strategy target, investment execution and other related factors. These factors are also taken into account for risk identification. Thus, GGC has taken steps for risk assessment and management in 2019 which are mentioned as follows:

#### 1. Operational and Safety Risks

GGC gives high priority to the Operational Excellence Management System (OEMS) which focuses more on process safety management (PSM) and strict compliance with policies on safety, security, occupational health and environment to ensure smooth and effective production activities with maximum safety. To this end, GGC has launched risk management measures which are mentioned as follows:

##### Operational Risk Management Measures

- To run and develop reliability and integrity system of machinery with an inspection carried out through the Asset Integrity Assessment (AIA) by the internal experts.
- To prepare spare parts and emergency generator that supplies emergency power for critical equipment with preventive and proactive maintenance plans.
- To apply the Risk and Reliability Management (RRM) by conducting the Risk-based Inspection (RBI), which is a process to identify risks and draw up an industrial risk map (due to corrosion and stress cracking) that could affect pressurized equipment and structural components. The Reliability-centered Maintenance (RCM) is also a rigorous and cost-effective process to increase the reliability of each critical asset within the firm.

##### Safety Risk Management Measures

- To develop Process Safety Management (PSM) and assess the effectiveness in all areas of process safety while conducting the stability management of machinery.
- To develop knowledge and competency of employees who are responsible for safety in manufacturing operations and raise safety awareness through the B-CAREs.
- To appoint the Committee of Occupational Safety, Health and Work Environment to review workplace safety policy as well as off-the-job safety policy to prevent and reduce risk of accidents and unsafe acts. The Committee also submits a report and provides recommendations to improve safety standards in line with laws.
- To conduct the Business Continuity Plan (BCP) annually to prepare the Company's personnel for any potential threats to GGC and enable them to respond to the threats with confidence that the Company can recover quickly when disaster strikes.
- To provide essential insurances to mitigate the impacts of business-related losses.

- To apply and develop the Field Risk Assessment (FRA) to be used as a tool to identify abnormality or any deviations from the design intention for a process in order to prevent major accidents.
- The announcement of Life Saving Rules has been instituted in order to prevent serious accidents that may result in a fatality. The rules consist of 4 measures; a permit to work, fall protection equipment when working at heights, isolation verification before work begins and safe entry into confined spaces.

## 2. Raw Material Risks

Palm Oil and Palm Kernel Oil are key raw materials for GGC's products. Fluctuations in raw material prices could harm the Company's business operations and profits. A shortage of raw materials may also pose a potential threat to production process. In order to maintain the competitiveness, a sufficient supply of raw materials at a reasonable price is crucial for the Company. Due to these reasons, GGC has outlined measures to deal with raw material risks which are mentioned as follows:

### Risk Management Measures

- To draw up a scope for inventory risk management for raw materials and products in line with GGC's business operations and periodically monitor the business performance with a regular review conducted by the Risk Management Committee.
- To appoint the Value Chain Management (VCM) Committee to oversee raw material prices, procurement of raw materials and inventory management with a close monitoring on economics, industry and raw material market to align with the volatile markets and economy and as stated in the risk management scope approved by the Risk Management Committee.
- To study and define preventive measures for prices of crude palm kernel oil (CPKO), which is considered a key material to produce Fatty Alcohols. In order to manage risks caused by fluctuation of raw material prices and come up with preventive measures, the studies on changes of raw material prices compared with derivatives of other agricultural products that could be relevant are underway.
- To set up a working team to closely cooperate with the public sector in drawing up promotional measures for the sustainable practices across the Palm Oil supply chains.
- To set up a working group to develop service tools across the supply chains, manage the whole process, starting from procurement, manufacturing and storage to information technology, distribution and transportation in order to enhance the management capacity, reduce cost and mitigate risks across the process.

### 3. Inventory Risk Management at External Warehouse

GGC manages inventory at both internal and external warehouses. Thus, there are risks that the service providers may not comply with the conditions agreed upon or any action may not be in line with the warehouse standards. Moreover, performance of the Company's employees in managing the inventory may not be in line with the procedure which could result in a difference of on-hand inventory stock from the inventory quantity recorded in an inventory system. In order to manage inventory at the external warehouse effectively, GGC has taken steps which are mentioned as follows:

#### Risk Management Measures

GGC recognizes the risks and has taken serious steps to improve production process to secure raw materials and inventory more effectively. The management approaches include reducing the dependency of external warehouse, regularly screening products and raw materials in terms of quality and quantity and identifying inventory selection criteria. The integration of the SAP is also part of more effective risk management efforts. In order to evaluate the quality of the service providers and ensure effective inventory management, the efficiency of service providers is taken into consideration.

### 4. Sales and Marketing Risks

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 price of domestic raw materials such as Crude Palm Oil, RDB Palm Oil and Palm Stearin, which is announced by the Department of Internal Trade (DIT). The price serves as reference price when negotiate with the suppliers to purchase the raw materials. The raw material prices are GGC's cost that may sometimes differ from the DIT-set figure since the prices are perhaps affected by several factors such as demand and supply of raw materials and those of other vegetable oils, global economy, crude oil prices and climate conditions. However, GGC's cost for raw materials generally follows the DIT-set prices.

Prices of Fatty Alcohols depend on a number of factors such as raw material prices, domestic and global demand for Fatty Alcohols and competitiveness factors – industrial capacity and production. GGC's Fatty Alcohol products not only compete with natural Fatty Alcohols, but also complete with synthetic Fatty Alcohols which is a substitute goods of the natural ones in some products. In case products can be made of either natural or synthetic Fatty Alcohols, customers are generally influenced by price. As a result, GGC has to partly determine appropriate purchase price of natural Fatty Alcohols based on the price of synthetic Fatty Alcohols.

In order to maintain competitiveness in the industry, GGC has taken steps which are mentioned as follows:

#### Risk Management Measures

- The Value Chain Management (VCM) has been set up to oversee raw material prices, set up a scope of pricing for raw materials, follow up on sales price and weekly monitor prices of raw materials and products, demand and supply of raw materials. Other functions include a revision of production process and appropriate selection of raw materials by choosing alternative lower-cost raw materials to be used for manufacturing process to maintain the pricespread.

- To conduct R&D and innovation on special products or the new grade in order to add value as required by the customers and even to extend the business operations to downstream industries, with the hope to increase the product's profit margin and respond to growing demands of customers and markets.
- To seek new markets and business partners in order to improve distribution channel of Fatty Alcohols in global market.
- To create brand awareness through marketing activities such as exhibitions to promote the marketing and forge ties between the customers and GGC's products.
- To closely cooperate with the public sector to promote the use of B10.

## 5. Operation, Strategy and Investment Risks

A constantly changing business environment can insert its impacts on the Company's business strategy, including investment and business expansion. To achieve targets as stated in the Corporate Strategy and maintain competitiveness, GGC has taken steps which are mentioned as follows:

### Risk Management Measures

- To determine the 10-year corporate planning and the 5-year strategic plan as well as the annual Key Performance Indicator (KPI) report. Also, to follow up on the implementation and report to the Management Committee (MC) and the Board of Directors periodically.
- To set up the Investment Committee to look after and provide recommendation for each investment in line with GGC's strategy and the business growth before seeking an approval for an investment project from the Management Committee (MC) and the Board of Directors.
- To establish the Corporate Investment Management (CIM) with prudence and clarity that covers identification of more investment opportunities, selection of business partners and business patterns, involvement of the Investment Committee and the Risk Management Committee in the feasibility study process before seeking an approval from the Board of Directors. Monitoring and Evaluation (M&E) is also used to assess the performance of a completed project (shortly known as Look Back) and serve as a guideline to be followed by GGC's future projects.
- Risk assessment for joint venture projects and any projects that pose significant potential to GGC's business operations will be conducted by the Risk Management Committee in order to find out appropriate protection measures which will later be forwarded to the Board of Directors for approval. Monitoring and risk management for projects are also conducted periodically.
- In 2019, GGC took part in the work of a working group between the public and private sectors as another way to seek new investment opportunities, support the government's Bioeconomy policy, configure R&D and innovation networks both locally and internationally.

## 6. Policy and Regulatory Risks

GGC places great emphasis on the preparation for any changes in policy, regulations and announcement made by state agencies on matters relating to the Company's business such as the government's announcement to change the mandate components of biodiesel which could affect the business operations and cause risks or opportunities. To be able to manage regulatory risks effectively, GGC has taken steps which are mentioned as follows:

### Risk Management Measures

- To provide opinion and data to the public sector in support of the development of biochemistry and related industries.
- To assess and study laws, the government's regulations and other privileges which are part of economic feasibility study and risk management plan for each project in support of the Company's investment decision.
- To monitor news or any movement from the public sector that could affect the business operations such as a change in laws and regulations in order to amend the Company's policy in line with such legal changes.
- To collaborate with the public sector in developing the biofuel and support the government's BCG model – which stands for Bio economy, Circular economy, and Green economy.
- To appoint the Company's employees as members and directors of the Federation of Thai Industries (FTI) to push forward and support the government's promotional measures for the biofuel industry.

## 7. Foreign Exchange Risks

GGC's products, including Fatty Alcohols and Glycerine are sold to foreign market following the reference price for the dollar. Thus, fluctuation of foreign exchange rates of baht per dollar poses a threat to the Company's business operations. To be able to manage foreign exchange risks effectively, GGC has taken steps which are mentioned as follows:

### Risk Management Measures

The Value Chain Management (VCM) has been set up to closely monitor the foreign exchange market and economic situation by setting a target for risk management and tolerance in line with the GGC's business which is approved by Risk Management Committee (RMC). Reporting the result of risk management in foreign exchange to Risk Management Committee (RMC) quarterly and Enterprise Risk Management Committee (ERMC) monthly in order to consider the measurement to manage foreign exchange risk exposure by using financial tools such as derivatives within a framework approved by the Risk Management Committee.

## Assets in Business

### 4.1 Fixed assets of GGC and its subsidiaries

As of December 31, 2019, Net Book value in the company's financial statements is as follows

List of Asset	Type of ownership	Net Book Value as at		
		31 December	31 December	Obligation
		2018	2019	
		(THB)	(THB)	(THB)
Plants, machinery, factory tools and equipment	Property of the entity	2,996,783,590	4,126,854,822	No obligation
Buildings and buildings improvement	Property of the entity	348,324,490	333,622,700	No obligation
Land improvement	Property of the entity	19,171,335	20,267,442	No obligation
Furnitures, fixtures and office equipment	Property of the entity / Leased assets	7,354,948	9,737,995	No obligation
Vehicles	Property of the entity / Leased assets	9,525,510	11,074,535	No obligation
Asset under construction	Property of the entity	1,733,590,832	262,424,717	No obligation
	Net Book Value	5,114,750,705	4,763,982,211	

### 4.2 Leasehold

The list of leasehold of GGC and its subsidiaries as of 31 December 2019 is as follows:

- (1) Title deed no. 111033 – Methyl Ester Plant 1 is located in Map Ta Phut sub-district, Mueang district of Rayong province. The plant covers 27 rai 3 ngan 13.598 square wa owned by PTT Global Chemical Plc (GC) and GGC has entered into a 30-year leases agreement, starting from 1 August 2006 to 31 July 2036
- (2) Title deed no. 123254 – Methyl Ester Plant 1 is located in Map Ta Phut sub-district, Mueang district of Rayong province. The plant covers 9 rai 3 ngan 43.9 square wa owned by PTT Global Chemical Plc (GC) and GGC has entered into a 30-year leases agreement, starting from 1 August 2006 to 31 July 2036.

- (3) Title deed no. 6150 – Methyl Ester Plant 2 is located in Khao Sok sub-district, Nong Yai district, Chon Buri province. The plant covers 27 rai 2 ngan owned by Thai Eastern Industrial Land Co., Ltd and GGC has entered into a 30-year leases agreement, starting from 1 April 2016 to 31 March 2046
- (4) Title deed no. 6150 – Refined Glycerine Plant 2 is located in Khao Sok sub-district, Nong Yai district, Chon Buri province. The plant covers 2 rai 2 ngan owned by Thai Eastern Industrial Land Co., Ltd and GGC has entered into a 30-year leases agreement, starting from 1 March 2018 to 29 February 2048
- (5) Title deed no. 111033 – Fatty Alcohols Plant is located in Map Ta Phut sub-district, Mueang district of Rayong province. The plant covers 2 rai 86.402 square wa owned by PTT Global Chemical Plc (GC) and GGC has entered into a 30-year leases agreement, starting from 1 August 2006 to 31 July 2036

#### 4.3 Other lease agreements as of 31 December 2019

- (1) 3 year lease agreement to rent the office building and common areas with Energy Complex Co., Ltd at No. 555/1 Energy Complex Building A, 4<sup>th</sup> Floor. The agreement covers 1,070 square metres and is effective from 1 October 2018 to 20 September 2021.
- (2) 1 year lease agreement to rent the office building for PTT Global Chemical Plc (GC) at No. 8 I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut sub-district, Mueang district of Rayong province. The lease agreement covers 300 square metres and is effective from 1 November 2017 to 31 March 2019. The agreement was extended to 30 June 2020.

#### 4.4 Intangible Assets

Intangible assets of GGC and subsidiaries as of 31 December 2019 are shown in the table below:

(Unit: THB)

Intangible Assets	Net book value after deducting accumulated amortization and impairment of assets
Patent – production process	31,482,560
Goodwill	33,527,418
Other intangible assets	4,233,002
Total net book value	69,242,980

#### 4.5 Trademarks and Service Marks

As of 31 December 2019, subsidiaries own key trademarks for products are shown in the table below:

Service Marks/ Trademarks	<b>THAIOL</b>	Usage For fatty alcohols Industrial purpose
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Country	Period of time
Thailand	21 August 2017 – 21 August 2027
India	22 August 2017 – 22 August 2027
South Africa	7 September 2017 – 7 September 2027
Mexico	23 August 2017 – 23 August 2027
New Zealand	20 August 2017 – 20 August 2027
Indonesia	7 September 2017 – 7 September 2027
Malaysia	19 September 2017 – 19 September 2027
Venezuela	Pending for trademark renewal
Chile	27 February 2018 – 27 February 2028
The Philippines	10 March 2018 – 10 March 2028
Colombia	30 April 2018 – 30 April 2028
Argentina	Pending a trademark renewal
Brazil	24 March 2015 – 24 March 2025
Canada	21 March 2016 – 21 March 2026

#### 4.6 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 7 September 2006. According to the agreement, the Company's Methyl Ester plants will enjoy technology from Agrar Technik. Uhde has also agreed to reveal information regarding technology adaptation and modification once a year until 1 January 2021. 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.

#### 4.7 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 31 December 2019 and are still effective is as follows:

Order	Projects	Issuance date	Product and Production Capacity	Expiration date	Note
1.	GGC Registration No. 1547(2)/2549	30 May 2006	- Produce Methyl Ester 384,000 tons annually - Produce Fatty Alcohols 120,000 tons annually - Produce Glycerine 38,400 tons annually - Produce Potassium Sulfate 5,400 tons annually	31 December 2020	Previous name: TOL
2.	GGC Registration No. 59-1251-1-00-1-0	28 September 2016	- Produce Biodiesel or Methyl Ester 346,820,810 litres (or 300,000 tons)	17 November 2026	
3.	TFA Production of other chemicals  Registration No. 1068(2)/2550	31 January 2007	- Produce fractionated Fatty Alcohols 120,000 tons annually - Byproducts include 1,700 tons of light end hydrocarbon fuels and 1,250 tons of residue	25 May 2021	

#### 4.8 Investments Policy for Subsidiaries

GGC has a policy to invest in subsidiaries and associates that do common business to support and promote the Company's core value. At present, GGC appoints executives as Managing Directors of Subsidiaries and Joint Company based on recommendations and a list of nominate qualified candidates for a directorship from the Company's subsidiaries and associates.

GGC encourages the Company's employees to be as representatives in Subsidiaries and Joint Company, so the company can jointly design policies and closely follow up on the business operation. If Subsidiaries and Joint Company have significant business that involved GGC, the business must be approved by the company's Board of Directors.

As of 31 December 2019, GGC has invested in Subsidiaries and Joint Company as shown below.

Company	Stock code	Business type	Registered capital (Million baht)	paid-up capital (Million baht)	Stake (%)
<u>Subsidiaries</u>					
1. Thai Fatty Alcohols Co., Ltd.	TFA	Manufacture and sell petrochemicals	1,060	1,060	100
2. GGC Biochemicals Co., Ltd.	GGC Bio	Green chemicals	1,035	525.35	100
3. Thai Ethoxylate Co., Ltd.	TEX	Manufacture and sell petrochemicals	420	420	50
<u>Joint Company</u>					
4. Thai Eastern Top Seeds Oil Co., Ltd.	TETSO	Manufacture and sell Crude Palm Kernel Oil (CPKO) and vegetable oil	222	222	30
5. GGC KTIS Bio Industrial Co., Ltd.	GKBI	Chemicals and bioplastics	2,600	1,047.5	50 (through GGC Bio)

## Company Information

Company Name	: Global Green Chemicals Public Company Limited
Initial	: GGC
Website	: www.ggcplc.com
Registration Number	: 0107559000044
Registered Capital	: As of 31 December 2019, the Company registered share capital was THB 9,724,833,650, made of 1,023,666,700 common shares at par value of THB 9.50 per share. Paid-up capital was THB 9,724,833,650.
Registered as Company Limited	: 28 July 2005
Registered as Public Company Limited	: 18 February 2016
First day trade on the SET	: 2 May 2017
Core business	: Methyl Ester : Fatty Alcohols : Service and other businesses
Number of employees	: 232 (as of 1 January 2020)

### Contacts

Investor Relations	<b>Tel</b> : +66 (0) 2 558-7345, +66 (0) 2 558-7395 <b>Email</b> : ir@ggcplc.com
Corporate Affairs and Corporate Secretary	<b>Tel</b> : +66 (0) 2 558-7310, +66 (0) 2 558-7304 <b>Email</b> : Corporategovernance@ggcplc.com
Head office	555/1 Energy Complex Building A, 4 <sup>th</sup> Floor, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900 Tel : +66 (0) 2 558-7300 Fax : +66 (0) 2 558-7301
Branch 1	<b>Branch 1</b> 8 I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong, Rayong 21000 Tel : +66 (0) 3899-4000 Fax: +66 (0) 3897-744
Branch 2	<b>Branch 2</b> 8 Soi G 12, Pakon Songkroh Rat Road, Map Ta Phut, Mueang Rayong, Rayong 21000 Tel : +66 (0) 3899-4000 Fax : +66 (0) 3897-744
Branch 3	<b>Branch 3</b> 199/1 Moo 2, Khao Sok, Nong Yai, Chon Buri 20190 Tel : +66 (0) 3897-1000

## Reference

### Securities Registrar

#### **Thailand Securities Depository Co., Ltd.**

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](http://www.set.or.th/tsd)

### Auditors

1) Mr. Mongkol Somphol CPA Reg No. 8444

2) Dr. Supamit Techamontrikul CPA Reg No. 3356

3) Dr. Suwatchai Meakhaamnouychai CPA Reg No. 6638

4) Mr. Chavala Tienpasertkij CPA Reg No. 4301

#### **Deloitte Touche Tohmatsu Jaiyos Co., Ltd.**

AIA Sathorn Tower, 23rd – 27th Floor

11/1 South Sathorn Road, Yannawa, Sathorn

Tel : +66 (0) 2 034-0000 Fax : +66 (0) 2 034-0100

Website : [www.deloitte.com/th](http://www.deloitte.com/th)

### Legal Advisors

#### **Baker&McKenzie Limited**

25th Floor, Abdulrahim Place, 990 Rama IV Road

Bangkok 10500

Tel : +66 (0) 2 636-2000 Fax : +66 (0) 2 636-2111

Website : [www.bakermckenzie.com](http://www.bakermckenzie.com)

#### **Weerawong, Chinnavat & Partners Ltd.**

22nd Floor, Mercury Tower, 540 Ploenchit Road

Lumpini, Pathumwan Bangkok 10330

Tel : +66 (0) 2 264-8000 Fax : +66 (0) 2 657-2222

Website : [www.weerapongcp.com](http://www.weerapongcp.com)

#### **Siam Premier International Law Office Limited**

The Offices at Central World, 26/F 999/9 Rama 1 Road,

Pathumwan, Bangkok 10330

Tel : +66 (0) 2 646-1888 Fax : +66 (0) 2 646-1919

Website : [www.siampremier.com](http://www.siampremier.com)

#### **Domnern Somgiat & Boonma Law Office Limited**

719 Si Phraya Road Bangrak Bangkok 10500

Tel : +66 (0) 2 639-1955 Fax : +66 (0) 2 639-1956

Website : <https://dsb.co.th>

#### **Theerapol and Partners Legal Consultant**

49/64 Charansanitwong 40, Charansanitwong Road,

Bangyikhan, Bangphlat, Bangkok 10700

Tel : +66 (0) 2 434-1919, +66 (0) 2 434-2422

## Shareholding Structure

### 6.1 Securities

As of 31 December 2019, the company has a total registered capital of THB 9,724,833,650, divided into 1,023,666,700 ordinary shares at a par value of THB 9.50 each and the fully paid-up capital of THB 9,724,833,650.

### 6.2 Shareholders

A list of seven major shareholders at the book closing date on 25 September 2019 is as follow.

No.	Shareholders	Shares	%
1.	PTT Global Chemical Public Company Limited	739,999,980	72.29
2.	Mr. Samroeng Manoonpol	18,157,800	1.77
3.	Ms. Pensri Ratanasuntrakul	10,499,400	1.02
4.	Mr. Pichit Shinvidhayakul	10,000,000	0.97
5.	Thai NVDR Company Limited	7,622,700	0.74
6.	Mr. Songchai Atchariyahirunchai	7,500,000	0.73
7.	Bangkok Life Assurance Public Company Limited	6,695,800	0.65

- As of 25 September 2019, the major shareholders with significant influence on the establishment of GGC's policy and strategy is PTT Global Chemical Public Company Limited ("GC") which in total holds 72.29 % in GGC.

- Foreign Shareholders

As of 25 September 2019, GGC had a total of 23 foreign shareholders with a combined 9,036,604 shares, accounting for 0.88 % of the paid-up capital.

### 6.3 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."

### 6.4 Dividend Payment Policy

#### The Company's Dividend Payment Policy

The Board of Directors Meeting No.7/2015 held on 25 September 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)

Dividend Paid (THB/Share)				Dividend Payout Ratio (%)
Year	First Half	Second Half	Full Year	
2017 <sup>(1)</sup>	0.15	0.20	0.35	69
2018 <sup>(2)</sup>	-	-	-	-
2019 <sup>(3)</sup>	0.15	0.20	0.35	N/A

#### Notes:

- <sup>(1)</sup> The Board of Directors at its meeting No 2/2018 held on February 14, 2018 has approved the proposal to propose at the 2018 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2017 operating performance of THB 0.35 per share, of which THB 0.15 per share was paid as an interim dividend on September 7, 2017. The final dividend payment of year 2017 (July-December 2017) was paid of THB 0.20 per share on April 25, 2017.
- <sup>(2)</sup> The Board of Directors at its meeting No 3/2019 held on February 19, 2019 has approved the proposal to propose at the 2019 Annual General Meeting of Shareholders to consider and approve on the omission of the dividend payment for year 2018 because the company has retained loss as stated in financial statements as of 31st December, 2018 due to the issue about procurement process of raw materials.
- <sup>(3)</sup> 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 29, 2020, but the right to receive dividend is subject to the approval of shareholders at the 2020 Annual General Meeting.

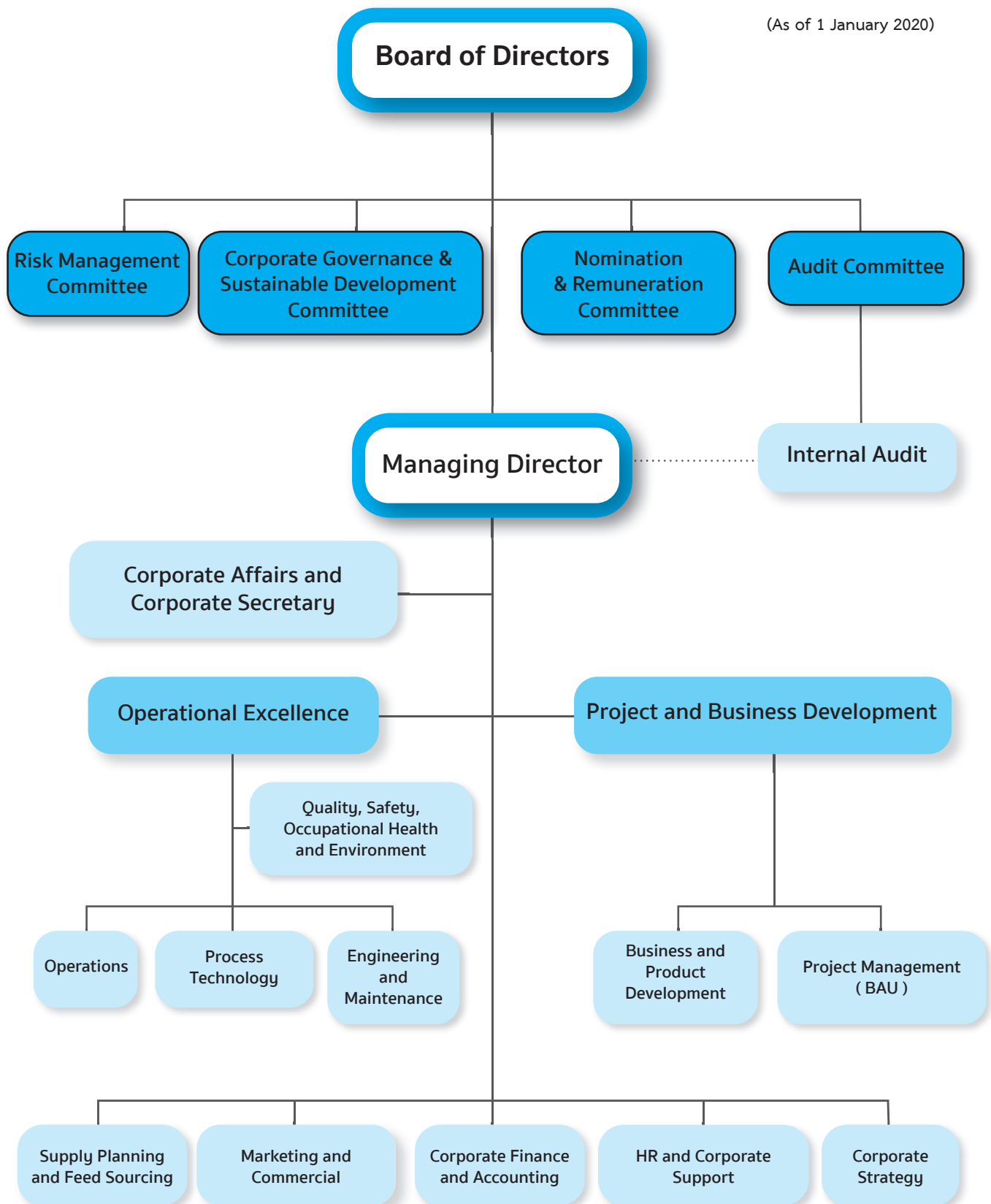


# Organization Structure and Corporate Governance



## Organization Structure

(As of 1 January 2020)



Note: the Board of Directors Meeting No. 16/2019 held on December 18, 2019 approved the above Organization Structure by adding the Project Management and Business Development position, separating Marketing and Commercial from Supply Planning and Feedstock Sourcing Department, and transferring the Product Movement Division to Operations Department.

## Management Structure

### 7.1 The Board of Directors

Name	Position	Date of Appointment
1. Mr. Supattanapong Punmeechaow	Chairman	17 February 2016
2. Prof. Dr. Kumchai Jongjakapun	Chairman of Independent Directors and Chairman of Audit Committee	17 February 2016
3. Ms. Kannika Ngamsopee	Independent Director, Director to Audit Committee and Chairman of Risk Management Committee	17 February 2016
4. ACM Songtam Chokkanapitag	Independent Director and Chairman of Nomination and Remuneration Committee	17 February 2016
5. Mr. Payungsak Chartsutipol	Independent Director and Chairman of Corporate Governance and Sustainable Development Committee	6 January 2017
6. Mr. Apichart Jongskul	Independent Director and Director to Audit Committee	6 January 2017
7. Mr. Suphit Suwagul	Independent Director and Director to Corporate Governance and Sustainable Development Committee	1 January 2018
8. Maj.Gen Titawat Satiantip <sup>(1)</sup>	Independent Director, Director to Nomination and Remuneration Committee and Corporate Governance and Sustainable Development Committee	11 September 2019
9. Mr. Kongkrapan Intarajang <sup>(2)</sup>	Director	6 November 2019
10. Mr. Patiparn Sukorndhaman <sup>(3)</sup>	Director, Director to Nomination and Remuneration Committee and Director to Risk Management Committee	17 February 2016
11. Mr. Witoon Suewatanakul <sup>(4)</sup>	Director and Director to Risk Management Committee	1 July 2019

#### Notes:

- <sup>(1)</sup> The Board of Directors' Meeting No.14/2019 held on 11 September 2019 has appointed Maj.Gen Titawat Satiantip as Director to Nomination and Remuneration Committee and Corporate Governance and Sustainable Development Committee, replacing the resigned director, Mr. Athavudhi Hirunburana. The appointment has been effective since 11 September 2019.
  - <sup>(2)</sup> The Board of Directors' Meeting No.15/2019 held on 6 November 2019 has appointed Mr. Kongkrapan Intarajang as Director, replacing the resigned director, Mr. Narongsak Jivakanun. The appointment has been effective since 6 November 2019.
  - <sup>(3)</sup> The Board of Directors' Meeting No.15/2019 held on 6 November 2019 has appointed Mr. Patiparn Sukorndhaman as Director to Risk Management Committee, replacing the resigned director, Mr. Narongsak Jivakanun. The appointment has been effective since 6 November 2019.
  - <sup>(4)</sup> The Board of Directors' Meeting No.8/2019 held on 12 June 2019 has appointed Mr. Witoon Suewatanakul as Director to Risk Management Committee, replacing the resigned director, Mr. Sekxon Arttamangkura. The appointment has been effective since 1 July 2019.
- \* Director No.2 was 1<sup>st</sup> re-elected on 15 March 2019 and for 2<sup>nd</sup> re-elected on 2 April 2019. Director No. 3, 4 and 10 were re-elected on 21 March 2017 while Director No.1, 5, 6, 7 were re-elected on 5 April 2018.

### The Resigned Directors in 2019

Name	Position	Time in office
1. Mr. Sekxon Arttamangkura	Director and Director to Risk Management Committee	1 August 2018 - 30 June 2019
2. Mr. Athavudhi Hirunburana	Director, Director to Nomination and Remuneration Committee and Director to Corporate Governance and Sustainable Development Committee	17 February 2016 - 31 August 2019
3. Mr. Narongsak Jivakanun	Director and Director to Risk Management Committee	17 February 2016 - 15 October 2019

Thus, 10 out of the 11 directors are not executives while seven directors are Independent Directors. The address to contact GGC's directors is 555/1, Energy Complex Building A, 4<sup>th</sup> Floor, Vibhavadi Rangsit Road, Khwaeng Chatuchak, Bangkok – 10900.

#### 7.1.1 Authorized Directors

According to the Company's Articles of Association and Certificate of Incorporation issued by Ministry of Commerce's Department of Business Development, the number and name of directors authorized signatory as of 13 November 2019 are Mr. Supattanapong Punmeechaow, Mr. Patiparn Sukornthaman, Mr. Kongkrapan Intarajang and Mr. Witoon Suewatanakul. The signature of two of these four directors are required to signed together with the Company's Seal affixed.

#### 7.1.2 Composition and Appointment of Directors

The composition of the Board of Directors and the appointment, removal or dismissal are mentioned in GGC's regulations, Good Corporate Governance Guideline and Business Code of Conduct which can be summarized as follows:

1. The Board of Directors consists of not less than 5 but not more than 11 directors, each of whom shall be appointed and removed by the shareholders' meeting. Thus, no less than half of the directors shall be residents of the Kingdom of Thailand and all directors must be fully qualified and must not bear any forbidden characteristics by law. The directors must not be over 70 years of age. The Board of Directors shall elect one of its members to be Chairman and appoint another member as a Vice Chairman.

2. Resolutions to appoint director(s) are passed with a majority vote at the shareholders' meetings as per director candidate selection criteria:

(1) Each shareholder has the right to vote according to the number of shares owned whereby one share is entitled to one vote.

(2) If the number of valid nominations is less than that of the vacancies, the shareholders shall vote on the eligible nominees. Shareholders must allocate all of their votes to one nominee per one without dividing their votes.

(3) If the number of valid nominations exceeds that of the vacancies, the voting for election of directors shall be conducted on a person-by-person basis. The shareholders must allocate all of their votes to one nominee without dividing their votes. The nominees who receive the majority vote shall be elected to the Board of Directors until there are no vacancies left. In addition, if the number of valid nominations with equal votes exceeds the number of available positions, the Chairman of the meeting shall use his or her casting vote.

3. In each Annual General Meeting, one-third of the directors shall step down as their terms end. If the number of the directors is not equally divisible by three, the number of directors stepping down should be close to the aforementioned ratio of one-third.

In the first and second years after the Company's registration, a Board member may voluntarily choose to resign. If the number of the volunteer directors still fall short, director to step down will be selected by drawing lots. However, for later years, directors serving the longest terms shall step down while directors whose term have ended maybe re-elected to the Board of Directors.

4. Any director who wishes to resign from his post must tender his resignation letter to the Company. The resignation shall take effect from the date of resignation letter reaches the Company. The director who resigns may notify the Registrar of his resignation.

5. When a director position becomes vacant for any reasons other than the end of such director's term, the Board of Directors must nominate a person who meets the classification for the directorship and does not have any forbidden characteristics by laws to attend the next Board of Directors' meeting, except the remaining term is less than two months. The new director shall only serve the remaining term of his or her predecessor. This decision must be made with the agreement of three-fourths of the remaining directors.

6. At the shareholders' meeting, shareholders may pass a resolution to force the termination of a director before his or her term ends with three-fourths of the attending shareholders with the voting rights. In addition, a majority vote must constitute at least half of the total votes cast of the shares held by the attending shareholders with the voting rights.

#### **7.1.3 Authorities and Responsibilities of the Board of Directors**

The Board of Directors is responsible to perform its duties in a proactive manner in the field of decision making, setting a business direction and supervision as mentioned as follows.

1. To perform their duties and oversee GGC's business in strict compliance with laws, objectives, regulations and resolutions of the Annual General Meeting (AGM) of Shareholders by adhering to the SET's Best Practices for Directors of Listed Companies.

2. To dedicate time to fulfilling their duties in line with the Company's vision, missions, directions and strategies by jointly expressing their views and freely pursuit information that would be helpful for setting the Company's business direction.

3. To review and approve key strategies and policies, including financial goals and work plans while supervising and ensuring that the Management carries out their duties effectively as stated in the Company's directions and strategies.

4. To devise a policy on Corporate Governance Policy and Business Code of Conduct that cover principles and best practices for the directors, management team and employees at all levels and with a focus on the growing awareness and understanding of responsibility for their duties as well as strict compliance with the Company's rules and regulations to ensure fairness to all stakeholders.

5. To define the scope of approval authority for matters beyond the scope of the Managing Director's authority in line with GGC's regulations. The additional matters include budget approval, investment, project implementation of the Company's and those of its subsidiaries, entering into an agreement, appointment of the directors to replace those who resign during the year, appointment of sub-committees, appointment of the directors who are authorized to sign and bind the Company, scheduling the Annual General Meetings (AGM) of shareholders and distributing the interim dividend.

6. To ensure the credibility of the financial statements and audit system while conducting an assessment of internal control with a focus on its efficiency and effectiveness.

7. To consider potential risk factors and outline comprehensive risk management approaches that allow the executives to command risk management process, seek business opportunities that could occur due to such risks and establish an efficient as well as effective internal control.

8. To monitor and handle conflicts of interest and related transactions with a more focus on significant transactions that bring financial benefits to the shareholders and all stakeholders.

9. To establish communication channels that suitable for GGC and encourage the participation between the stakeholders and the Company by taking important notes to improve business operations in a more effective manner as well as stressing the importance of disclosing information to ensure accuracy, clarity, credibility and the highest standard.

10. To regularly conduct the self-assessment and assess the performance of the Managing Director.

11. To establish a system or mechanism to manage remuneration for top executives appropriately and in line with their performance to provide both short-term and long-term incentives.

12. To become a leader and serve as a role model for business ethics and code of conduct as stated in the Company's Corporate Governance Policy.

13. To conduct the assessment at least once a year in order to make sure the performance of the Board of Directors is in line with the Company's Corporate Governance Policy and business ethics and code of conduct.

14. To establish a good recruitment system that allows the Company to hire the right candidate to fulfil top executive positions with transparent and fair recruitment process. The top executives, referring to vice presidents and higher positions, are appointed by a majority vote of the Board of Directors.

15. To report and disclose their conflicts of interest as well as their related persons to the Company or the affiliates.

16. To attend the Board of Directors' Meetings and the Annual General Meetings (AGMs) in person. If unable to attend, a director may inform the Chairman.

17. To stress the importance of conducting the business with great responsibility towards society and environment to promote better livelihoods for the local people who live near the factories so that the local residents and the factories can sustainably co-exist.

18. To support GGC's efforts to work against corruption in all its forms for the sake of the Company's sustainable progress and growth.

19. To play a key role in driving the corporate culture while creating ethical awareness and being a role model for the good corporate governance. Besides earning profits, employees at all level are encouraged to adopt the corporate culture.

20. To facilitate innovation in order to add value and open more doors in business and manage risks with information technology as well as sufficient security systems to guard the technology information.

21. To encourage GGC to disclose information both in Thai and English languages through other channels rather than SET's channel such as the Company's website.

#### **7.1.4 Managing Director's scope of authorities**

The Board of Directors has appointed Mr. Witoon Suewatanakul to the Managing Director position with the scope of authority to manage the business operations in line with GGC's policy, work plans and budget that are approved by the Board of Directors. The Managing Director is the highest-ranking manager at GGC whose key duties is to give strategic direction to ensure that the Company achieve its objectives, regulations, the resolutions of the Board of Directors' Meetings. Thus, the scope of authority of the Managing Director that is outlined in terms of four references and approved by the Board of Directors cover (1) finance, accounting and budget (2) procurement of materials (3) personnel administration and (4) marketing, procurement and product sales and services.

#### **7.1.5 Independent Directors**

According to GGC's Corporate Governance and Business Code of Conduct Handbook, at least one-third of the Board of Directors must be Independent Directors. There must be at least three Independent Directors and each director may serve three consecutive terms or up to nine years. The Independent Directors must possess knowledge as well as competency, be legally independent so that they are able to express their own point of view freely at the meetings, regularly attend the meetings and have access to



financial and other business-related 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 the same top-level managers in other companies. Furthermore, Independent Directors shall self-verify their independence upon their appointment and report such information annually to the Company if there is any change.

Thus, GGC's Independent Directors must command the following qualifications which are described as follows:

1. An Independent Director holds no more than 0.5% of all shares with voting rights of GGC, parent companies, subsidiaries, joint/associated companies, major shareholders or entity with controlling parties. The shares held by Independent Directors' related parties are also included.
2. An Independent Director must not be the company's Executive Director, worker, employee, salaried consultant or entity with controlling parties of GGC, parent companies, subsidiaries, major shareholders or entity with controlling parties, either at the present time or within two years prior to his/her appointment as Independent Director, excluding the case where the independent director used to be a government official or advisor of a government unit which is a major shareholder of a controlling person of the Company.
3. An Independent Director has no connection by blood or legally registered as father, mother spouse, sibling, son/daughter or spouse of son/daughter of any Directors, Executives, major shareholders, entity with controlling parties, or persons who will be nominated as Directors, Executives, or controlling parties of the company or subsidiary.
4. An Independent Director has no business relationship with GGC, parent companies, subsidiaries, major shareholders or entity with controlling parties in such a manner that may obstruct the person(s) from having independent views. Also, an Independent Director should not be or has never been a significant shareholder or an entity with controlling parties for those having business relations with the company, either at the present time or within two years prior to his/her appointment as Independent Director. Such business relationship is inclusive of a trading transaction occurring on a conventional basis for the conduct of business; a rent or lease of property; a transaction involving assets or services; a provision or an acceptance of financial assistance through means of a loan, a guarantee, a use of an asset as collateral against debt; and, other similar actions which result in the Company or the party to the contract having a debt to be repaid to another party for the amount of more than 3% of net tangible assets (NTA) of the Company or 20 million baht, whichever is lower. This amount is determined by the calculation of the Related Transaction value as per the announcement of the Securities and Exchange Commission (SEC). It is inclusive of debt(s) arising within one year prior to the day of business relationship with the same party.

5. An Independent Director must not be or has never been an auditor of GGC, parent companies, subsidiaries, major shareholders or entity with controlling parties. Also, an Independent Director should not be or has never been a significant shareholder or an entity with controlling parties (holding more than 10% of the total voting rights of the Company, including shares held by Linked Entities), entity with controlling parties, or partners of current auditor's auditing firm of GGC, parent companies, subsidiaries, major shareholders or entity with controlling parties, either at the present time or within two years prior to his/her appointment as Independent Director.
6. An Independent Director must not render any professional service, legal consulting or financial consulting service to the company with a fee of more than 2 million baht per year. Also, an Independent Director should not be or has never been a significant shareholder or an entity with controlling parties for those having business relations with the company, either at the present time or within two years prior to his/her appointment as Independent Director.
7. An Independent Director must not be a director who is appointed to represent the company's directors, major shareholders, or the shareholder related to major shareholder.
8. An Independent Director must not engage in the same business nature and significant competition with the company or subsidiary; or not a significant partner of the partnership, executive director, salaried worker, employee, or consultant; or holding more than 1 percent of the voting shares of any other companies operating under similar business nature and significant competition to the company and subsidiary.
9. An Independent Director must not have any conditions that prevent him/her from expressing independent views towards the company's business operations freely.

After appointment as GGC's Independent Directors, they may be assigned by the Board of Directors to engage in the business operation of GGC, its parent companies, subsidiaries, associates, sister companies, major shareholder, or controllers in the form of collective decision. Such practice is not regarded as Independent Directors' participation in management.

Currently, GGC has a total of 7 Independent Directors, which accounts for more than one-third of the Board of Directors and exceeds the legal requirements. Moreover, the Charter of Independent Directors clearly outlines their duties and ensures their tangible performance.

#### **7.1.6 Sub-Committees**

In compliance with the Corporate Governance Policy, the Board of Directors Meeting No.1/2016 held on 26 February 2016 approved two sub-committees, namely the Audit Committee and the Nomination and Remuneration Committee. While the Board of Directors Meeting No. 1/2017 held on 13 January 2017 appointed two more sub-committees, namely the Corporate Governance and Sustainable Development Committee and the Risk Management Committee. Each committee is to serve for three years or until any committee member steps down at the end of his/her designated terms or resign. Directors are subject to re-election by the Board of Directors.

Each committee has its own defined area of operation. The committee carries out its activities in a prudent and effective manner before submitting their own performance reports to the Board of Directors. Below is the list and duties of each sub-committees as of 31 December 2019.

#### Audit Committee

Name	Position	Date of Appointment
1. Prof. Dr. Kumchai Jongjakapun	Chairman of Audit Committee (Independent Director)	1 January 2018
2. Ms. Kannika Ngamsopee	Director to Audit Committee (Independent Director)	26 February 2016
3. Mr. Apichart Jongskul	Director to Audit Committee (Independent Director)	5 April 2018

Ms. Kannika Ngamsopee has been appointed as Director to Audit Committee due to her knowledge and experience in accounting and finance bringing credibility to the financial statements. While Ms. Kunakorn Witthayapaisarn serves as Vice President of Internal Audit and also the Audit Committee's Secretary.

The Audit Committee comprises at least three Independent Directors. The committee is subject to a three-year term. The Directors must retire from office by rotation at Annual General Meeting of Shareholders. Nevertheless, a retiring Director is eligible for re-election. The Board of Directors has confidence that the Audit Committee possesses full qualifications, knowledge and experiences in order to perform their roles and responsibilities with effectiveness. A member of the committee must have extensive knowledge, sufficient experience and responsibility in reviewing the reliability of the financial statements. Furthermore, the Audit Committee also gain more knowledge regarding the duties of audit committee consistently to create the reliability of the financial statements and disclose the related information to the public. The Audit Committee is also committed to following the legally defined Financial Reporting Standards that cover the consideration, selection, appointment and determination of remuneration for the auditors who are reliable, experienced and independent. The Committee shall discharge any independent auditors who fails to perform his or her duties. Additional functions of the Committee include regulatory compliance, internal control, risk management and effective Corporate Governance, especially in the fields of internal control over procurement of raw materials and products. The Audit Committee also stresses the importance of creating anti-corruption awareness, building preventive system and ensuring the whistleblower procedure is appropriate and effective. The related transaction or any transaction that may cause conflicts of interest is also among key responsibilities of the Audit Committee to make sure the transactions are in line with law and regulations issued by SET to bring financial benefits to the Company. The Audit Committee also works on independence and effectiveness of the internal audit to ensure international standards.

The Board of Directors approved the Committee's Charter which highlights the composition, qualifications, the office term, the scope of authority and responsibilities of the Corporate Governance to ensure the committee members perform their duties in line with laws, related regulations and business ethics and code of conduct as shown on the Company's website.

In 2019, the Audit Committee held 15 meetings in total, including the meetings that were planned, special meetings for urgent matters, two meetings with the auditors and meeting with the Managing Director. The Audit Committee has performed its duties within the scope of specified authority as stated in the Charter and as assigned by the Board of Directors. The performance reports were also submitted to the Board of Directors on a quarterly basis and to be published in the Company's annual report.

#### Nomination and Remuneration Committee

Name	Position	Date of Appointment
1. ACM Songtam Chokkanapitag	Chairman of Nomination and Remuneration Committee (Independent Director)	26 February 2016
2. Mr. Patiparn Sukorndhaman	Director to Nomination and Remuneration Committee	26 February 2016
3. Maj.Gen Titawat Satiantip *	Director to Nomination and Remuneration Committee (Independent Director)	11 September 2019

Note: Maj.Gen Titawat Satiantip has been appointed as Director to the Nomination and Remuneration Committee, replacing the resigned director, Mr. Athavudhi Hirunburana. The appointment has been effective since 11 September 2019.

Mrs. Uramanee Puttong, Vice President, Corporate Affairs and Corporate Secretary, serves as Secretary to the Nomination and Remuneration Committee.

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 directors for the Board of Directors as well as the Sub-committee and the Managing Director. The Committee also define selection criteria, transparent selection process, determination of remuneration for the directors and Managing Director, especially those who are well experienced and possess a variety of skills as well as technical knowledge that are considered essential for the business operations as stated in the Company Board Skill Matrix to balance all knowledge in various disciplines and maximize the benefits. The Committee also conducts the Directors' Pool and submit it to the Board of Directors and/or the Annual General Meeting of Shareholders for approval.

Furthermore, the Board of Directors also approved the Committee's Charter which outlines the composition, the office term and the scope of authority and responsibilities of the Corporate Governance. This information is disclosed in the business ethics and code of conduct and available on the Company's website.

In 2019, the Nomination and Remuneration Committee had a total of 7 meetings to perform its duties in line with the Charter and as assigned by the Board of Directors while submitting its performance report to the Board of Directors quarterly as well as publishing it in the annual report for the shareholders.

#### Corporate Governance and Sustainable Development Committee

Name	Position	Date of Appointment
1. Mr. Payungsak Chartsutipol	Chairman of Corporate Governance and Sustainable Development Committee (Independent Director)	13 January 2017
2. Mr. Suphit Suwagul	Director to Corporate Governance and Sustainable Development Committee (Independent Director)	1 January 2017
3. Maj.Gen Titawat Satiantip *	Director to Corporate Governance and Sustainable Development Committee (Independent Director)	11 September 2019

Note:

\* The Board of Directors' Meeting No.14/2019 held on 11 September 2019 has appointed Maj.Gen Titawat Satiantip as Director to Corporate Governance and Sustainable Development Committee, replacing the resigned director, Mr. Athavudhi Hirunburana. The appointment has been effective since 11 December 2019.

Mrs. Uramanee Puttong, Vice President, Corporate Affairs and Corporate Secretary, served as Secretary to the Corporate Governance and Sustainable Development Committee.

The Corporate Governance and Sustainable Development Committee consisted 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 current members of the committee are all Independent Directors.

The Corporate Governance and Sustainable Development Committee performed its duties assigned by the Board of Directors, including providing recommendations for more effective policies and practical approaches in line with the Business ethics and Code of Conduct, Good Corporate Governance Principles, guidelines issued by SEC and SET to promote the company to international standards.

In 2019, the Corporate Governance and Sustainable Development Committee had five meetings in total to carry out their tasks as stated in the Charter and as assigned by the Board of Directors while submitting its performance report to the Board of Directors in a quarterly basis as well as publishing it in the annual report for the shareholders.

In addition to their main duties, the Corporate Governance and Sustainable Development Committee also followed up on two developments as follow:

1. Improving Corporate Governance & Business Code of Conduct (updated version in 2019) is as follow :

- Published and distributed the Corporate Governance & Business Code of Conduct Guidelines (the updated version of 2019 is in line with CG Code) to Directors, Executives and employees at all level and also encourage all parties to sign binding agreements. In order to promote “good” corporate culture, the training on Fundamental CG & Compliance Roadshow was organized for Managements and employees at all level in order to build awareness on “self-discipline”

- The Board of Directors is responsible for the stakeholders such as customers, partners, local communities and environment which are mentioned in Corporate Governance in line with international standards > Guideline 5: Promotion of innovation and responsible investment > roles of the stakeholders.
- The Committee was awarded for its Good Corporate Governance practices which is shown in the topic: Good Governance recognition.

2. Increasing Transparency (updated version in 2019) is as follow:

- Revised and added the table showing GGC's efforts to tackle issues relating to Bribery as well as corruption and manage Internal Control procedures for raw material purchasing system as suggested by the CAC.
- Improved issues relating to the Whistleblower Policy such as the scope of handling procedure and protection measures.
- The Corporate Governance and Sustainable Development Committee' Meeting No.4/2019 held on 21 October 2019 approved the Corporate Governance Policy as stated in the Corporate Compliance Policy and work plans to be used as guidelines to build the awareness and prevent any impact to the Company and employees.

Thus, the Corporate Governance and Sustainable Development Committee has continuously reported its performance and development progress to the Board of Directors to seek further suggestions and recommendations to protect the interests of the stakeholders in a sustainable manner.

#### Risk Management Committee

Name	Position	Date of Appointment
1. Ms. Kannika Ngamsopee	Chairman of Risk Management Committee (Independent Director)	13 January 2017
2. Mr. Patiparn Sukorndhaman <sup>(1)</sup>	Director to Risk Management Committee	6 November 2019
3. Mr. Witoon Suewatanakul <sup>(2)</sup>	Director to Risk Management Committee	1 July 2019

Notes:

<sup>1)</sup> The Board of Directors' Meeting No.15/2019 held on 6 November 2019 has appointed Mr. Patiparn Sukorndhaman as Director to Risk Management Committee, replacing the resigned director, Mr. Narongsak Jivakanun. The appointment has been effective since 6 November 2019.

<sup>2)</sup> The Board of Directors' Meeting No.8/2019 held on 12 June 2019 has appointed Mr. Witoon Suewatanakul as Director to Risk Management Committee, replacing the resigned director, Mr. Sekxon Arttamangkura. The appointment has been effective since 1 July 2019.

Mr. Apichart Kullavanijaya, Vice President, Corporate Strategy, served 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 to determine and review the policy, objectives and the scope of risk assessment in the same direction and in line with the Company's goals and strategy. The Committee regularly review the policies, objectives and the scope of work while giving priority to early warning signs and irregularities based on internal as well as external factors to prioritize risks and come up with the right approaches. The Committee also regularly reviewed the Charter and performed its duties assigned by the Board of Directors and as stated in the Company's regulations.

In 2019, The Risk Management Committee had six meetings in total – four of which were quarterly meetings while two were special meetings to carry out their tasks as stated in the Charter and as assigned by the Board of Directors while submitting its performance report to the Board of Directors in a quarterly basis as well as publishing it in the Annual Report for the shareholders.

The Risk Management Committee emphasizes and pay attention to improve internal control thorough the company. Thus, the Committee hired Independent Auditors to assess the internal control over procurement of raw materials (Phase I) provide recommendation for further revision and also recommended the Independent Auditors to assess the internal control over other areas of work (Phase II). The Committee revised the internal control process across the Company as suggested by the auditors and reported the development to the Board of Directors for consideration and further recommendations. Preventive measures for Bribery and Corruption in the procurement of raw materials and at refineries are also redesigned based on the recommendations from the CAC. Thus, the Risk Management Committee clearly stressed the importance of internal controls of the Company by regularly providing recommendations regarding this matter to the Board of Directors and performed its roles with responsibilities, prudence and care to protect interests of the stakeholders.

#### **Board of Directors' Meetings**

In 2019, the Board of Directors, Sub-Committees, Independent Directors and non-executive Directors held various meetings as shown in the table below. These meetings were called in advance. The Directors, who could not attend the meetings, notified the Chairman in writing with their reasons for their absences, of which the Chairman then informed the Board of Directors before the meetings began.

In 2019, the Board of Directors scheduled its meeting in advance, which was held once a month so that the directors may plan their schedules without conflicts. The directors who are government officials and allocate their personal hours or apply for leave to utilize their experience and capability for extra duties at the Company, regarded as another role in national development as the Company's Directors with a vision for biochemical leadership under the mission of creating sustainable value for stakeholders.

## Board of Directors' Meetings

Name	Board Meetings in 2019							
	Boards of Directors (times)	Independent Directors (times)	Non-Executive Directors (times)	Audit Committee (times)	Nomination and Remuneration Committee (times)	Corporate Governance and Sustainability Committee (times)	Risk Management Committee (times)	AGM 2019 (times)
	Total 16	Total 1	Total 1	Total 15	Total 6	Total 5	Total 6	Total 1
1. Mr. Supattanapong Punmeechaow	16/16	-	1/1	-	-	-	-	1/1
2. Prof. Dr. Kumchai Jongkapun	15/16	1/1	1/1	15/15	-	-	-	1/1
3. Ms. Kannika Ngamsopee	15/16	1/1	1/1	15/15	-	-	6/6	1/1
4. ACM Songtam Chokkanapitag	16/16	1/1	1/1	-	6/7	-	-	1/1
5. Mr. Payungsak Chartsutipol	14/16	1/1	1/1	-	-	5/5	-	1/1
6. Mr. Apichart Jongskul	15/16	1/1	1/1	15/15	-	-	-	1/1
7. Mr. Suphit Suwagul	15/16	1/1	1/1	-	-	5/5	-	1/1
8. Maj.Gen Titawat Satiantip <sup>(1)</sup>	2/2	-	1/1	-	2/2	2/2	-	-
9. Mr. Kongkrapan Intarajang <sup>(2)</sup>	2/2	-	1/1	-	-	-	-	-
10. Mr. Patiparn Sukorndhaman <sup>(3)</sup>	15/16	-	1/1	-	7/7	-	-	1/1
11. Mr. Witoon Suewatanakul <sup>(4)</sup>	8/8	-	-	-	-	-	3/3	-
Resigned Directors in 2019								
1. Mr. Athavudhi Hirunburana	11/12	-	-	-	5/5	3/3	-	1/1
2. Mr. Narongsak Jivakanun	12/14	-	-	-	-	-	5/5	1/1
3. Mr. Sekxon Arttamangkura	8/8	-	-	-	-	-	3/3	1/1

Notes:

(1) Maj.Gen Titawat Satiantip has been appointed as Director and Director to the Nomination and Remuneration Committee, replacing the resigned Director, Mr. Athavudhi Hirunburana.

The appointment has been effective since 11 September 2019.

(2) Mr. Kongkrapan Intarajang has been appointed as Director, replacing the resigned Director, Mr. Narongsak Jivakanun. The appointment has been effective since 6 November 2019.

(3) Mr. Patiparn Sukorndhaman has been appointed as Director to the Risk Management Committee, replacing the resigned Director, Mr. Narongsak Jivakanun. The appointment has been effective since 6 November 2019

(4) Mr. Witoon Suewatanakul has been appointed as Director and Director to the Risk Management Committee, replacing the resigned Director, Mr. Sekxon Arttamangkura. The appointment has been effective since 1 July 2019.

## 7.2 Management

In order to manage GGC with efficiency and in compliance with the Company's policies and directions recommended by the Board of Directors, the Management Committee (MC), consists of Executives ranking at the level of Vice President position, has been set up. The MC is led by the Managing Director who is the top line of management and whose scope of authority is to manage the whole Company to be in line with the policies, work plans and budgets.



As of 1 January 2020, the MC consists of top executives as shown in the organization structure and the Directive No.001/2020 on the appointment of the MC is as follows:

Name	Position
1. Mr. Witoon Suewatanakul <sup>(1)</sup>	Managing Director
2. Mr. Suwat Kamolpanus <sup>(3)</sup>	Deputy Managing Director, Project and Business Development
3. Mr. Nikom Kasempura <sup>(2)</sup>	Deputy Managing Director, Operational Excellence
4. Mrs. Kunakorn Witthayapaisarn <sup>(4)</sup>	Vice President, Internal Audit
5. Mrs. Uramanee Puttong	Vice President, Corporate Affairs and Corporate Secretary
6. Ms. Wanlapa Sophiskhaunkhant	Vice President, Corporate Finance and Accounting
7. Mr. Apichart Kullavanijaya	Vice President, Corporate Strategy
8. Mr. Ekaphong Govitgoongrai <sup>(5)</sup>	Vice President, Supply Planning and Feed Sourcing
9. Mr. Suchet Deemangmee	Vice President, Marketing and Commercial
10. Mrs. Narungsi Kaiwikaigumnurd	Vice President, HR and Corporate Support
11. Mr. Thodsaphorn Phienchob <sup>(6)</sup>	Vice President, Operations
12. Ms. Sirintra Chatchawanpreecha <sup>(7)</sup>	Vice President, Process Technology
13. Ms. Chompunuch Liamprawat <sup>(8)</sup>	Vice President, Process Technology
14. Mr. Sayan Saesue	Vice President, Engineering and Maintenance
15. Mr. Chanasiri Vanit	Vice President, Reporting to the Managing Director

**Notes:**

- (1) Appointed Mr. Witoon Suewatanakul as Managing Director, in replace of Mr. Sekxon Arttamangkura who retired, effective from 1 July 2019.
- (2) Appointed Mr. Suwat Kamolpanus as Deputy Managing Director, Project and Business Development, effective from 1 January 2020.
- (3) Appointed Mr. Nikom Kasempura as Deputy Managing Director, Operational Excellence, effective from 1 July 2019.
- (4) Ms. Kunakorn Witthayapaisarn Vice President, Internal Audit attends the meeting to gives opinion and suggestion only for the interest of the Company and refrain from voting which does not affect her independence.
- (5) Appointed Mr. Ekaphong Govitgoongrai as Vice President, Supply Planning and Feed Sourcing, effective from 1 December 2019.
- (6) Appointed Mr. Thodsaphorn Phienchob as Vice President, Operations, effective from 1 January 2020.
- (7) Ms. Sirintra Chatchawanpreecha has resigned from Vice President, Process Technology effective from 31 January 2020
- (8) Appointed Ms. Chompunuch Liamprawat as Vice President, Process Technology , in replace of Ms. Sirintra Chatchawanpreecha who resigned effective from 31 January 2020.

**Secondment**

Name	Position
1. Mr. Piya Suri <sup>(1)</sup>	Vice President, Reporting to the Managing Director
2. Mr. Yothin Budyochuntho <sup>(2)</sup>	Vice President, Reporting to the Managing Director

**Notes:**

- <sup>(1)</sup> Full-time secondee at Thai Ethoxylate Co., Ltd. (TEX) as Managing Director
- <sup>(2)</sup> Full-time secondee at GGC KTIS Bio Industrial Co., Ltd (GKBI) as Managing Director

In 2019, the MC held 36 meetings in total with the Vice President, Corporate Affairs and Corporate Secretary acting as the Secretary to the Committee and take the minutes of a meeting.

Directorship of Subsidiaries/Joint Ventures/Related Companies (as of 17 February 2020)

[illegible]

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

TETSO = Thai Eastern Top Seeds Oil Co., Ltd.  
GKBI = GGC KTIS Bioindustrial Co., Ltd.

PTT = PTT Plc.  
GC = PTT Global Chemicals Plc.  
GPSC = Global Power Synergy Plc.  
SUN = Solution Creation Co., Ltd.  
GCP = GC Polyols Co., Ltd.  
GCM = GC Marketing Solution Co., Ltd.  
GC-M PTA = GC-M PTA Co., Ltd.  
PTTGC America Corporation = PTTGC America Corporation  
PTTGC America LLC = PTTGC America LLC  
PTTGC Inter (USA) inc. = PTTGC International (USA) inc  
HMC = HMC Polymers Co., Ltd.  
PTTMCC = PTT MCC Biochem Co., Ltd.  
PTTAC = PTT Asahi Chemicals Co., Ltd.  
TPRC = Thai Pet Resin Co.LTD.

Remarks : ● = Chairman  
■ = Director  
◆ = Executive

### 7.3 Company Secretary

In compliance with Article 89/1 and Article 89/16 of the Securities Exchange of Thailand Act (“SEC”) (No.4) B.E. 2551 (2008), the Board of Directors Meeting No.9/2017 held on 8 November 2017 has appointed Mrs. Uramanee Puttong as Company Secretary effective from 1 January 2018, to performed her duties under the law in preparing and maintain key corporate documents such as the director registrar, meeting notices, the Board of Directors minutes of meeting, Shareholders minutes of meeting , the Annual Reports, the reports of related parties transactions of Directors and Executives.

The Company Secretary also attended training programs that is helpful for her roles and responsibilities each year.

### 7.4 Remuneration of the Board of Directors and Sub-committees

#### 7.4.1 Remuneration of the Directors

The 2019 Annual General Meeting (AGM) held on 5 April 2019 approved the remuneration for the Board of Directors, Sub-committees and the sub-committees that may be appointed by the Board of Director to oversee specific matter or if it is necessary in the future.

Board of Directors/Sub-Committees	Monthly Remuneration (THB)		Remuneration for Meetings Attendance (THB/Time/Director)*	
	Chairman	Directors	Chairman	Directors
Board of Directors	37,500	30,000	-	-
Audit Committee	-	-	25,000	20,000
Nomination and Remuneration Committee	-	-	25,000	20,000
Corporate Governance and Sustainable Development Committee	-	-	25,000	20,000
Risk Management Committee	-	-	25,000	20,000
Other compensation	-None-	-None-	-None-	-None-

Note: \* Paid for each attendance

In the event that the Company payout dividend, the Board of Director shall receive the bonus payouts of 0.5% of net profit or not exceed THB 10 million per year. The bonus was prorated to each director’s office term and the Chairman is to receive 25% higher than other Directors. This is subject to approval at the Annual General Meeting (AGM) of shareholders.

The remuneration of the Board of Directors and Sub-committees including Internal Audit Committee, Nomination and Remuneration Committee, Corporate Governance and Sustainable Development Committee and Risk Management Committee as for 31 December 2019 is shown below.

Name*	Board of Directors Meeting in 2019					
	Board of Directors	Audit Committee	Nomination and Remuneration Committee	Corporate Governance & Sustainable Development Committee	Risk Management Committee	Other income
Mr. Supattanapong Punmeechaow	450,000					
Prof. Dr. Kumchai Jongjakapun	360,000	400,000				
Ms. Kannika Ngamsoppee	360,000	320,000			150,000	
ACM Songtam Chokkanapitag	360,000		175,000			
Mr. Payungsak Chartsutipol	360,000			150,000		
Mr. Apichart Jongskul	360,000	320,000				
Mr. Suphit Suwagul <sup>(1)</sup>	360,000			120,000		80,000
Mr. Kongkrapan Intarajang <sup>(2)</sup>	53,260					
Maj. Gen Titawat Satiantip <sup>(3)</sup>	110,000		40,000	40,000		
Mr. Patiparn Sukorndhaman	360,000		160,000			
Mr. Witoon Suewatanakul <sup>(4)</sup>	180,000				60,000	
<b>Total</b>	<b>3,313,260</b>	<b>1,040,000</b>	<b>375,000</b>	<b>310,000</b>	<b>210,000</b>	<b>80,000</b>

Director who resigned in 2019 and received the remuneration in 2019						
Mr. Athavudhi Hirunburana <sup>(5)</sup>	239,032		100,000	80,000		
Mr. Narongsak Jivakanun <sup>(6)</sup>	383,548				100,000	
Mr. Sekxon Arttamangkura <sup>(7)</sup>	180,000				60,000	
<b>Total</b>	<b>802,581</b>		<b>100,000</b>	<b>80,000</b>	<b>160,000</b>	

Notes:

\* The Annual General Meeting of Shareholders 2019 held on 2 April 2019, has approve the omission of the divided payment in result of such omission the Board of Director did not receive bonus for the performance of the year 2018

(1) Mr. Suphit Suwagul attended the Human Resource Committee totalling 4 meetings and received compensation for each attendance at 20,000 THB

(2) Appointed Mr. Kongkrapan Intarajang as Director effective from 6 November 2019.

(3) Appointed Maj.Gen Titawat Satiantip as Independent Director, Director to Nomination and Remuneration Committee and Director to Corporate Governance and Sustainable Development Committee effective from 11 September 2019.

(4) Appointed Mr. Witoon Suewatanakul as Director and Director to Risk Management Committee effective from 1 July 2019

(5) Mr. Athavudi Hirunburana has resigned from the Directorship on 31 August 2019

(6) Mr. Narongsak Jivakanun resigned from the Directorship on 15 October 2019

(7) Mr. Sekxon Arttamangkura resigned from the Directorship on 30 June 2019

#### 7.4.2 Director's Remuneration for directorship at Subsidiaries and Joint Company

GGC's Directors serve at subsidiaries and joint venture to ensure that the businesses are operated under GGC Group's policies.

Name	Position	Total Compensation
<b>Thai Fatty Alcohols Company Limited</b>		
Mr. Witoon Suewatanakul	Director / Chairman	None
<b>GGC Biochemicals Company Limited</b>		
Mr. Witoon Suewatanakul	Director / Chairman	None
<b>Thai Ethoxylate Co.,Ltd</b>		
Mr. Witoon Suewatanakul <sup>(1)</sup>	Director	94,500
<b>GGC KTIS Bio Industrial Co.,LTD<sup>(2)</sup></b>		
Mr. Witoon Suewatanakul	Director	22,500

Notes:

- (1) The board of directors Meeting of Thai Ethoxylate Co.,Ltd no.3/2019 held on 16 September 2019 appointed Mr. Witoon Suewatanakul as a director, replacing Mr. Sekxon Arttamangkura, who resigned from the positions.
- (2) The Annual General Meeting 2019 of GGC KTIS Bio Industrial Co.,Ltd held on 10 July 2019 approved directors' remuneration for year 2019 on a monthly basis.

#### 7.4.3 Management Remuneration

GGC evaluates management performance on a yearly basis through the application of the Key Performance Indicators (KPIs), including financial performance, implementation of long-term strategic goals, management performance, differences of GGC's guidelines and those of other SET-listed companies of a similar size. Responsibilities, management development and the overall economic conditions are also taken into account.

The remuneration of the Managing Director is measured in the most appropriate way and with transparent, fair and reasonable principles. The position's duties and responsibilities together with management performance are also taken into consideration to determine the remuneration before the Nomination and Remuneration Committee forwards the figures to the Board of Directors for approval.

Managing Director is provided with good remuneration and fringe benefits that are considered suitable for the Company's top Executive in addition to other benefits received as the Chairman of the Board of Directors.

The compensation received by top Executives who fell under the SEC's definitions and served during the year 2019 is shown in the table below.

Items	Persons	Amount (Baht)
Base salary, bonus, wages and other welfare benefits	14	47,758,542
Contributions into provident funds	14	3,379,943

**7.4.4 Remuneration for Management in Subsidiaries and Joint Company (as of 31 December 2019)**

GGC's Management has been appointed as directors in subsidiaries to ensure that the businesses operations are in line with GGC Group's policies.

Name	Position	Total Compensation
<b>Thai Fatty Alcohols Company Limited</b>		
Mr. Witoon Suewatanakul	Director / Chairman	None
Ms. Wanlapa Sophiskhaunkhant	Director	None
Mr. Ekaphong Govitgoongrai <sup>(1)</sup>	Director/ Managing Director	None
<b>GGC Biochemicals Company Limited</b>		
Mr. Witoon Suewatanakul	Director / Chairman	None
Ms. Wanlapa Sophiskhaunkhant	Director	None
Mr. Apichart Kullavanijaya	Director/ Managing Director	None
<b>Thai Ethoxylate Co.,Ltd</b>		
Mr. Witoon Suewatanakul <sup>(2)</sup>	Director	94,500
Mr. Piya Suri	Director/ Managing Director	252,000
<b>GGC KTIS Bio Industrial Co.,Ltd <sup>(3)</sup></b>		
Mr. Witoon Suewatanakul	Director	22,500
Mr. Yothin Budyochuntho	Director/ Managing Director	22,500
<b>Thai Eastern Top Seeds Oil Co.,Ltd</b>		
Ms. Wanlapa Sophiskhaunkhant	Director	None
Mr. Ekaphong Govitgoongrai <sup>(4)</sup>	Director	None

Notes:

- (1) The board of Directors Meeting of Thai Fatty Alcohols Company Limited No. 2/2020 held on 17 February 2020 appoint Mr. Ekaphong Govitgoongrai as director in replace of Mr. Apichart Kullavanijaya effective from 17 February 2020.
- (2) The Board of Directors Meeting of Thai Ethoxylate Co.,Ltd no.3/2019 held on 16 September 2019 appointed Mr. Witoon Suewatanakul as director, replacing Mr. Sekxon Arttamangkura , who resigned from the position.
- (3) The Annual General Meeting 2019 of GGC KTIS Bio Industrial Co., Ltd held on 10 July 2019 approved directors' remuneration for year 2019 on a monthly basis.
- (4) The Board of Directors Meeting of Thai Eastern Top Seeds Oil Co., Ltd, No. 6/2019 held on 23 December 2019 appointed Mr. Ekaphong Govitgoongrai as director, replacing Mr. Sirintra Chatchawanpreecha who resigned from the position.

## Securities held in the name of Directors, their spouses and minor children as of 1 January 2020

Securities Holders*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of 1 January 2019	As of 1 January 2020	
1. Mr. Supattanapong Punmeechaow	50,000	50,000	No change
2. Prof. Dr. Kumchai Jongjakapun	15,000 (spouse)	15,000 (spouse)	No change
3. Ms. Kannika Ngamsopee	20,000	20,000	No change
4. ACM Songtam Chokkanapitag	None	None	No change
5. Mr. Payungsak Chartsutipol	50,000	50,000	No change
6. Mr. Apichart Jongskul	None	None	No change
7. Mr. Suphit Suwagul	None	None	No change
8. Maj.Gen Titawat Satiantip	None	None	No change
9. Mr. Kongkrapan Intarajang	None	None	No change
10. Mr. Patiparn Sukorndhaman	23,000	23,000	No change
11. Mr. Witoon Suewatanakul	None	None	No change

Directors who resigned in 2019 (as of each person's last day of work**)			
Securities Holders*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of 1 January 2019	As of 1 August 2019	
1. Mr. Athavudi Hirunburana	None	None	No change
	As of 1 January 2019	As of 1 August 2019	
2. Mr. Narongsak Jivakanun	15,000	15,000	No change
	As of 1 January 2019	As of 1 August 2019	
3. Mr. Sekxon Arttamangkura	None	None	No change

Note: In compliance with the notification of the SEC No. TorChor 17/2551 Re: Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities Clause 2 (16)

\* Including shares held by the Directors' spouse and minor children.

\*\* Information as of the last day in directorship position

## Securities held in the name of Executives, their spouses and minor children under the SEC regulation as of 1 January 2020

Securities Holders*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of 1 January 2019	As of 1 January 2020	
1. Mr. Witoon Suewatanakul	None	None	No change
2. Mr. Suwat Kamolpanus <sup>(1)</sup>	N/A	None	No change
3. Mr. Nikom Kasempura	None	None	No change
4. Ms. Uramanee Puttong	1,000	1,000	No change
5. Ms. Wanlapa Sophiskhaunkhant	None	None	No change
6. Mr. Apichart Kullavanijaya	None	None	No change
7. Mr. Ekaphong Govitgoongrai	None	None	No change
8. Mr. Suchet Deemangmee	None	None	No change
9. Ms. Narungsi Kaiwikaigumnurd	None	None	No change
10. Mr. Thodsaphorn Phienchob <sup>(2)</sup>	N/A	None	No change
11. Ms. Sirintra Chatchawanpreecha	None	None	No change
12. Ms. Chompunuch Liamprawat <sup>(3)</sup>	N/A	None	No change
13. Mr. Sayan Saesue	None	None	No change
14. Mr. Chanasiri Vanit	33,000	33,000	No change

Executives who resigned in 2019 (as of each person's last day of work)			
Securities Holders*	Shareholding (No. of shares)		Change during the year (No. of shares)
	As of 1 January 2019	As of 1 June 2019**	
1. Mr. Sekxon Arttamangkura	None	None	No change

Note: In compliance with the notification of the SEC No. TorChor 17/2551 Re: Determination of Definitions in Notifications relating to Issuance and Offer for Sale of Securities Clause 2 (16)

\* Including shares held by the directors' spouse and minor children.

(1) Appointed Mr. Suwat Kamolpanus as Deputy Managing Director, Project and Business Development effective from 1 January 2020.

(2) Appointed Mr. Thodsaphorn Phienchob as Vice President, Operation effective from 1 January 2020.

(3) and (4) Appointed Ms. Chompunuch Liamprawat as Vice President, Process Technology in replace of Ms. Sirintra Chatchawanpreecha who resigned from the position , effective from 31 January 2020.

\*\* Information as of the last day in work



## 7.5 Personnel

### 7.5.1 Number of Employees

As of 1 January 2020, GGC has 232 employees in total, including the Managing Director (additional 18 employees from GC and one employee from PTT for secondment also included) while 119 employees work at the manufacturing sites. None of the Company's employees joins labor unions. Until now, the Company has never faced a strike or any business interruption due to labor disputes. the Company considers that the Company has maintained a healthy relationship with employees.

The number of GGC's employees is shown in the table below. (As of 1 January 2020)

Business Unit	Number of Employees
Reporting to Managing Director	5
Internal Audit	6
Corporate Finance and Accounting	11
Corporate Affairs and Corporate Secretary	13
Corporate Strategy	8
Supply Planning and Feed Sourcing	11
Marketing and Commercial	15
HR and Corporate Support	13
Project and Business Development	5
Business and Product Development	8
Project Management	8
Operational Excellence	1
Operations	93
Process Technology	12
Engineering and Maintenance	14
Quality, Security, Safety, Health and Environment Policy	9
<b>Total</b>	<b>232</b>
Secondment at GGC Subsidiaries/Joint Venture	6

#### Note

The Board of Director No 16/2019 held on 18 December 2019 has approved the new organization structure of the company effective from 1 January 2020, the detail of the change in the Organization Structure detailed in Part 2 : Organization Structure and Corporate Governance.

## 7.5.2 Remuneration to Other Employees

### A) Compensation

Benefits to employees comprising salary, bonus, wage and welfare worth approximately THB 251 million in 2019. Nevertheless, a pay raises usually provided to employees whose annual performance review and productivity are sufficient to earn an increase and in competitive job market based on the Balance Scorecard systems.

### B) Other Benefits

GGC treats the employees in compliance with Thailand's labor laws. The social security fund contribution and retirement lump sum are paid to the employees include employees training, life insurance that are worth approximately THB 51 million in 2019.

### C) Provident Fund

GGC, GC and 15 joint ventures of GC jointly establish 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 basic salaries and the Group contributes at the minimum rate of 5 percent but not exceeding 15 percent of the employees' basic salaries. The provident funds at the end of 2019 is approximately THB 12 million

## 7.5.3 Human Resource Management Policy

In 2019, 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 placed high importance on 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 by believing that employees are valuable assets and are the key contributions to success and sustainable growth of the company.

GGC has a plan to increase 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 create 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.

Capacity building, a full understanding in business overview and employee engagement are created through the so-called Learning Journey in which mentoring and determination of learning goals are key factors. Development plan for employees has been set out to allow them to perform their duties as expected. Learning and development have become more systematically for employees at all levels to improve both functional as well as leadership skills.

**Personnel Development** GGC improves manpower in terms of quantity and quality to be well prepared for any assignments to generate new business opportunities.

GGC, together with PTT Global Chemical Plc (GC), has developed ‘Top Talent’ by offering them challenging tasks, so they can tough them out.

In order to identify new market opportunities, building a strong brand is important to attract more prospective employees to join GGC. The Company recruits personnel through several types of channels and activities. For example, Campus Recruitment that is circulated mainly on social media to reach the company’s target groups.

Regarding implementation of corporate culture, since 2018, GGC has set out the so-called Core Behaviors which consists of courage, wisdom, goodness, discipline, care and responsibility to protect the environment. To support the implementation of core behaviors in the company, the chief executives should first serve as role models and their practices shall be reviewed and evaluated in the 360-degree feedback ahead of the appointment and promotion. Furthermore, the company also promotes the roles of Change Agent who will help each department inside the company transform itself by focusing on such matters to bring more practical changes. The six Core Behaviors will be merged into human resource development work such as recruitment of employees whose practices should be in line with the Company’s core value, performance assessment and development of leaders as well as employees.

In order to build up morale and engagement among employees, the Company has created a two-way communication channel for the chief executives to send their messages including information regarding the Company’s business direction and at the same time opinions from the employees can be received by their managers. Among key activities shared through this channel include Employee Wellbeing Program that promotes physical and mental well-being as well as work-life balance of the employees.

## Corporate Governance

The Board of Directors recognized business operation based on a Good Corporate Governance and Business Code of Conduct in compliance with Laws, Rules and Regulations of Securities and Exchange Commission (SEC), The Stock Exchange of Thailand (SET) As well as the determination to enhance to the international standards.

### 8.1 Corporate Governance Policy

Since 2016, the Board of Directors has established the Good Corporate Governance Policy and specified it as part of the Company Policy. The Board of Directors assigns the Corporate Governance and Sustainable Development Committee to supervise, monitor and performance evaluation relate to the principles of Corporate Governance Code for listed companies in 2017 or CG Code of the SEC.

Quarter 4 of 2018	: The Board of Directors approved the Good Corporate Governance Policy and agreed to keep it modern and aligned with the changing context of the Company.
Quarter 1 of 2019	: The Board of Directors approved the improvement of the Good Corporate Governance and Business Code of Conduct Handbook (CG Handbook) in order to raise awareness of Business Code of Conduct among employees and taking into account the interests of the relevant stakeholders equally.
Quarter 4 of 2019	: The Board of Directors, Executives and employees at all levels signed an acknowledgement to comply with the principles, the policies and the code of conduct appearing in CG Handbook (revised edition) as a practical guidelines of business operations.

### 8.2 Good Corporate Governance Policy and Good Corporate Governance and Business Code of Conduct Handbook

The Board of Directors approved an updated revision of the Good Corporate Governance Policy and the CG Handbook to be a practical guidelines for the Board, Executives and employees in order to oversee the business operations and carry out their duties in line with the CG Code which consists of eight principles as follows:

- Principle 1 : Establish Clear Leadership Role and Responsibilities of the Board
- Principle 2 : Define Objectives that Promote Sustainable Value Creation
- Principle 3 : Strengthen Board Effectiveness
- Principle 4 : Ensure Effective CEO and People Management
- Principle 5 : Nurture Innovation and Responsible Business
- Principle 6 : Strengthen Effective Risk Management and Internal Control
- Principle 7 : Ensure Disclosure and Financial Integrity
- Principle 8 : Ensure Engagement and Communication with Shareholders

### 8.3 Communication of Good Corporate Governance Principle

In 2019, GGC established a Good Corporate Governance Roadmap that enhances knowledge and understanding to contribute to the implementation of the Good Corporate Governance policy and CG Handbook with guidelines for communicating to employees at all levels through the following activities

- I. To specify “Good Corporate Governance and Business Code of Conduct” as a main topic in every orientation session.
- II. Initiated the first "CG & Compliance Roadshow" activity, organized throughout October 2019, for a total of 3 times, in order to raise awareness among Executives and employees to realize the implementation of Business Code of Conduct and operations in accordance with the laws, rules and regulations of the GGC’s group.
- III. Communicated and delivered the CG handbooks (2019 edition) to the Directors, Executives and employees have acknowledged the principles, the policies and the code of conduct appearing in handbook as a practical guideline of their operation.
- IV. Communicate best practices regarding Good Corporate Governance to employees via email, GGC CG News, and through the LINE application as a monthly basis. To be used as a means of communication for employees to access more conveniently.
- V. Organize “The Ethic and Compliance Test” for two consecutive years to assess the knowledge and understanding of the Good Corporate Governance among employees.
- VI. Assessment of compliance with external regulator such as The Office of the Securities and Exchange Commission (SEC), The Stock Exchange of Thailand (SET), Thai Institute of Directors Association (IOD) and Thai Investors Association, to measure the efficiency of the implementation of the Good Corporate Governance Principle and to boost up a good governance of the Company to international standards

### 8.4 Business Code of Conduct

The Business Code of Conduct consists of several good practices for all GGC employees to hold on to and adopt as guidelines for work appropriately in an ethical manner with adherence to correctness and honesty. Director and Executives should be determined to promote and encourage ethical conduct among employees through their personal leadership.

GGC established the Business Code of Conduct with due regard to all stakeholders that are also published in the CG Handbook and given to the Board of Directors, Executives and employees. Thoroughly, GGC’s subsidiaries and affiliates are recognized the existence of Business Code of Conduct and available for the shareholders, investors and interested parties able to conveniently access on [www.ggcplc.com](http://www.ggcplc.com) under the section titled “Corporate Governance”.

Moreover, the Managing Director delivered a corporate message of Good Corporate Governance and Business of Conduct to Business partners and customers for acknowledgement and applied good practices into their business operation.

## 8.5 Awards and Recognition of Good Corporate Governance

GGC drives its business operations based the Good Corporate Governance Principles with commitment to create value to the stakeholders sustainably. As a result, in 2019, the company has been recognized by the following external regulator.

- The Company has taken into accounts the assessment on the Annual General Meeting of Shareholder (AGM Checklist) for the year 2019 and received 97 out of 100 which evaluated by The Thai Investor Association (TIA)
- GGC was rated “Excellent” in the Corporate Governance Report of the Thai Listed Companies for two consecutive years which evaluated by the Thai Institute of Directors Association (IOD).
- GGC was evaluated for the 2019 SET Sustainability Award.
- It is the fifth consecutive year of GGC has received the CSR-DIW Continuous Award from Ministry of Industry’s Department of Industrial Works.
- GGC received the Green Meetings certificate from the Thailand Business Council for Sustainable Development (TBCSD) for its awareness of environmental impacts.
- GGC was for the first time selected by The Stock Exchange of Thailand (SET) into the Thailand Sustainability Investment (THSI) List with the market capitalization worth between 10,000 – 30,000 million baht.

## 8.6 Good Corporate Governance based on International Standards

The company has complied with the Good Corporate Governance Principles for listed companies of the Stock Exchange of Thailand (SET), the Corporate Governance Report (CGR) and the Dow Jones Sustainability Indices (DJSI). In the past year, the Company has applied the Principles of Good Corporate Governance for Listed Companies 2017 or CG Code as follows:

### **Principle 1 : Establish Leadership Role and Responsibilities of the Board of Directors as the leader in the sustainable organization**

#### **The Board’s Responsibilities**

The Board of Directors established the policy related to their responsibilities. In the year 2019 the Board of Directors has the following actions;

#### **1. Define policy, strategy and business direction**

The Board of Directors reviews and make a decision business operation policy, vision, mission, business plans, budget and strategy in line with the fluctuation of the business condition. The Board of Directors are also defining indicators and objectives while providing recommendations for management to achieve corporate goals by assigning the Managing Director to continuously submit a report to the Board of Directors. In 2019, The 10-year strategic plan (2020 – 2029) was presented in the Board of Directors meeting.

## 2. Good Corporate Governance and Business Code of Conduct

The Board of Directors established Good Corporate Governance and Business Code of Conduct so that the Directors, Executives and employees abide by as a guideline for business operations in line with standards as well as transparency and in an effective and trackable manner. The performance of its duties should be based on business ethics and code of conduct while protecting the interests of stakeholders equally. The Corporate Affairs and Corporate Secretary acts as a mediator to oversee the related matters. The performance has been mentioned under the topic: “Good Corporate Governance”

In the fourth quarter of 2019, Directors, Executives and employees signed, acknowledged, understood and agreed to apply the principles, policies and code of conduct in "CG Handbook" as a standard of operating.

## 3. Internal Control and Internal Audit

The Board of Directors realizes the importance of internal control and internal audit by assigning the affiliated companies to standardize the internal control and ensure that the Company's goals are meet the risk acceptable level. To this end, the Internal Audit is responsible for regularly assessing and monitoring the activities and report progress to the Internal Audit Committee and the Board of Directors. Further information about the Company's efforts to boost confidence among the stakeholders through more effective internal control that disclosed under the section titled “Internal Control”.

## 4. Risk Management

The Board of Directors has been taking to consider important risk factors that may occur to business operation and set guidelines for managing risks completely by assigning The Risk Management Committee is responsible for policy making, supervise and promote the GGC's risk management. Effectively, consider the significant risks, define action plans, monitor, assessment, and mitigate risks appetite. As well as reporting risk management results to the Board of Directors as disclosed in the topic "Risk management and risk factors"

## 5. Conflicts of Interest

GGC formulated policies to ensure good corporate governance and prevent any action that may result in a conflict of interest in transactions and involves the Directors, Executives and employees. Such policies were mentioned in the CG Handbook to ensure that employees comply with Laws, Rules and Regulations stipulated by the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC).

Furthermore, the Company also pronounced prohibition and gave a warning to Directors, Executives and employees to take advantage from their position to buy/sell the Company's stock or use inside information to buy/sell the Company's stock. The Directors and Management as stipulated by SEC were required to report their own interests and the interests of related parties to GGC. Employees were also required to report transactions with potential conflict of interest every year on GGC's intranet. If certain transaction cause conflict of interest, the relevant stakeholders must report to GGC at once.

## 6. Social Responsibility Towards Society and Environment

The Board of Directors has assigned the Corporate Governance and Sustainable Development Committee to be responsible for approving Sustainable Development Roadmap and follow up the results to look after and improve the quality of community's life, society and environmental protection.

In 2019, a wide range of important issues relating to Corporate Governance and Sustainable Development working team include executives from different department, concerned the progress in resolving problems or threats may occur to business operation as well as consider the Stakeholder Engagement Plan and Integrated Sustainability Report Plan for year 2019. Moreover, hiring external consultant to assess the completeness of the report in order to enhance the reliable and in accordance with international standards.

### Principle 2 : Define Objectives that Promote Sustainable Value Creation

#### Define a Framework and Monitor the Business Operations

The Board of Directors and also the Management Committee (MC) at yearly corporate strategy meeting No.11/2019 held on 20 July 2019, considered the Long-term corporate business strategy and human resource development plan which is determined as an annual agenda to the Board of Directors' Meeting to ensure that the strategic directions and plans are able to respond to current and reflect the change of economic, social and environment. There is also a risk assessment and preparation for business operations under various situations effectively. And also monitor the progress of the operations according to the corporate strategy through the Board of Directors meeting on a monthly basis.

In addition, GGC implements Good Corporate Governance and Sustainable Development Roadmap along with the corporate strategy in order to get the business moving in the same direction and more effectively.

### Principle 3 : Strengthen Board Effectiveness

#### Composition and the Proportion of Non-Executive Director

The Company determined the appropriate number of Directors. At present, the member of the Board of Directors comprises of 11 members, including an Executive Director and 10 Non-Executive Directors. 7 members are Independent Directors which make up 63.63 percent or more than half of the Board of Directors.

#### Roles of Chairman and Managing Director

Chairman and Managing Director must never be the same person. Chairman typically does not engage in the day-to-day management and has different roles from Managing Director which are described below:



## Chairman

- 1) Although Chairman is not required to be an Independent Director but independent from the Management in accordance with the CG Code principle, whom practices agenda for the Board of Directors Meeting with the Managing Director who also acts as Secretary to the Board of Directors.
- 2) Chairman shall take the chair at the Board of Directors meetings and the Annual General Meeting (AGM) of Shareholders and ensure that the Board is effective in its task of setting and implementing the Company's good corporate governance practices.
- 3) Chairman must not hold a directorship or management position in any sub-committee in line with division of responsibilities.

## Managing Director

The Managing Director is the Top Management, selected and appointed by the Board of Directors from Directors according to GGC Article of Association. He/she is responsible for corporate management under policies, action plans, budgets, and authority assigned by the Board of Directors and stipulated by GGC's Article of Association. The Managing Directors also serves as Board of Directors secretary, and his duties are publicized on GGC's website.

The Articles of Association also stated that the Managing Director earns compensation and benefits as the top corporate executive, based on the Board of Director's annual appraisal, on top of those of a Director.

## Board of Directors' Meeting

As a rule, the Board of Directors' Meetings are scheduled in advance the date and times for its meetings for a given year. It also clearly set the agenda for each month and may call for special meetings as seen appropriate and necessary. The Board of Directors receives meeting notices, draft meeting minutes, and supporting documents for consideration at least seven days before the meeting. During the meetings, the Directors are free to express their recommendations while the Chairman provides leadership and ensure proper information for the Board. If a Director is involved in conflict of interest of the issue under consideration, such Director must abstain from decision-making on such issue.

In 2019, the Board of Directors held sixteen meeting and four special meetings in advance. A Board of Directors' meeting minutes report was made and signed by the Chairman and the Corporate Secretary. The minute was kept in several forms such as in folder and in electronic file which limits access to only relevant person for security of internal data and confidential information.

## The Meeting of Non-Executive Directors

GGC schedules the meeting of non-executive directors at least once a year in line with the Good Corporate Governance Policy. In 2019, the meeting was held on 18 December 2019 at its head office in Bangkok. Nine non-executive directors attended the meeting to discuss management issues and the business operations. The discussion covers various issues such as prioritizing the business operations and setting the important goals with monitoring system. In order to prevent unexpected events, the related development was reported to the Board of Directors regularly as well as creating a corporate culture and support the employee engagement.

## The Board of Directors' Reports

GGC submitted the reports of the Board of Directors' meetings to the directors in accordance with regulations of the Stock Exchange of Thailand (SET) within 14 days from the last day of the meeting to allow the directors to review the content inside and return it with recommendation to the Company which has been ongoing since 2017.

In addition, the Board of Directors emphasize to the importance of the financial reports by assigning the Internal Audit Committee to consider the completely of financial reports and internal control processes. As well as reviewing the appropriateness and guidelines for disclosing important information adequately in the notes to the financial statements. As specified in the 2019 annual report which has been approved by the Board of Directors.

### Sub-Committees

Board of Directors has established four sub-committees namely the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainable Development Committee and the Risk Management Committee. Each committee shall serve up to three years since the date of appointment. Their specific roles and responsibilities in line with each committee's charter, the number of the meetings and the number of attendances required are shown under the topic: Management Structure.

### Nomination and Appointment of Directors and Independent Directors

The Nomination and Remuneration Committee is responsible to determine appropriate remuneration and consider persons whose knowledge, competency, expertise, experience and specific qualifications are valuable for business operation and GGC's strategy in line through skill matrix and the Board Diversity. As well as considering independence and none of conflicts of interest of directors.

In addition, the Company provides an opportunity for minor shareholders holding shares not less than 4% can nominate a person with suitable qualifications as a director in addition to using the Director Pool from the Thai Institute of Directors (IOD).

In order to understand the Company's business direction, organization structure and good corporate governance practices, those who are appointed to Director and Independent Director position shall attend the orientation sessions organized by the Company's different departments. The guidelines of the appointment of Directors and Independent Directors are as follows:

#### 1. Nomination of Directors

- **Recommendations on the Appointment of New Directors :** Directors are appointed to the Board of Directors based on their qualifications in line with laws and regulations, expertise, knowledgeable and capability in various professional fields which are useful for the performance of directorship as Skills Matrix is in engineering, economics, finance, accounting, business operation, security and social science, law, strategic planning, risk management and corporate governance.
- **Recommendations on the Re-Appointment of the Directors :** The performance, dedication and participation of the Company's activities in previous years will be taken into account.

## 2. Nomination of Independent Directors

GGC considers the composition of the Board of Directors in line with the regulations of the Securities and Exchange Commission (SEC). On 31 December 2019, out of 11 directors, seven Independent Directors which are greater than required by the SEC, defined their qualifications in accordance with the CG Handbook in GGC's website.

The Company also organizes the meeting of Independent Directors once a year. The meeting was held on 8 May 2019 at head office in Bangkok. The Independent Directors, who had independence as basic qualifications as required by the SEC attended the meeting, including Prof. Dr. Kumchai Jongjakapun who served as a Chairman of Independent Director and Chairman of the meeting. A wide range of issues was discussed including their roles and responsibilities during unexpected events in the previous year, legal proceedings, inventory risk management, communication with the shareholders, technology integration for mitigate risk and establish a Legal and Compliance Department to oversee operations in accordance with relevant laws, rules and regulations.

### Recruitment and Appointment of the Managing Director

The recruitment of the Managing Director in case of vacancy will be considered by the Nomination and Remuneration Committee from the ranks of those with skill, experience, professionalism, specific qualifications in various fields that are necessary and beneficial to GGC's business operations, pending the approval of the Board of Directors. In 2019, the Board of Directors appointed Mr. Witoon Suewatanakul to the Managing Director on 1 July 2019.

### Board of Directors Performance Appraisal

#### Board of Directors

GGC has reviewed and assessed the Board of Directors performance since 2018. In 2019, the Board's performance was assessed in three types – the entire board assessment, self-assessment and cross-assessment of other Directors. The scores were divided into five levels. The assessment was conducted in accordance with the CG Code stipulated by the SEC. Assessment is applied to partly consider Director's annual compensation in addition to GGC's performance and were disclosed in the annual report. The performance assessment of the Board of Directors is shown below:

#### 1. Assessment of the Board's Performance (Entire Board)

The assessment comprised of six categories:

- 1) Board Policy
- 2) Board Performance
- 3) Board Structure
- 4) Board Style
- 5) Board Meeting
- 6) Board Development

The Directors who underwent this assessment were Directors as of November 2019 (11 in total). And the Group assessment score was 93.33%, up 3.71% from 2018.

**2. Assessment of Individual Directors' performance (Self-Assessment)**

The question consisted of three categories:

- 1) Responsibilities and Duties
- 2) Independence and,
- 3) Self-Development and Teamwork

The Self-Assessment of Directors scored 93.80% in 2019, up 2.12% from 2018.

**3. Assessment of Individual Directors' performance (Cross Assessment)**

The question consisted of three categories:

- 1) Knowledge and Expertise
- 2) Independence and,
- 3) Devotion and Meeting Attendance

The Self-Assessment of Directors scored 93.79% in 2019, up 2.53% from 2018.

**Sub-Committees**

The Sub-Committees consist of the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Sustainable Development Committee and the Risk Management Committee. The performance assessment of the Sub-Committees, both group and individuals, was conducted for all. In 2019, assessments were reviewed by all and improved as shown below:

1. **Audit Committee** : The assessed topics consisted of the Audit Committee's Charter, composition and qualifications, performance evaluation, relationship of Vice President of Internal Audit Department, external auditors, development of the Audit Committee, report to the Board of Directors and shareholders as well as maintaining the duties.
  - Committee's assessment with an average score of 93.50%
  - Individual assessment with an average score of 92.35%
2. **Nomination and Remuneration Committee** : The assessed topics consisted of the composition and qualifications of the member, role and responsibilities, meetings attendance, reporting and performance assessment.
  - Committee's assessment with an average score of 94.61%
  - Individual assessment with an average score of 94.71%
3. **Corporate Governance and Sustainable Development Committee** : The Corporate Governance and Sustainable Development Committee's Meeting No.4/2019 held on 21 October 2019 approved a revision of the performance assessment for the entire committee. The added-on topic related to Board responsibilities in line with the CG Code, affecting the number of the assessment increase from 18 to 20. Criteria topics -- the composition and qualifications of member, meetings attendance, reporting and performance evaluation -- remained unchanged.
  - Committee's assessment with an average score of 94.31%
  - Individual assessment with an average score of 94.30%

4. **Risk Management Committee** : The assessed topics consisted of the composition and qualifications of member, role and responsibilities, meetings attendance, reporting and performance evaluation.

- **Committee's assessment with an average score of 90.87%**
- **Individual assessment with an average score of 92.73%**

#### Supervision of GGC and GGC Subsidiaries

GGC conducts its business through subsidiaries, the details of shareholding in these entities appear under "Shareholding Structure" on the Company's website [www.ggcplc.com](http://www.ggcplc.com). GGC has carried out its business activities in line with the GC Way of Conduct, as mentioned as follows:

- The Managing Director shall have the authority to formulate policies, criteria, regulations, orders, announcements, guidelines and empowering executives to have the authority to approve and sign to perform tasks as needed.
- To oversee GGC's key policies such as Good Corporate Governance Policy, Whistleblower Policy, Anti-Corruption Policy, Compliance Policy, and other related policies that align the operations with the regulations of Securities and Exchange Commission of Thailand, Stock Exchange of Thailand, and related laws, rules and regulations.

Moreover, During the meeting with Managing Director of GGC KTIS Bioindustrial Co., Ltd (GKBI), a subsidiary in which each holds a 50% stake, the Company informed policies that are in compliance with GGC Way of Conduct that consists of HR Way of Conduct, HR System, the meeting standards and good corporate governance practices for the subsidiaries.

#### Anti-Corruption

GGC is committed to operate business based on good governance, transparency, honesty and business code of conduct with responsibility towards society, environment and stakeholders. The Company has developed and improved business operation in line with laws and the Good Corporate Governance Principles which are mentioned as follows:

- **CAC Certification**: GGC has declared its opposition against corruptions by joining the Collective Action Against Corruption (CAC) in 2017 and has become as a member in the following year. In the first quarter of 2019, GGC revised the risk management and internal control plans in terms of anti-corruption to be more effective and concise as suggested by the CAC's Committee. The revision was already submitted to the CAC.
- **legal and Compliance Department** : GGC has established Legal and Compliance Department to manage risks that might arise from legal consequences. The department also formulate plans to promote the "Compliance Policy" to systemize its business.
- **Corruption Risk Assessment** : GGC provided corruption risks assessment to analyze likelihood and the impact that may cause fraud by using assessment forms as a tool for considering corporate risks as well as creating awareness on anti-corruption for employees through meetings, training sections and activities as follows:

- 1) **Board of Directors** : The Board of Directors acknowledged the development for corruption risk management on a quarterly basis to ensure that the measures taken are effective and efficient, which leads the Company to achieve business plan and long-term goal.
  - 2) **Executives** : On 18 April 2019, GGC's executives attended the training session namely "The roles of executives in driving Enterprise Risk Management across the organization and promoting the participation of employees".
  - 3) **Employees** : On 27 August 2019, Representatives of employee who perform duties as "Risk Coordinators" of each department have participated in risk management and internal control training on-site in order to develop the operational risk management to be more efficient with discussions as well as establish guidelines for 2020 Risk Management.
- **Internal Communication** : GGC remains committed to effective communication channels to promote good corporate governance and business code of conduct that are in accordance with the corporate culture which are "Bravery, Competency, Devoted, Discipline, Care of Stakeholders and Environmental Stewardship" as follows:
    - 1) **Corporate Governance Talk (CG Talk)** : Specify that every Management Committee (MC) meeting must specify the corporate governance agenda to be a regular agenda in order to emphasize the management to be the leader in communicating the Good Corporate Governance to employees in their own departments.
    - 2) **GGC CG News** : Communicate Business Code of Conduct as well as good practice through regular corporate governance news emails on monthly basis.
    - 3) **CG & Compliance Roadshow** : firstly organized the "CG & Compliance Roadshow" in October of 2019, for 3 times in order to create a better understanding of laws, regulations and corporate governance. And promoting "Devoted" culture within the organization as well as requiring every levels of employees to participate in "Ethic & Compliance Test" at the end of 2019 in order to analyze the effectiveness and understanding of ethics and business code of conduct.
    - 4) **Corporate Governance and Business Code of Conduct Handbook (CG Handbook)** : CG handbook was revised in line with the CG Code and delivered to Directors, Executives, and employees to acknowledge and understand the principles, the policies and the code of conduct.
  - **External Communication** : GGC communicated Anti-Corruption Policy and disclosed Good Corporate Governance and Business Code of Conduct Handbook (2019 Revision) on GGC's website and also delivering corporate letters to customers and business partners to acknowledge GGC's Business Code of Conduct.

- **Participation with public sector** : GGC took part with GC Group in the International Anti-Corruption Day (Thailand) under the concept “Anti-Corruption Unite” on September 6, 2019, at Impact Exhibition & Convention Center. The event featured cooperated between Office of The National Anti-Corruption Commission (NACC), Office of Public Sector Anti-Corruption Commission (PACC), and related networks to devoted campaign of promoting virtue among the public sector and private sector regarding anti-corruption. The event was presided by Mr.Wichian Phongsathorn, President of the Anti-Corruption Organization of Thailand.
- **Whistleblower System and Protection**
  - 1) A revision of Whistleblower Policy was approved during the Board of Directors’ Meeting No.15/2020 held on 18 December 2019 to increase its effectiveness to protect complainants which was reviewed by the Corporate Governance and Sustainable Development Committee beforehand.
  - 2) GGC has provided channels for sending complaints as follow :
    - 1<sup>st</sup> channel : Mail to Corporate Secretary or Vice President of Internal Audit, at 555/1 Energy Complex Building A, 4<sup>th</sup> Floor, Vibhavadi Rangsit Road, Khwaeng Chatuchak, Khet Chatuchak, Bangkok 10900
    - 2<sup>nd</sup> Channel : Website: [www.ggcplc.com](http://www.ggcplc.com) (Topic titled : Good Corporate Governance)
    - 3<sup>rd</sup> Channel : Email: [GGCVoice@ggcplc.com](mailto:GGCVoice@ggcplc.com)
    - 4<sup>th</sup> Channel : Other available channels

In addition, the company has improved the complaint topic on the company's website. By dividing topics into 2 categories which are 1) Complaints of Good Corporate Governance and Business Code of Conduct, amount 3 items, and 2) Complaints related to stakeholders, among of 5 items so that stakeholders can easily classify complaints.

- 3) Whistleblower Process
  - **Filing a Complaint** : Any person who witnesses unethical business behavior or illegal misconducts could fill a complaint to the Company through designated channels shown in No.2.
  - **Complaint Submission and Investigative Process** : The Corporate Secretary is responsible for taking a complaint and forwarded through Internal Audit Department or related department for further investigation.
  - **Whistleblower Protection** : Name and other information of complainant and the conduct of an investigation shall be concealed.
  - **Response** : Complainant or any involved stakeholder will be contacted only if he/she provide their information. The case will later be submitted to the Corporate Governance and Sustainable Development Committee and the Audit Committee.

- 4) GGC has put in place a Whistleblower Procedure so complaints would be kept standardized and verified registration number so the case can be proceeded to the next steps appropriately. In the year 2019, no complaint was discovered. Regarding complaints in 2018, the company has complied with the Whistleblower Policy and proceed with the offender according to the disciplinary process of the company completely.

### Director and Executive Interest and Disclosure

The eligible persons are elected as Director must disclose the shareholding of the company by themselves, their spouses, and their minors before and after the date of appointment in compliance with Section 89/1/4 of the Securities and Exchange Act B.E. 2535 (1992) and the SEC No. TorChor. 2/2552, Disclosing of Interests of Directors, Executives and Related Persons.

The Board of Directors' Meeting No.1/2017 held on 15 March 2017 agreed that Directors, and key managerial personal must disclose any change in their shareholding and those held by spouse and their minors as instructed by the Securities and Exchange (SEC) and report it to the Board of Directors.

Securities held by Directors and Executives, spouses and their minors as of 31 December 2019 in line with SEC regulations are shown as "Management Structure".

### Principle 4 : Ensure Effective CEO and Personnel Management

#### Succession Plan

GGC has developed a succession plan for executives in order to ensure the professionalism with knowledge and capabilities as well as perform their duties to maintain the Company performance. The Nomination and Remuneration Committee is in charge for nominating qualified persons to become Directors and reporting to the Board of Directors for consideration.

#### Development of Directors and Executives

##### Directors' Orientation

GGC has organized the orientation session for new Directors which consists of the following points:

1. A briefing of The Good Corporate Governance Principles, rules and regulations and the organization structures of subsidiaries, associated companies and related companies will be conducted to introduce new Directors to the Company's overall operations. Also, to provide them with insight knowledge in the Company's regulations, objectives, strategy, goals, code of conduct of Directors and other information that is considered important for their work.

2. New Directors shall receive key documents and related handbooks such as corporate strategy plan, the Company's regulations, Memorandum of Association, annual report and the CG handbook.

In this regard, the person appointed as a Director and Independent Director will receive an orientation on matters necessary for performing duties from various departments of the Company in order to be informed of basic business practices, the organization structure of the Company, and the good corporate governance practices.



## Training for Director

GGC supports Directors to attend the training sessions to enhance their knowledge and capabilities in line with the Board Skill Matrix as shown below.

1. All Directors underwent training organized by the Thai Institute of Directors Association (IOD) and other leading institutions as listed in this table.

รายชื่อ	DCP	DAP	ACP	BMT	BNCP	ELP	RCP	CMA	TEA	RMP	FBS	SFE	ITG
Mr. Supattanapong Punmeechaow	131/2010						30/2013		Class 4				
Prof. Dr. Kumchai Jongjakapun	128/2010		38/2012				34/2014	Class 9					
Ms. Kannika Ngamsopsee	21/2002				7/2019			Class 3					
ACM Songtam Chokkanapitag	227/2016												
Mr. Payungsak Chartsutipol		SCC/2004						Class11	Class 1				
Mr. Apichart Jongskul	109/2008		30/2010					Class 17					
Mr. Suphit Suwagul	177/2013			8/2019		13/2018							
Maj. Gen Titawat Satiantip	285/2019												
Mr. Kongkrapan Intarajang	119/2009						21/2009		Class 14				
Mr. Patiparn Sukornthaman	73/2006								Class 7				
Mr. Witoon Suewatanakul	186/2014									4/2014	2/2015	27/2016	5/2017

DCP : Director Certification Program	ELP : Ethical Leadership Program	RCP : Role of the Chairman Program
DAP : Director Accreditation Program	BMT : Board Matters and Trends	CMA : Senior Executive Course, Capital Market Academy
ACP : Audit Committee Program	BNCP : Board Nomination and Compensation Program	TEA : Senior Executive Course, Thailand Energy Academy
RMP : Risk Management Committee Program	FBS : Family Business Government For Sustainability	SFE : Successful Formulation & Execution of Strategy

2. GGC annually organized Knowledge-Sharing sessions for the Board of Directors and in 2019, which covered “Bio Plastic”, was held on 10 July 2019. Dr. Pipat Weerathaworn, advisor to GGC, was invited as a guest speaker. The seminar aims to develop a better understanding and other skills in line with the implementation of NBC Project (Phase II)
3. Management that has been sent to be Director in the company subsidiaries and joint venture has undergo trainings and development form Thai Institute of Director Association (IOD)

## Corporate Secretary's Training

The Board of Directors encourages the Corporate Secretary to undergo training and development programs, which would be benefits to her performance in line with the CG Code. In 2019, the Corporate Secretary attended a session “Ethical Leadership in Digital Era” with GC Group for raising business code of conduct awareness.

## Principle 5 : Promotion of Innovation and Business Responsibility

### Promotion of Innovation

The Company has established the policy to support the participation of stakeholders in the development of innovation in order to balance between creating value for communities, society, and environment along with sustainable business growth of stakeholders as shown below:

1. Supplier: Promoting sustainable palm oil plantation standards (RSPO : Roundtable on Sustainable Palm Oil) for agriculture by cooperating with business partners to standardize GGC's products.
2. Customer: Improve and products development for customer needed such as Sodium Lauryl Ether Sulfate (SLES) for cleansing solutions.

3. Employee: Inspire all employees to participate in creating innovations, such as executing a comprehensive human resource development plan and awareness training session from experts
4. Community: Natural product development such as environmental toilet cleaners, Luffala products, and Hydrogenated Fatty Acid Methyl Ester (H-FAME) project in cooperation with The Ministry of Energy in order to increase the quality of biodiesel
5. Nation: The development of the Palm Bio Complex investment project to support the Eastern Economic Corridor of Innovation (EECI) for economic growth.

In addition, the Board of Directors supported and promoted innovation by establishing an innovation department. Innovation progressing report has been reported to the Board of Directors regularly. The Board of Directors' Meeting No.13/2019 held on 16 August 2019 was informed the development on R&D and innovation. GGC, Biodiversity Corporation Company Limited, which is a biotech startup, and Chiang Mai University have jointly studied and developed to extract oil from larvae of Black Soldier Fly in a demonstration plant. This oil will be utilized in cosmetics, supplements, and animal feed to promote the development of green chemicals in accordance with the corporate strategy.

### **Roles of Stakeholders**

GGC emphasizes and pay attention to the rights of every group of stakeholders by defining the policy and guidelines in the CG handbook for Directors, Executives and employees. Eventually, every personnel must perform their duties based on The Good Corporate Governance Principle including Conflicts of Interest guideline, Responsibility to stakeholders (shareholders, customers, partners, competitor, creditors, public sector, employees, society, local communities and environment), good practices for Anti-Corruption and, Receiving and offering of Gifts, Assets or any other benefits. The guidelines are published on [www.ggcplc.com](http://www.ggcplc.com) under the section "Good Corporate Governance"

Furthermore, GGC has provided channels for stakeholders to submit their opinions or recommendations relating to corporate governance or other related matters to the Company by entering the section "Whistleblower" or email to [corporategovernance@ggcplc.com](mailto:corporategovernance@ggcplc.com) or other available channels.

The Corporate Governance and Sustainable Development Committee has acknowledged way to approach to different stakeholder groups in 2019 which are described as follows:

#### **1. Shareholders**

GGC respects the fundamental rights of shareholders and treats every shareholder equitably, including the right to participate in the Annual General Meeting (AGM), the right to vote, the right to propose meeting agenda items, the right to nominate candidates for a directorship, and provides them with contact channels via the GGC's website: [www.ggcplc.com](http://www.ggcplc.com) and via email at [corporategovernance@ggcplc.com](mailto:corporategovernance@ggcplc.com) and [ir@ggcplc.com](mailto:ir@ggcplc.com). In 2019, GGC's operating was in line with the Corporate Governance Roadmap in order to build the trust and shareholders engagement.

## 2. Customers and Business Partners

In 2019, Marketing Commercial and Feedstock sourcing Department and Human Resources and Corporate Support Department have reported the treatment and relationships with customers and business partners to the Corporate Governance and Sustainable Development Committee for the first time. The report was highlighting their commitments to protect the mutual benefits, confidential information, the fairness in trade and regulatory compliance in line with the business code of conduct.

GGC has also emphasized on regulatory compliance among the Company's employees and those subsidiaries working, especially in terms of Anti-Corruption Policy and prevention of conflict of interest which involves any stakeholders.

## 3. Business Competitors

GGC ensured fair and transparent competition by neither seeking competitors' trade secret through inappropriate or dishonest means nor defaming them with malicious accusations as well as not violating intellectual property.

## 4. Creditors

In 2019, GGC reported responsibility to creditors, especially the transactions involving in the financial institutions, to the Corporate Governance and Sustainable Development Committee in order to ensure the Company conducted its business in line with the Good Corporate Governance Principles and to prove that all creditors, including the financial institutions, were treated fairly and equally while prioritizing the relationship and conditions in the term of agreement.

## 5. Public Sector

GGC gives an important role to public sector by specifying best practices for the public sector in the CG Handbook, the guidelines for treatment of public sector, by prioritizing to comply with the laws, rules and regulations in order to applying any government licenses.

GGC regularly supports the International Anti-Corruption Day (Thailand) under the concept "Anti-Corruption Unite" as shown in the topic "Anti-Corruption" in order to ensure that the Company remains conducting business honestly, transparently and accountably.

## 6. Employees

GGC focuses on developing employees' competency by using Knowledge Sharing Activities that emphasize on business operation via email and Line Application, external training sessions, the development of assessment forms, the participation with GC Group in order to share working experiences.

In 2019, GGC required every level of employees to attend Fundamental CG & Compliance course, which is a mandatory course, organized for the first time in October 2019. This course was conducted three times to create employees' awareness in the Good Corporate Governance Principles and Compliance in order to support GGC culture in "Devoted".

## 7. Communities, Society and Environment

The Corporate Governance and Sustainable Development Committee's Meeting No.3/2019 held on 7 August 2019 (Offsite Meeting), the Directors and Executives traveled to the Centre of Sufficiency Economy Philosophy for Sustainability on Koh-Kok, Noen Phra Sub-district, Mueang Rayong District, Rayong province. This offsite meeting aims to express the corporate responsibility towards the local communities in a sustainable manner and promote employee engagement detailed in Sustainable Development Report 2019.

### Principle 6 : Strengthen Effective Risk Management and Internal Control

#### Risk Management Policy

The Board of Directors established the Risk Management Policy to create the awareness of managing risks across organization which covers operations, investment, procurement, anti-corruption by addressing likelihood and impact may occur as well as controlling risk within acceptable level (Risk Appetite).

To this end, Enterprise Risk Management Committee (ERMC) was set up to follow up on the risk management plans and reported the progress quarterly to the Risk Management Committee (RMC) and presented to the Board of Directors for consideration.

#### Internal Control Policy

The Board of Directors focuses on an internal control system that covers overall procedures such as financial, operation, and compliance by assigning related departments to evaluate their internal control in accordance with the rules of the Securities and Exchange Commission (SEC) for analyzing the adequacy of the internal control system. The evaluation will be forwarded to the Risk Management Committee for further consideration. It is also considered as the role of Audit Committee to review the internal control of the Company specified in the Audit Committee's Charter. The details are disclosed in "Internal Control" section.

### Principle 7 : Ensure Disclosure and Financial Integrity

The Board of Directors ensures the integrity of the Company's reporting system within timeline in order to raise the shareholders' confidence and to ensure that all could receive information equally as stated in laws and regulations of the Company. Related actions are following.

#### 1. Quality of Information

- **Financial Information :** Statement of Financial for the year and quarter have been reviewed in line with the accounting standards and approved by the Audit Committee and the Board of Directors before disclosing the information to shareholders and the public. To ensure the transparency, the Board of Directors has included the Responsibility for Financial Statements which cover related transactions, Management Discussion and Analysis (MD&A) and financial risk management measures.

- **Non-Financial Information** : GGC discloses GGC Group's business structure consisted of the major shareholding structure and a number of share, institutional shareholders ratio, the free float ratio, and reporting on conflict of interest and related parties relevant to GGC's activities, specifically when directorship or management positions promoted in the first time or changing data, monthly and yearly report of shareholding, internal control and risk management report, Charter of Sub-Committee, declaration of independence of independent Directors and report of Sub-Committee in the previous year.
- **Performance Report** : GGC discloses the Company's information through other channels as well instructed by the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET). Other information includes the development of investment in major projects, business operations, and social responsibility projects to support the Company's sustainable development plans.

## 2. Channels of Disclosure

- **SET Link** : GGC discloses information online through SET Link of the Stock Exchange of Thailand (SET).
- **Website** : Corporate information in both Thai and English is regularly updated and clearly mentions the formal communication channels of each department.
- **External Communication** : GGC provides information to the press through the events such as the Analyst Meeting which is organized every quarter and the Company roadshow which aims to promote the GGC's Vision, Strategies, Goals and Performance Outcomes. For public media, the Company regularly discloses news for business progress.
- **Internal Communication** : GGC encourages employees in the business planning process through several engagements such as in the Executives meeting , email and Line application in order to encourage employees to integrate all information in their functions in accordance with GGC's internal control measures and the confidentiality of information.

## 3. Supervision on Internal Information and Information Confidentiality

The Board of Directors values the disclosure of information and transparency by defining policy accurately, reliable and on time in the CG Handbook and GGC's website for shareholders and interested parties. Directors, Executives, and employees are highlighted to recognize the importance and to comply, summarized below:

- a. Directors, Executives and employees shall protect confidential information of the Company, especially non-publicized information.
- b. Directors and executives, defined by SEC, from Vice President to a higher level have the duty to acknowledge and report changes in GGC's shareholding within three working days after each change. The Corporate Secretary also reports the matter to the Board of Directors and makes a comparison of shareholding between beginning of the year and ended of the year

- c. Directors, Executives and employees shall receive a letter of notification to inform the prohibited periods of securities trade for 30 days before the public disclosure of quarterly/annual financial statement or other information that may affect the price of GGC's securities. They must also abstain from the securities trading during the 24 hours after publicizing the information.
- d. Directors, Executives and employees are regularly informed regulations and policies on the use of internal information through several channels to ensure employee's acknowledgement.

The handling of confidential Information is clearly published in Human Resource Management Guideline, stated that "Employees shall keep company's benefits, keep confidential internal information, refrain from any conflict of interest with the Company, and keep follow the result of their works. Employees must notify the Company immediately if property or reputation damage is found".

#### **4. Supervision on Information and Communication Technology**

GGC encourages employees to integrate Information and Communication Technology (ICT) into their operations to control the use of internal information, such as the authority to access significant data of each department. SAP operating system has been utilized to comply and analyze the big data as well as ensured users' authorization in line with the segregation of duties and to be aligned with GC group.

The use of internal information, information confidentiality and the use of non-publicizing information have potential to influentially increase the price of a stock, the employees shall comply with the business ethics and code of conduct. In the year 2019, the Company has implemented system as follows:

- Digital Joint Meeting (D-Joint) Application, Facilitating the Board of Directors to be informed and access to the information for the Board of Directors' meetings and Sub-committees. Users must enter their password and authorization prove in order to access or update the information for informing directors.
- Microsoft Forms are used to create the questionnaire, assessment, employee engagement survey. All information will be gathered to the center for more accurate data processing.

#### **Investor Relations**

GGC's Investor Relations centralizes all communication and monitors information disclosure to the shareholders, institutional and minor investors, financial analysts and applicable regulators. Investor Relations supervises the quality of financial statements, including important information that have the price of securities impacts such as financial statements, performance reports, preparation of quarterly/annual Management's Discussion and Analysis (MD&A), all of which represent GGC's performance and outlooks. Furthermore, information is disclosed to the public via SEC Link to local and foreign investors for equal information. In addition, the "Investor Relations Code of Conduct" was instituted to define roles and good practices appeared in the CG Handbook and in the Company's website.

In 2019, GGC has provided information to institutional investors, minor investors, analysts and through the roadshows and other activities as shown below.

Investor Meetings	
Domestic Investors Meeting	4 times
SET Opportunity Day	4 times
Financial Analyst Meeting	4 times
Meeting at the Company	5 times
Teleconference	42 times
Information Disclosure	
Disclosure via SET Link and GGC's website	96 times

GGC has disclosed information on [www.ggcplc.com](http://www.ggcplc.com) for shareholders and interested parties to access equally. Those who interested information can contact for information via following channels:

1) Mail	: Investor Relations Department Global Green Chemicals Public Company Limited 555/1 Energy Complex Building A, 4 <sup>th</sup> Floor Vibhavadi Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900
2) Phone	: +66 (0) 2558-7395, +66 (0) 2558-7345
3) Email	: <a href="mailto:ir@ggcplc.com">ir@ggcplc.com</a>
4) Fax	: +66 (0) 2558-7301
5) Website	: <a href="http://www.ggcplc.com">www.ggcplc.com</a>

Moreover, shareholders, investors and interested parties can also contact the Corporate Secretary for inquiries of GGC via email at [corporategovernance@ggcplc.com](mailto:corporategovernance@ggcplc.com).

#### Corporate Communication and CSR Department

This department has responsibility for public relations and update information of GGC's activities to the media such as:

1. Joined a piling ceremony of Nakhon Sawan Biocomplex with representatives from Kaset Thai International Sugar Corporation Public Company Limited (KTIS) in September 2019.
2. The certification of Carbon Footprint of Product (CFP) for the annual report and the 2018 Integrated Sustainability Report from Thailand Greenhouse Gas Management Organization in September 2019.
3. Invitation representative executives to join the "Biodiesel B10 Campaign" in October 2019.
4. Attended the "Media Seminar" with PTT Group in November 2019 to express the Company's gratitude to the local media.
5. Quarterly organized "Opportunity Day" for Investor Meeting, Financial Analysts Meeting in cooperation with finance and accounting department.

6. The certification of Green Meetings from the Thailand Business Council for Sustainable Development (TBCSD) and Thailand Environment Institute (TEI), SET Sustainability Award from Stock Exchange of Thailand (SET) and Sustainability Disclosure Award from Thaipat Institute in the fourth quarter of 2019.

Inclusively, 2018 Integrated Sustainability Report has certified the Gold Medal Award in “Major of Infographic” at the ARC Awards International 2019 in Seoul, South Korea, which was outstanding in data communication through images, symbols or charts covering all dimensions, including environmental, social and economic.

Furthermore, the Corporate Governance and Sustainable Development Committee firstly visited Koh-Kok communities in Rayong province in August 2019. This field trip is planned with the communities considered as one of the important stakeholders every year.

## **Principle 8 : Ensure Engagement and Communication with Shareholders**

### **Shareholder’s Rights**

The Board of Directors values the protection shareholders’ rights and their equality. This has been specified in the Good Corporate Governance Policy, that shareholders are entitled to receive and acquire adequate information in a timely fashion and in a format conducive for decision making. Shareholders are also entitled to attend a meeting, cast their votes at shareholders’ meeting to deliberate important policies, elect and remove directors, approve appointments of auditors.

Apart from the rights mentioned above, GGC has been promoted and facilitate of rights for every shareholder as mentioned as follows:

1. Disclose necessary information for shareholders even if some issues do not mention as a law enforcement for disclosure, if the company considers it important to shareholders, the Company will disclose it via the company's website and through the system of the Stock Exchange of Thailand.
2. Encouraging shareholders' participation and voting rights in the meeting or authorize proxy attended the meeting and allowing shareholders to express their opinions or provide their question equally.

### **Equitable Treatment of Shareholders**

#### **The 2019 Annual General Meeting of Shareholders.**

GGC held the Annual General Meeting (AGM) of Shareholders on 2<sup>nd</sup> April 2019 at 09:30 AM at Vibhavadi Ballroom, Centara Grand at Central Plaza Ladprao, Bangkok which was the 2<sup>nd</sup> Shareholders meeting. The 2019 AGM was attended by 11 Directors, 187 shareholders and 78 proxies, bringing the total 265 persons, representing 777,947,266 shares. This accounted for 75.50 of all 1,023,666,700 shares. GGC has complied with laws and the AGM Checklist Criteria stipulated by the Thai Investors Association (TIA) as follows:



### Prior to the Meeting

- Provide the opportunity for shareholders to send question in advance to promote rights and equitable treatment of shareholders, including the minority shareholders.
- In 2019, the Corporate Governance and Sustainable Development Committee has remain unchanged the criteria for minority shareholders defined as any single shareholder or group of shareholder holding not less than 4% of all shares with eligible voting rights, to propose agenda items and nominate qualified candidates to be elected as Directors prior to the meeting during October 1<sup>st</sup> to December 31<sup>st</sup>, 2018, that has announced on the Company's website.
- At the Board of Directors' Meeting No. 3/2019, on 18 February 2019, the Board of Directors approved the date of organizing 2019 Annual General Meeting, which the Company informed to the Stock Exchange of Thailand, to disseminate the Meeting Resolution, Record Date, Book Closing Date and dividend payment during the same day 2 months in advance.
- The invitation letter and related documents in both Thai and English languages were available on GGC's website on 28<sup>th</sup> February 2019, 30 days before the meeting date. The available details included date, time and venue of the meeting, meeting agenda items with clear objective of acknowledgement or approval matters and provided documents required by Ministry of Commerce for any shareholders or proxies to maintain the right of shareholders as well as to deliver the invitation letters to shareholders 14 days in advance.
- Invitation letter provided the details of nominating Independent Directors for shareholders to consider as proxies in case of shareholders unable to attend the meeting by themselves as well as various criteria of the meetings such as registration, exercise of voting rights that does not restrict the rights of shareholders to exercise their votes.

### On the day of the meeting

- GGC held the Annual General Meeting (AGM) of Shareholders on 2<sup>nd</sup> April 2019 at 09:30 AM at Vibhavadi Ballroom, Centara Grand at Central Plaza Ladprao, Bangkok. The Company determined the date, time and venue of the meeting and responded to any inquiries raised by the shareholders.
- GGC used barcode scanning in registration process for convenience and efficiency and provided staff to verify shareholders' documents ahead of time. Registration began more than two hours before the meeting started.
- All 11 Directors attended the AGM. Executives, auditors, legal advisors, shareholder rights protection volunteer, lawyers and a shareholder who volunteered as vote counting witnesses were also present.
- The Chairman explicitly informed a meeting criterion accordance with the laws and regulations of company, such as the number of attendees, the total number of shares with voting rights, Method of voting and counting procedures and provide voting cards for each agenda item. Shareholders and proxies could vote "Approve", "Disapprove" or "Abstain" as well as no other agendas added more

than those specified in the invitation letter also allocating time appropriately in order to encourage shareholders express their opinions equally. The Company has disclosed the voting result in the minute of meeting.

- An independent legal consultant is invited to monitoring the transparency and regulatory compliance at the meeting, including the voting and counting procedures, ensuring that voting cards are collected from attended shareholders and checking the accuracy of the voting result.

#### After the Meeting

- GGC disclosed the resolutions passed at the 2019 Annual General Meeting of Shareholders (AGM) through the Stock Exchange of Thailand's portal once the meeting had ended.
- GGC also prepared the minutes of the AGM meeting, specifying the names of Directors and Executives in attendance, as well as other relevant attendees, important explanations, a list of questions and answers and a summary of opinions expressed. The minutes were prepared in both Thai and English and submitted to the Stock Exchange of Thailand and other related agencies within 14 days after the meeting.

The organization of the 2019 Annual General Meeting of Shareholders was marked as "Excellent" level and have been honored by this level for two consecutive years.

### 8.7 Implementation of CG Code 2017

At the Board of Directors' Meeting No.2/2020 held on 14<sup>th</sup> February 2020 acknowledged the following additional guidelines for adoption in place of compliance with the CG Code, as detailed below:

- **Independence of Chairman :** The Chairman supports the management operations to deliver results effectively. The Chairman is free to express opinion for the management operations and not involve in any day-to-day business operations, at though the Chairman is not independent directors
- **Independence of the Nomination and Remuneration Committee :** The Committee consists of three directors, two of them are independent directors. The Chairman is be an independent director. Although all members are not independent directors, director who is not an independent director still has knowledge, skill, and experience for giving suggestions and recommendations about suitable nomination and remuneration. Moreover, the Company regularly reviews their suitability, performance and experience in line with the Committee's Charter.
- **Establishing Succession Plans :** GGC has the policy to development and evaluate the Managing Director and Executives annually, so the results can be used for further consideration to find and appoint a qualified candidate for directorship or other high-ranking positions.

### 8.8 Compliance with Corporate Governance on other Matters

In 2019, GGC has always thoroughly adhered to principles of good corporate governance as stipulated by the Stock Exchange of Thailand which are described below:

### 8.8.1 Promotion of Good Corporate Governance

Executives and employees attended the training session to develop their understanding about the good corporate governance in compliance with the compliance policy. The lecturers were invited from two departments – 1) Legal and Compliance Department and 2) Corporate Secretary and Governance Department. The training aims to promote the implementation of Good Corporate Governance across the Company.

### 8.8.2 Sustainability Actions

- GGC Group's Sustainability Development Committee held the meeting on 3<sup>rd</sup> May 2019, chaired by the Managing Director and designed to steer business undertaking for sustainable progress in economic, social, and environment to apply for the 2020 SET Sustainability Awards assessment and reported the progress to the Corporate Governance and Sustainable Development Committee on a quarterly basis.
- In 2019, GGC has developed and applied the Corporate Social Responsibility Strategy (CSR Strategy) that focuses on three dimensions – 1) Recognition for its social responsibility 2) Seedily increased growth for social responsibility and 3) Building trust among the stakeholders.

### 8.8.3 Supervision on Governance, Risk & Compliance (GRC)

The GRC Management refers to a strategy for managing an organization's overall Governance, Risk management and Compliance with regulations to ensure the Company's goals in an effective, transparent and accountable manner. In 2019, GGC has paved the way for the GRC Management as summarized below:

- Directors of GRC were elected from three departments which are 1) Internal Audit 2) Corporate Affairs and Corporate Secretary and 3) Corporate Strategy and chaired by the Managing Director.
- The Short-Term GRC Roadmap (2019-2021) was established to be used as guidelines for the GRC Working Team to develop a better understanding of the GRC including the scope of responsibilities and the GRC implementation.

### 8.8.4 Board Skill Matrix

GGC improves the Board Skill Matrix in order to develop appropriate training programs for both new as well as existing Directors to in line with the business operations. In 2019, a total of three new Directors attended training session organized by the Thai Institute of Directors Association (IOD). The detail is shown under the section "Training for Directors".

### 8.8.5 Corporate Governance Roadmap and Sustainable Development Plan

At the Corporate Governance and Sustainable Development Committee's Meeting No.1/2019 held on 26<sup>th</sup> March 2019 acknowledged the Corporate Governance (CG) Roadmap and the 2019 Sustainable Development Plan. The progress must be reported to the Directors on a quarterly basis.

#### 8.8.6 Report of the Sub-Committee

- According to the Charter of every sub-committee such as the Audit Committee, the Nomination and Compensation Committee, the Corporate Governance and Sustainable Development Committee, and the Risk Management Committee stipulates that every committee has to report their performance to the Board of Directors and disclosure report in the company's annual report which signed by the Chairperson of each committee.
- Every sub-committee has established an agenda to report their performance in the Board of Directors meeting and disclosed in the annual report.

#### 8.8.7 Heads of Internal Audit Department and Compliance

- **Head of Internal Audit**

The Audit Committee's Meeting No. 8/2017 held on 21<sup>st</sup> December 2017 approved the appointment of Ms. Kunakorn Witthayapaisarn to be a Vice President, Internal Audit, and as the new secretary, effective from 1 January 2018. Ms. Kunakorn is exceptionally well qualified to perform the duties due to her extensive experience in internal audit, internal control and risk management. She was a Certified Internal Audit (CIA) and attended a comprehensive internal audit training course which is essentially considered to her performance.

In case of the appointment, removal and transfer of Vice President of Internal Audit will be forwarded to the Audit Committee for consideration as stated in the Charter.

- **Head of Compliance**

The Board of Directors assigned Ms. Uramanee Puttong, Vice President of Corporate Affairs and Corporate Secretary, to be responsible for Corporate Compliance with laws, rules and regulations by establishing the Legal and Compliance Department and the Corporate Secretary and Governance Department in order to promote the operation with clear and more efficient operating procedures.

Also, the Board of Directors' Meeting No.16/2019 held on 18<sup>th</sup> December 2019 has approved the Compliance Policy and acknowledged the GGC Compliance Program which have been reviewed by the Corporate Governance and Sustainable Development Committee.

#### 8.8.8 Audit Fee and Non-Audit Fee

1. GGC and its subsidiaries paid the audit fee amounting THB 2,270,000 to Deloitte Touche Tohmatsu Jaiyos Co., Ltd. for the fiscal year 2019, of this amount GGC paid THB 1,690,000 and its subsidiaries paid THB 580,000.
2. Non – Audit Fee for the Fiscal year 2019, GGC paid for BOI Consultation amounting THB 99,000 and its subsidiaries paid for Tax Health check 2019 amounting THB 290,745.

## Report of the Nomination and Remuneration Committee

Dear Shareholders,

The Nomination and Remuneration Committee consists of ACM Songtam Chokkanapitag (Chairman), Mr. Patiparn Sukondhaman (member) and Maj Gen Titawat Satiantip, who has replaced Mr. Athavudhi Hirunburana as a new member since 11 September 2019.

In 2019, the Committee had a total of seven meetings and had performed its duties in line with the Charter and the Board-assigned tasks as mentioned below.

### 1. Nomination of Committees, Sub-committees and Directors

- Nominated candidates for the election of new directors in replacement of those to be retired by rotation at the 2019 Annual General Meeting (AGM) and proposed a list of nominees three months in advance. However, no candidate was presented to the Board of Directors for consideration, so the list of three Directors who have knowledge, expertise, business experience in consistent with the Company's operation but were due to retire by rotation – Mr. Suphit Suwagul, Prof. Dr. Kumchai Jongjakapun and Mr. Narongsak Jivakanun were nominated to be re-elected. The nomination was approved at the AGM of Shareholders.

- Nominated qualified candidates to replace Directors who resigned. The candidates were Mr. Kongkrapan Intarajang and Maj Gen Titawat Satiantip and Mr. Witoon Suewatanakul who have full understanding and experience that are helpful for their directorship.

- Nominated persons to fill any positions that became vacant or replace those who were due to be retired by rotation in Sub-Committee while ensuring that selection criteria was in line with regulations of the Securities and Exchange Commission (SEC), the Stock Exchange of Thailand (SET), Global Green Chemical Public Co., Ltd. (GGC), the Committee's Charter and even the Board Skill Matrix to handle specific tasks.

- Nominated Directors to fill any positions that became vacant while ensuring that selection criteria was in line with regulations of SEC, SET and GGC and considering expertise and experience that are useful for their directorship.

### 2. Remuneration

- As for the 2019 remuneration of the Board of Directors and Sub-Committees at GGC, the Committee provided relevant data, including scope of responsibilities to the Board for further consideration, taking comparisons of remunerations for committees of leading companies in the same industry as well as GGC's operating performance into account. The amounts were presented for approval at the AGM.

### 3. Performance Assessment of the Board of Director in 2019

- Reviewed and revised the 2019 assessment form periodically to make sure the form was line with current standard and in addition to performance, the assessment results were also taken into consideration for determining remuneration for the Board of Directors.

- Conducted the self-assessment. The results were presented to the Board of Directors.

#### 4. Key Performance Indicators (KPIs) and Remuneration for the Board of Directors in 2019

- Reviewed selection criteria and assessed performance as well as remuneration of the Board of Directors by taking their performance over the past year that reflected their duties and responsibilities into consideration. The matter was proposed to the Board for approval.

#### 5. Performance Improvement

- Reviewed the Committee's Charter and set appropriate remuneration for members of the Board based on their performance of duties.

- Reviewed and revised the Board Skill Matrix to be more diverse, suitable for the current business and in line with international standards. The Board Skill Matrix was used as a supporting information to identify the qualifications of the candidates.

- Reviewed and revised selection criteria of the director nomination process to ensure it was up-to-date and consistent with law, related regulations and international standards.

- Ensured that the nomination criteria and the directors' remunerations were disclosed in the annual report and at the AGM of Shareholders in accordance with the company's Corporate Governance Report (CRG).

The Nomination and Remuneration Committee performed its duties with prudence and transparency as stated in the company's Good Corporate Governance Policy. The Committee remains committed to build up confidence of the shareholders and all stakeholders that will later lead to great benefits and long-term value to the company.

On behalf of the Nomination and Remuneration Committee

(Signed) (ACM Songtam Chokkanapitag)

Chairman of the Nomination and Remuneration Committee

## Report of the Corporate Governance and Sustainable Development

Dear Shareholders,

The Corporate Governance and Sustainable Development Committee consists of Mr. Payungsak Chartsutipol (Chairman) with Mr. Suphit Suwagul as member and MAJ. GEN Titawat Satiantip as a new member replacing Mr. Athavudhi Hirunburana since 11 September 2019.

In 2019, the Corporate Governance and Sustainable Development Committee held a total of 5 meetings and performed duties in accordance with the responsibility stated in its own charter and executed the tasks mandated by the Board of Directors, with the essence summarized as follows:

### 1. Good Corporate Governance

- Reviewed the Corporate Governance Roadmap of the year 2020 in order to create an efficient corporate governance that is in line with the Company's strategy. The Committee also focused on improving personnel knowledge to aware and understand Good Corporate Governance practices.
- revised the Good Corporate Governance & Business Code of Conduct Handbook to be accordance with the Principle of Good Corporate Governance Code for Listed Companies of The Securities and Exchange Commission, Thailand (SEC) and encouraged to publish handbooks and distributed to Directors, Executives and employees to be a guideline for conducting business as well as distributed the handbooks to business partners and supplier.
- Considered on the development and improvement of the Whistleblower Policy to be clearer.
- Followed up on the report of responsibility to the stakeholder related to the Company. From related departments on a quarterly basis, such as responsibility to customers, business partners, creditors, employees, communities and the environment.
- Followed up, considered, and provided suggestions that are beneficial to the arrangement of the Annual General Meeting according to the principles of good corporate governance in line with the AGM Checklist criteria. The Company has been evaluated for the 2019 Annual General Meeting, assessed by the Thai Investors Association with an excellent score.
- Provided recommendations regarding the risk assessment for corruption and internal control to cover issues regarding raw material procurement in accordance with the recommendations of the Thai Private Sector Collective Action Coalition Against Corruption (CAC).
- Considered and provided recommendations for preparing a self assessment for participation in the Listed Companies Corporate Governance Report (CGR) in accordance with the OECD and the Stock Exchange of Thailand guidelines. The Company obtained the excellent level 2 years consecutively.

### 2. Sustainable Development

- Considered and approved the operational plan for the sustainable development of the Company for 2020 to align with the Company's strategy and provided suggestions to the Company to monitor and review trend of sustainability whenever it charged.

- Followed up the Company performance on sustainable development and community development. The committee also visited communities that located in the Company's area as well as provided suggestion to furnish people knowledge and improved their quality of living in order to develop the communities sustainably.

- Provided suggestions to improve skills and capabilities of employees to be effective beyond their routine work and emphasized on the occupational health care.

### 3. Compliance with Applicable Laws and Regulations

- Considered and improved the rules and procedures on reporting the conflict of interest of Directors and Executives of the Company. The Committee also suggested the Company to determine additional period for reporting the Conflict of interests and notified such period to the Directors and Executives in order to ensure the Directors and Executives report the conflict of interests properly.

- Considered and approved the policy for supervising the operation to be in accordance with the laws, regulations and regulations (Compliance Policy) and the operational plan. The Committee also suggested the Company to improve the organization structure and determined roles and responsibility of the Company's personnel.

### 4. Performance and Appraisal

- Reviewed the Charter of the Corporate Governance and Sustainable Development Committee to ensure that the charter is still appropriate and consistent with good practices.

- Reviewed Self-assessment to ensure that the responsibility of the Committee in 2019 was in accordance with its charter.

- Jointly set up the plan for the Corporate Governance and Sustainable Development Committee meeting for the year 2020 and review agenda of the meeting both for approval and acknowledgement.

The Corporate Governance and Sustainable Development Committee emphasized on conducting business in accordance with good corporate governance policies, Code of Conduct, and Compliance Policy as well as sustainable development. The Committee also determined to improve business guidelines and establish good practices to govern GGC Group to be aligned with international standards in order to build trust and provide the Company's accountability to all stakeholders.

On behalf of the Corporate Governance and Sustainable Development Committee

(Signed) (Mr. Payungsak Chartsutipol)

Chairman of the Corporate Governance and  
Sustainable Development Committee



## Report of the Risk Management Committee

Dear Shareholders,

The Risk Management Committee consists of three members from the Board of Directors, one among them is an Independent Director. All members have experienced in the industrial sector, competency and excellent knowledge of risk management. Ms. Kannika Ngamsopee serves as a Chairman of the Risk Management Committee with Mr. Patiparn Sukorndhaman replacing Mr. Narongsak Jivakanun as a new member since 6 November 2019 and Mr. Witoon Suewatanakul replacing Mr. Sekxon Arttamangkura since 1 July 2019.

The Company has placed importance on risk management, including managing the risks in compliance with the GGC's Good Corporate Governance Policy and improving such systems effectively, so the Company can meet goals and boost confidence among the stakeholders.

The Risk Management Committee has carried out duties within its scope of authority and responsibility as assigned by the Board of Directors and as stated in the Committee's Charter. The Committee had a total of six meetings in 2019. A summary of the Committee's key activities is as follows:

1. The Risk Management Committee monitored, followed up and provided recommendations to the Management Department to continuously manage risks in 2019 and ensure that the risk management plan covers key elements and mitigates risks at the appropriate level and effectively. The Committee submitted the progress report to the Board of Directors quarterly for consideration.

2. The Risk Management Committee provided opinions, recommendations, operating plan and after-action review to all internal units. The Committee also closely followed up the performance by improving the control over internal operation to make sure internal controls are sufficient and effective as stated in principles of internal control and the Good Corporate Governance Policy.

3. The Risk Management Committee approved a risk management plan, including risk mitigation measures and key risk indicators (KRIs) for Nakhon Sawan Biocomplex (NBC) to handle a wide range of risks and manage the plan effectively to keep the project on track.

4. The Risk Management Committee provided opinions and recommendations for risk assessment, risk mitigation measures and a change in investment and project management framework of Refined Glycerine Plant 2 by assessing the risks, identifying risk management scope throughout the project to ensure the Company's suitable risk management plan.

5. The Risk Management Committee screened and approved a revision of risk management plan that covers all key elements and may have impact on the Company's business operations such as inventory risk, any difference between the price of products and raw materials, anti-bribery and anti-corruption efforts in procurement, business operations with the outsiders and risks from investment as well as exchange rates. Also, the Committee proposed the Management Department to consider safety standards and control system in order to manage risks more effectively.

6. The Risk Management Committee screened and offered recommendations on factors for the 2019 risk management plan in line with the business direction, the changing context of business and GGC's business goals as well as strategies.

7. The Risk Management Committee encouraged employees to include risk management as part of their duties and responsibilities. In addition, the risk management was considered part of an employee's performance and that of the Company.

8. The Risk Management Committee considered and approved a revision of the their Charter and Risk Management Policy, including GGC's risk management manual in line with the business direction and Good Corporate Governance Policy as well as the guideline of the Stock Exchange of Thailand (SET). The Committee also conducted assessments of both Entire and Self-assessment. The results of the assessment were forwarded to the Board of Directors for consideration.

The Risk Management Committee performed its duties systematically and reviewed the management plan in line with both internal and external situations while looking for effective measures to mitigate the risks. The Committee also closely followed up on the business operations which resulted in suitable risk mitigation measures that helped the Company achieve its objectives as well as goals and bring long-term value to the shareholders and stakeholders sustainably.

On behalf of the Risk Management Committee

(Signed) (Ms. Kannika Ngamsopee)

Chairman of the Risk Management Committee

## Update on Inventory Shortfall Incident

Global Green Chemicals Plc (GGC) has announced a reduction in raw material inventory in its 2018 annual report. The Company has found certain facts the actual raw materials in the inventory were significantly different from the data in the Company's system, as a result of misconduct among certain suppliers and some employees in the relevant functions, the Company has from time to time informed the shareholders and investors of updates on this matter. The Company has dealt with the issue and taken actions in 2019 to cope with this case summarized as follows:

### **1. Progress and Work Plan on Inventory Loss**

1.1 GGC has negotiated and entered into a settlement agreement with two suppliers who admitted guilt. The two suppliers have agreed to comply with the agreement's terms and conditions and deliver 22,800 tons of the remaining raw materials. In order to enforce the terms of the settlement agreement, the suppliers have mortgaged 44 rai of land and arranged for credible persons as personal guarantee. In addition, The Company has revised the reverse for damages from the inventory shortfall and reversed the reserve of approximately THB 217 million pursuant to an appraised value of the collateral under the aforesaid settlement agreement, provided that such reverse value is lower than the appraised price of the land because it was made on conservative basis. However, in 2019, the suppliers delivered the remaining portion of raw materials worth THB 16 million to GGC. Consequently, the amount of damage from the inventory shortfall has decreased accordingly while GGC has also withdrawn the criminal case against the suppliers.

1.2 GGC filed a complaint with the Economic Crime Suppression Division against the suppliers in the third quarter of 2018. Due to the legal complexity and several parties involved, the case was expected to take a great deal of work and time. However, the inquiry official has concluded the investigation of some cases and has notified certain wrongdoers of the charges.

1.3 Two civil cases have been filed against the Company as disclosed in the note to the 2019 financial statements as follows.

Case 1: a financial institution has filed a civil case against a supplier, its directors, and the Company, as co-Defendants on the allegations of breach of a facility agreement, sale of promissory notes at a discount, assignment of monetary entitlement, guarantee, and enforcement of mortgage, with a total amount of claim of THB 59.44 million. After due consideration of the facts and evidences, the legal advisor is of the view that the Company is not liable as claimed. The Company, therefore, appointed an attorney and submitted a statement of defense in the case. After negotiation with the Plaintiff, on 28 October 2019, the Plaintiff submitted a petition to withdraw the case against the Company on the ground that the Company did not receive any goods according to the invoice claimed by the Plaintiff and the Company has already made criminal complaints against the concerned persons. Therefore, the Court allowed the case to be withdrawn and disposed of the case file.

Case 2: another company has filed a civil case against a supplier and the Company as co-Defendants on the allegation of breach of a loan agreement and assignment agreement, with total damages claimed of THB 324.65 million. After due consideration of the facts and evidences, the legal advisor is of the view that the Company is not liable as claimed. The Company, therefore, appointed an attorney and submitted a statement of defense in the case. The case is currently in the stage of examination of the witnesses of both the Plaintiff and the Defendants. The Company expects that the court of first instance may give a judgement on second quarter of 2019.

## **2. Improvement of Business Operations**

The Company has given high priority on an effective internal control system. In this regard, in 2019, the Company engaged an independent expert to assess internal control system and give recommendations to enhance internal control system of the entire organization, which incorporate core business processes. The independent expert gives their opinion that the significant controls have been designed and there are additional recommendations for improvement in some areas in order to be consistent with operating procedure which has been efficiently designed. The management has formulated the action plan, delegated responsible persons, set a clear timeframe and is thereby able to implement as the committed action plan.

Furthermore, GGC has reviewed and improved the credit rating system of the suppliers to ensure a more effective procurement of raw materials. A process for the whistleblower and the related policy have become more effective with additional complaint channels both inside and outside the Company. The employees are developing a better understanding of the protection measures for the whistleblowers with fairness and transparency.

The Board of Directors and Executives have also emphasized on root a corporate culture, business ethics and Code of Conduct across GGC by distributing the CG Code Handbooks to the employees at all levels, including business partners and customers to insist that the Company is working towards being more transparent and sustainable in conducting business operations.

GGC still insists in the Directors, Executives, employees' intentions for their solid dedicated for conducting business in transparency to all stakeholders. GGC has still achieved company's vision to be a leading of world's oleochemical while supporting the competitiveness of downstream agricultural business of Thailand. This would bring sustainability to agricultural and industrial sectors.

## Sustainable Development and Safety, Occupational Health and Environmental Management Social Responsibility and Sustainable Development Policy

GGC is well aware that by conducting business with consideration of every impacts together with having management approaches to avoid or reduce the impact of business operations that may have on communities, society and the environment, will result in gaining confidence and trust from all stakeholder groups. Over the past years, GGC strives to conduct the business alongside with creating share value to communities and society. This is to enhance economy, quality of life, education and the environment of communities and society. This endeavor is corresponding GGC's Corporate Social Responsibility (CSR) strategy, which aims to truly achieve the sustainable development.

### Social Responsibility and Sustainable Development Strategy

GGC has the "3 Big Moves Strategy" as the CSR strategy, which focuses on promoting stakeholders' acknowledgement regarding business operation, enhancing ability to perform task in Corporate Social Responsibility, and ensuring all stakeholder groups of Corporate Social Responsibility performances. To validate that GGC's sustainability performances are in compliance with international standards, national and international sustainability ratings, as well as GGC's business growth direction, GGC has the Corporate Governance and Sustainable Development Committee to oversee policies, strategies, and sustainability as well as Corporate Social Responsibility execution plans.

### Corporate Social Responsibility Strategy (CSR Strategy)

#### Corporate Social Responsibility Strategy (CSR Strategy)



## Corporate Social Responsibility Activities

In 2019, to support business growth strategy and to gain trust, GGC encouraged the continuous implementation of CSR projects. To ensure that the projects cover economic, social and the environmental dimensions, both ongoing CSR projects and new CSR projects have been executed. In addition, to create trust among communities that are under GGC's responsibility, namely Map Ta Phut and Bang Chang areas, Rayong province, personnel from GGC have been visiting the communities on weekly basis to communicate on business operation and CSR projects, as well as listen to community suggestions. Moreover, GGC has established complaint and communication channels to improve capability and quality of life of the communities, while creating community's acceptance and trust toward business operation

### Improving Community Enterprise in Rayong for a Better Quality of life Project

GGC has been organizing the Improving Community Enterprise project with Koh Kok community for the second consecutive year. The project was organized under an integration of the concept "Starting from the Inside towards the society sustainability" and local communities requirements. The purpose is to direct the Koh Kok community as a model community by using knowledge and potential of its employees to support through 2 projects which are 1) Organic Waste Management Project and 2) Accounting Knowledge Development Project for Community Enterprises in Rayong province

### Growth: Organic Waste Treatment – Growth strategy for building trust: Organic Waste Management Project, Koh Kok model

GGC has implemented the organic waste management project in the Koh Kok community for the second consecutive year to encourage the Koh Kok Community Learning Center to have a comprehensive organic waste management and to be a good role model for other communities. GGC has created 4 learning bases for organic waste management within the Koh Kok Community Learning Center which are 1) Learning base for biological fermentation (Effective Microorganisms: EM), 2 ) Learning base for bio-microbial fermentation (Effective Microorganisms: EM), 3) Learning base for food waste fermentation, and 4) Learning base for leaf waste fermentation. Benefits that communities and the environment receive from organic waste management are reducing the amount of waste in the community, reducing dependence on chemicals, safety for users, increasing quality of soil, and reducing occurrence of unwanted odors. GGC has planned to expand this knowledge to other communities through the Koh Kok Community Learning Center. In 2019, there are in total 55 external organizations from both the government and private sectors visiting the learning center.

### Growth Strategy for Building Trust: Accounting Knowledge Development Project for Community Enterprises in Rayong province

GGC supports the Koh Kok community through the accounting knowledge development project in order to help the community enterprises to acquire knowledge and be able to manage accounts efficiently, verifiably, and more systematically. Furthermore, community enterprises are also able to use the accounting knowledge obtained to further expand and develop the community enterprise operations in the future. This

project implementation also contributes to the personal capacity development such as developing skills and knowledge in accounting for project members as well as continuously improving the well-being of the community. In 2019, GGC has played an important role in encouraging the Koh Kok community enterprises to enter the outstanding community enterprise contest until receiving "1st prize for outstanding enterprise in Rayong province", "1st prize in district level", and "national consolation award" in July 2019.

In 2019, GGC has also expanded the scope of participation by promotion Luffala community enterprise's economy through the joint formula development of community enterprise products by using GGC's products such as glycerin and demineralized water to produce hand soap and other hygiene care products. In the past year, GGC has given 250 gallons of hand soap products to the First Naval Area Command and has distributed to the Children and Youth Development Project in the Omkoi wilderness, Chiang Mai Province as well as 2,350 tubes to underprivileged youth within the whole country. GGC plans to expand capabilities of the project in the future in order to promote community enterprises in Rayong province to be strong and self-reliant, along with creating opportunities for the company's business expansion and continue to help society sustainably.

In 2019, GGC has supported the CSR projects by 874,795 Baht, divided into 3 types: donation, social investment for communities, and supporting commercial initiative. For the implementation of all CSR projects of GGC, there were 118 employees volunteering in the activities, totaling to 617 hours.

#### **Community satisfaction target and performance in 2019**

In 2019, GGC received no complaints regarding the business activities from the local communities that earned the Company an average satisfaction score of 93.84 percent, higher than 2018, reflecting the Company's social responsibility efforts.

#### **Safety, Occupational Health, and Environmental Management**

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

GGC remains committed to conducting its business to become a leader in the environmentally friendly chemical industry that is responsible for society and community (CSR). It pledges to continually improve the effectiveness in terms of security, safety, occupational health and environmental practices as follows:

1. To comply with laws, standards, rules and regulations to ensure safety, occupational health, environment and the business continuity
2. To maintain quality performance across the organization with the use of management tools, knowledge and productivity to meet the customer satisfaction and eco-friendly innovation.
3. To manage risks that could result in danger, occupational illness, accidental injuries and property damage and build a safety culture called B-CAREs as well as the Process Safety Management (PSM).
4. To recognize the security threats and develop emergency response plan to protect lives and property as well as to ensure business continuity.

5. To value occupational health and a positive work environment to promote the employees' better health and happiness at work.
6. To evaluate the impact on environment and ecology to conserve biodiversity by preserving habitats and utilizing natural resources in a more effective and sustainable manner. Also, to reduce climate change and encourage the local communities to adapt to climate change through the roles of employees and stakeholders to create a culture of caring for the environment.

GGC remains committed to becoming an accident-free workplace (Zero Accident) under the concept of "Accident is preventable" by focusing on process safety and personal safety management.

#### Process Safety

GGC conducts production process safety under the Operational Excellence Management System (OEMS) and the Center of Central Process Safety (CCPS), which are the standard systems encompassing the design process, risk management, risk assessment and emergency preparedness in order to ensure that employees operate safely at all times.

In 2019, GGC collaborated with DuPont (Thailand) Company Limited, an international organization with a reputation in industrial safety, to implement the Incident Investigation System and the Field Risk Assessment to further develop safety standards of GGC and become more efficient by implementing safety management in processes through important projects as follows:

##### **1. Incident Investigation System**

GGC has applied Dupont's system called "Why Tree Method" system as a standard tool to investigate any incident occurred, thus elevating the efficiency of safety to achieve zero accident goals (PSM Zero Accident) by training and disseminating knowledge about the Why Tree Method system, raising awareness of the importance of incident investigation, and becoming more efficient in incident management and reporting. Incident investigation identifies root causes of incidents on the failure of the system (System Failure) related to the PSM elements such as Process Hazard Analysis, Operating Procedures, Management of Change, Contractor Safety Management, including formulating recommendations, sharing lessons learned and effectively following up on the recommendations.

In addition, GGC has organized training courses for incident investigation for employees and contractors to understand and recognize the importance of investigation, including incident corrective action reporting.

##### **2. Field Risk Assessment (FRA)**

GGC has established a process safety system to identify defects or deviations that may arise from errors made by employees and contractors (Human Errors), errors in processes (Procedural Errors), location uncertainty (Worksite Conditions) and/or technology shortfalls (Technology Failure) and methods to implement effective solutions as well as ways to control such problems appropriately.



In addition, GGC develops comprehensive hazard awareness (Build Process Hazard Awareness) among frontline workers through direct observation, discussions, and analyses of potential process safety hazards from the production processes.

During the implementation of the FRA program, employees and executives have jointly inspected workplaces to identify deviations from the designed standards or work procedures which arise from unsafe acts and unsafe process conditions and formulate corrective actions or control of potential deviations, resulting in no process-related accident in GGC facilities at all times.

### Personal Safety

In addition to process safety, GGC is determined to strengthen the culture and behavior that promote safety awareness among employees and regularly create the awareness at personal level by emphasizing that employees and contractors shall work safely through the four following projects:

#### **1. Safety Now**

GGC has implemented the project called: Safety Now, which aims to encourage the employees to report and notify the Company of any unsafe issues through available channels to reduce the number of work-related accidents and injuries. The “Safety Now” system is user-friendly and similar to Facebook so that employees can share safety stories. The Like button enables the users to interact and comment on each safety story. It also can display graphs, statistics, and the SWO reports that are clear and understandable. Since the start of the project, the Safety Now system has been continuously used and reached the goal of six safety cases/person/year.

#### **2. Near-miss Report Promotion and No Blame Culture**

GGC has launched the project entitled: Near-miss Report Promotion to encourage the employees and contractors to report near-miss incidents, which is able to correct and prevent unsafe acts before the accident would occur.

According to the 2018 statistics on personal safety, the Company barely received near-miss report. The Company expected that no one noticed the near-miss case or witnessed it but did not want to get involved. According to the SWO and near-miss report of GC Group, near-miss cases accounted for 10 percent of the total SWO report. Thus, GGC has continually organized the training sessions to develop the employees’ understandings and skills to file the near-miss case and develop a “no blame culture”.

#### **3. Understand Risk**

GGC has implemented the understanding Safety project for all stakeholders, the contractors working at the plants in particular to develop safety awareness and be aware of preventive measures, for example, protective clothing, safe work procedures and safe working development.

The project has been launched since the third quarter of 2019. According to the assessment form to evaluate the understanding of risks at work (‘Understand Risk’) among the employees and contractors, the

Company found that the understanding remained poor. Thus, the safety team has equipped them knowledge and a better understanding. The managers and supervisors were invited to take part in training session in which they were taught to fill the Understand Risk form. In the next assessment, 100 percent of the respondents understand their risks.

#### **4. Safety Stand Down: Commitment to Zero Accident**

GGC has implemented the project called: Safety Stand Down for all Executives, employees and contractors to forge safety awareness and build team commitment to becoming a company that is free from work-related accidents and fatality (Safety Commitment: Zero Accident). In 2018, other projects have also been put in place to promote greater engagement to becoming an accident-free company, namely the Hand Injuries Awareness Program, focusing on reducing finger and hand injuries, and Life-Saving Rules program, which defines safety rules of the Company.

Thanks to an effective safety management system and several projects to create safety awareness, the rate of work-related injury of the employees in 2019 dramatically dropped to zero and has remained unchanged for the past six years and eight months.

#### **Environmental Management**

GGC is committed to comply with laws and regulations. It has established a number of key policies to ensure security, safety, occupational health, environment, business continuity, and energy conservation which lead to efficient operation and lower environmental impacts.

GGC has obtained certificates from several international standards, including ISO 14001 (for environmental management system), ISO 50001 (for energy management system) and ISO 22000 (for food safety management system). The assessment was made based on resource management in production processes in all operating areas of GGC. In 2019, GGC implemented several environmental projects which cover energy efficiency management, reduction of greenhouse gas emissions, water management and waste management in order to increase operational efficiency, achieve established goals and reduce environmental impacts for a long-term sustainable business. In 2019, GGC has implemented the following energy conservation projects:

##### **1. Steam Letdown**

GGC has increased the efficiency in the steam letdown by using the better desuperheater to produce medium-pressure steam (MP) and low-pressure steam (LPS) and reduce the HHPS and the boiler feed water. As a result, the Company was able to reduce the use of high-pressure steam to only 10,246 tons of year or THB 11,635,404.

##### **2. Installation of the Variable Speed Drive to Cooling Pumps**

GGC has installed a Variable Speed Drive (VSD) to a minor to control the motor speed and match the needs to save energy. The DOL (Direct On Line) is connected through a starter across the full supply

voltage and leads to energy being waste. Due to the change, GGC successfully cut down the power consumption to 60,500 Watts/hour/year or THB 193,186.

### **3. Installation of the Variable Speed Drive for Fatty Alcohol Production**

GGC has installed a Variable Speed Drive (VSD) to control the motor speed and match the needs to save energy. The DOL (Direct On Line) is connected through a starter across the full supply voltage and leads to energy being waste. Due to the change, GGC successfully cut down the power consumption to 60,500 Watts/hour/year or THB 255,220 per year.

#### Waste Management

GGC has established an industrial waste management policy under the 3Rs principle, namely Reduce, Reuse, and Recycle. The 3R principle is implemented along with the Green Purchasing, which covers separation, storage, transport, and disposal as well as waste management in compliance with laws. In addition, GGC has established the Industrial Waste Management Committee to develop effective plans and initiate important projects with goals to increase potential re-utilization of waste in 2019 as follows:

#### **Zero Waste to Landfill**

GGC has implemented a project based on the 3Rs principle to maximize the re-utilization of waste to minimize environmental impacts. This project has been successfully implemented, resulting in no waste disposal to landfill since 2014 and the efforts for better waste management continue.

#### Water Resource Management

GGC has strived to develop effective and sustainable water resource management by focusing on reducing water consumption and reusing water so that GGC may reduce the overall water consumption and be able to prevent risks in the future business operations, prevent impacts on the environment and communities from the project. In 2019, GGC has launched the water resource management project which are detailed as follows:

#### **Installation of Reverse Osmosis System (RO Units) in Cooling Water System**

GGC has conducted a study to install the Reverse Osmosis System (RO Units) to improve the water quality from the outflow of the cooling water system. The improved water can be further used as a supplementary volume for the next cycle. Currently, the feasibility study is underway and the equipment is now being designed. It is expected that GGC could reduce the amount of water discharged by 15,840 cubic meters per year (equivalent to 10 percent of the total water discharge) and reduce the volume of new water introduced into the system by 15,840 cubic meters per year (10 percent of the total volume of water used in the water cooling system).

## Internal Control

Global Green Chemical Publics Company Limited (GGC) has emphasized and established the Internal Control System in accordance with the International Standard of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to achieve the internal control's objectives, which consists of operational effectiveness, the accuracy of reporting, and compliance with laws and Company's Regulations. These would support business activities and operation of GGC to be accuracy, transparency, which is enable GGC to achieve the Company's objectives.

The Board of Directors Meeting No. 2/2020 held on 14 February 2020, has evaluated the assessment report on the sufficiency of internal control system, which was prepared by GGC management in accordance with the guideline of the Securities and Exchange Commission (SEC) and the result of the Audit Committee's on internal control sufficiency review. The Board's opinion that GGC's internal control system has been functioned properly in an adequate manner. The operation has been efficiently managed with sufficient number of qualified and competent personnel. In addition, GGC has implemented a monitoring system to ensure safeguarding of GGC group's assets against misused of authorized persons and related persons or unauthorized access and also supervise related parties transaction or any conflict of interests activity.

GGC adopted the COSO's internal control framework, which consists of five elements, so called Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring and Reporting Activities to use as tools for internal control management.

Furthermore, in 2019, GGC has improved on our processes and system to increase its efficiency of internal control, to strengthen governance process and to identify risks and issues rapidly. The Company's internal control system can be summarized as follow:

### Control Environment

The Board of Directors and the Management strive to promote a corporate culture based on integrity and business ethics. Moreover, they also encouraged the Company's personnel to conduct business with integrity, morality, and responsibility. GGC emphasized to build up good and effective internal control environment as detail below;

- The Board of Directors is independent from the Management and is responsible to govern the overall operations of GGC as well as expressing views on the Directions and strategy for GGC which will be used as guidelines to formulate business and operating plan. Furthermore, the Board of Directors has regularly monitored the performance of GGC and its sub-committee to ensure achievement of GGC's objective and goals.
- GGC's Corporate Structure has been adjusted to align with business growth and objective of each business unit to promote efficient manner and Good Corporate Governance in the Company. The Structure has been designed with segregation of power principles to embed a checks and balances system which delegates duties and responsibilities appropriately. Furthermore, all employees acknowledge their roles, authorities, responsibilities, and accountabilities.

- The Board of Directors has established the Corporate Governance Policy aligned with laws and regulations, Internal Control Policy, and Anti-Corruption Policy to be guidelines for all Directors, the Management, employees. Furthermore, GGC has distributed Corporate Governance Handbook which contained a preferable practice for all Directors, the Management and employees. The Company's personnel signed off the Handbook to commit and conduct business under Corporate Governance practice and Internal Control Policy. There were various activities for communicating Corporate Governance and Compliance Policy to all employees for example CG Road Show. Moreover, GGC announced its Anti-Corruption Policy and Guideline which shown our intention against Corruption which GGC has granted a Certifications from Thailand's Private Sectors Collective Action Coalition Against Corruption (CAC).
- The Company set up Whistleblower Policy which specified procedure, measurement and scope of complaint. The Company also reviewed whistleblower channel and created various channels as well as established the protection and treatment measures for complainant with fairness and transparency, which enhance confidence and creditability of the compliant to whistleblower system.
- The Company imbedded its personnel with knowledge on Good Corporate Governance, Code of Conduct, Conflict of Interest and Anti-Corruption through various channels including monthly Newsletters, Road Show as well as knowledge sharing session. Furthermore, the Company also rechecked the personnel knowledge and understanding on aforementioned issues by 2019 Ethic and Compliance Test.
- The Board of Directors established the Human Resource Committee which is responsible to manage human resource effectively and determine operation guideline to support the Company growth strategy and nurture the Company's culture.
- GGC Corporate Culture has been implemented to all employees to conduct business with ethic and Good Corporate Governance. It would be a principle of way of conduct to drive Company growth with sustainability.
- GGC 's human resource management process has defined the qualifications for each position to be in line with recruitment criteria and recruitment procedure. Moreover, human resource development and performance appraisal have been implemented with fairness and transparency.
- GGC established Internal Control Policy to enhance the Board of Director, Management, and Employees awareness of internal control process. The internal control policy also support GGC operation and business activities to achieve Company objectives and goals.

## Risk Assessment

GGC has recognized the importance of Risk Management culture as an enabler for GGC members in order to achieve its short-term and long-term goal. The Board of Directors has appointed The Risk Management Committee (RMC) to have roles and responsibilities to create and review Risk Management Policy, Risk Management framework, and Risk Management monitoring system and mitigation plan. Moreover, the committee has given a value of recommendation and suggestion to corporate risk profile and investment risk over Company's new growth project. Moreover, The RMC has established sub-committee so called enterprise risk management committee (ERMC) which consists of the Managing Director as Chairman of Committee, and the management is responsible for the effectiveness and efficiency on corporate risk management which aims achievement to Company's business goal. GGC's risk management approach will be defined as below;

- The Board of Directors and RMC has given an attention to create more risk management and risk awareness into corporate culture. They have deployed Risk Management Policy to all employees to have an awareness and understand on Risk Management as corporate culture. Moreover, the Management also encouraged all employees to create working environment in compliance with company's risk management policy and adopted risk management to be their roles and responsibility.
- The Company has promoted a leaning and development program for the Directors, Management, all employees to understand on corporate risk profile and specified risk management activity in their job description.
- The Company has established goals and objectives based on Vision and Mission for the Company
- The Company has implemented ISO 31000 ( risk management) and COSO enterprise risk management to be Company's risk framework and launched Company's risk management policy to be a guideline of corporate risk management.
- The Company has identified corporate risk profile which consists of the risk identification, risk analysis and risk assessment both corporate level and business units. Moreover, the corporate risk profile also shown an annually risk measurement and mitigation plan to minimize the impact of those risks.
- The Company has conducted risk evaluation based on the uncertainty of internal and external factors and monitored the corporate risk management to maintain those risks within the boundaries of the Company's tolerance levels. Moreover, the Company also implement risk indicator (KRI) system to be instruments for monitoring risks and uncertainty which might impact to corporate objectives and goals. The reporting will be presented to ERMC in monthly basis, and the result and performance on corporate risk management will be quarterly reported to RMC.

### Control Activity

GGC obtained the internal control system which govern the Company's major operation, business activities, and risk management process, for minimizing the impacts of risk and uncertainty that would cause the Company's failure on objectives and goals.

- The Company has designed its control activities in accordance with internal control principles. These included the segregation of duties, policies and good practices for the conflicts of interest transactions. In addition, the Company's business has been conducted with transparent, fair and auditable manner. The business transaction would be conducted with fairness and transparency based on the utmost benefit of the organization.
- The Company established rules and regulations, business of Conducts, Corporate Policy, Good Corporate Governance Manual and manual of delegate authorities (MODA) which those have stated roles, responsibilities and authorization of each position levels. Moreover, each department set up its procedure and work instruction to be guidelines. The Company also reviewed and monitored its operation to ensure that the operation has been conducted in compliance with Company's rules and regulations, corporate policy as well as Company's procedures and work instructions.
- The Company has specified the preventive and mitigation plans from risk and uncertainty which aligned with the corporate risk assessment, and the Company has managed those risks within the boundaries of the Company's tolerance levels. The risk monitoring report and risk mitigation result would be presented to RMC and the Board of Directors.
- The Company has the control process which well-covered to major operation, business activities that work process established with in manual control system and automated control system. Both would be a significance system to be preventive control and detective control.
- The Company has the control process for IT access and security system, for example access control: User Name and Password before directly access personal computer and authorization control for any office automation system. Those control systems would create an effective security system. Moreover, the Company has announced IT security policy to ensure that the IT system has been secure and also without any disruption.
- In 2019, the Company appointed the Governance Risk Management & Compliance Committee (GRC) which has created company's synergy on good governance, risk management, and compliance for driving Good Corporate Governance to enhance efficiency of corporate planning, monitoring system and evaluation process with sufficient internal control system to support the Company to achieve its objectives and corporate strategy. In addition, GGC as a GC's Subsidiary Company, GC Way of Conduct was implemented and governed GGC. In this regard, the Company established GGC Way of Conduct in line with GC Way of Conduct to govern GGC Subsidiaries.

### Information & Communication

GGC has recognized the criticality of the quality of Information and Communication both internal and external channels that effectively supported operations with details as below;

- GGC has prepared the management reports for the Board of Directors based on a full analysis with variety of support information from both internal and external factors. The information showed the trend of business performance, production and sales performance, and stock and Inventory levels which financial report, and other management reports may need the information to be provided. The effectiveness and sufficiency information on management report would be a significant information to assist the Board of Directors in making decision. If the Board of Directors requires any information to support its decision, the Company is responsible to provide relevant information for consideration.
- The Company established various internal communication channels by considering types of information and objectives of communication such as types of Communication, Communication Direction, Targets and goals. The key policies were communicated through MD Town Hall, Meeting of cross functional team, on site visit communication, and the Company intranet and emails.
- The Company has various communication channels to communicate with stakeholders i.e. a Company website including business units which are responsible to distribute the Company information such as the investor relations and managerial accounting and corporate communication and CSR. Moreover, the Company revised the whistleblower system to be more effective by creating additional channels.

### Monitoring and Reporting Activity

GGC has ensured that there will be an adequacy and efficient Internal Control's monitoring and assessment process as below;

- The Company has assigned business units to engage on internal control to support the Management for internal control assessment, control development, control implementation and supervision on control process. Moreover, there would be value of recommendation to improve and monitor internal control process as 2nd line of defense which will have an effectiveness internal control assessment report to be presented to the Management Committee.
- The Company has reviewed its internal control process together with external experts who have experiences in the industry on internal control assessment. The experts have given suggestions over internal control process which the Company could develop and improve its business process and operation process to be more effective and efficient.
- The internal audit has independently reviewed the effectiveness and sufficiency of GGC's internal control system to assure sub-process and operation process based on Company's strategic growth and risk profile that might impact to the Company's performance. The report on internal control



process reviewed by internal audit will regularly be presented to the Audit Committee. Moreover, the Audit Committee has approved an annual audit plan for auditing business process and control activities to create more sufficiency on internal control system and also improve on control process as internal audit recommendation. The internal audit will present audit report to Audit Committee and also provide Quarterly Audit Committee Report to the Board of Directors. With Accounting and Finance Audit review, external audit has reviewed and given Financial Audit Report under Quarterly and Annual Basis.

- The Company has been certified as a member of Thailand's Private Sectors Collective Action Coalition Against Corruption (CAC) and the Company must review CAC Control Self-Assessment every 3 years. The report on control self-assessment consists of Policies, Practices, Anti-Corruption Policy in accordance with the GGC Corporate Governance and Business Code of Conduct.

In 2019, the Audit Report did not find any significant issue related to conflict of interests, fraudulent activities, or any other significant deficiencies in the internal control system which might affect GGC's objectives. Furthermore, there was no violations of SEC and SET rules and regulations or other laws related to GGC operation were found.

## Connected Transactions

For Fiscal Year 2019, GGC conducted business transactions with its subsidiaries and related companies with common shareholders or Directors. Connected transactions with the other entities of potential conflicts of interest are based on market or contractual prices if there are no reference market prices. Details of the relationship with these companies are as follows:

Company	Relationship (As of December 31, 2019)	Connected Transaction	2017	2018	2019
(Million THB)					
PTT Public Company Limited (PTT)	<ul style="list-style-type: none"> <li>Major Shareholder of GC holds 47.68 % of the shares in GC</li> <li>Director who is PTT Executive 1. Mr. Kongkrapan Intarajang</li> <li>Director who is PTT Director 1. Mr. Suppattannapong Punmeechaow</li> <li>Sale/purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of Goods or Services	5,245	2,333	102
		Purchases of Goods or Services	675	2,134	757
		Other Income	16	49	21
		Other Expenses	5	4	51
		<b>Statement of Financial Position Items</b>			
		Trade receivables - related parties	356	-	-
		Other receivables - related parties	3	4	-
		Trade payables - related parties	37	65	-
		Other payables - related parties	2	3	1
PTT Global Chemical Public Company Limited (GC)	<ul style="list-style-type: none"> <li>Major Shareholder of GGC holds 72.29 % of the shares of GGC</li> <li>Common Directors 1. Mr. Suppattannapong Punmeechaow 2. Mr. Kongkrapan Intarajang</li> <li>Director who is GC Executives 1. Mr. Kongkrapan Intarajang 2. Mr. Patiparn Sukorndhaman 3. Mr. Witoon Suewatanakul</li> <li>Sale/purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of Goods and Services	1,230	947	1,012
		Purchases of Goods and Services	188	220	232
		Other Income	13	8	18
		Other Expenses	92	96	104
		<b>Statement of Financial Position Items</b>			
		Trade receivables - related parties	52	21	112
		Other receivables - related parties	11	23	19
		Trade payables - related parties	9	25	3
		Other payables - related parties	43	39	65
Thai Eastern Top Seeds Oil Company Limited (TETSO)	<ul style="list-style-type: none"> <li>GGC holds 30 % of the shares of TETSO</li> <li>Executive who are TETSO Directors 1. Ms. Wanlapa Sophiskhaunkhant 2. Mr. Ekaphong Govitgoongrai</li> <li>Sale/purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Purchases of Goods and Services	86	249	252
		<b>Statement of Financial Position Items</b>			
		Trade payables - related parties	2	4	7

Company	Relationship (As of December 31, 2019)	Connected Transaction	2017	2018	2019
(Million THB)					
Thai Ethoxylate Company Limited (TEX)	<ul style="list-style-type: none"> <li>• GGC holds 50% of the shares</li> <li>• Common Director 1. Mr. Witoon Suewatanakul</li> <li>• Executive who serves as both Director and Executive at TEX 1. Mr. Piya Suri</li> <li>• Sales and purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	1,669	1,743	1,095
		Other income	5	5	5
		<b>Statement of Financial Position Items</b>			
		Trade receivables – related parties	394	305	165
		Other receivables – related parties	2	2	1
GC Glycol Company Limited (GC Glycol)	<ul style="list-style-type: none"> <li>• GC holds 100% of the shares</li> <li>• Sales and purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	-	4	-
		Other expenses	10	11	11
		<b>Statement of Financial Position Items</b>			
Solution Creation Company Limited (SUN)	<ul style="list-style-type: none"> <li>• GC holds 100% of the shares</li> <li>• Common Director 1. Mr. Patiparn Sukorndhaman</li> <li>• Sales and purchase transactions of products</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	26	33	25
		<b>Statement of Financial Position Items</b>			
		Trade receivables – related parties	6	6	5
Global Power Synergy Public Company Limited (GPSC)	<ul style="list-style-type: none"> <li>• PTT holds 22.58%, GC holds 22.73% of the shares, and Thai Oil Power Company Limited (TOP holds 74% and PTT holds 26% of the shares) holds 20.79% of the shares</li> <li>• Common Directors 1. Mr. Payungsak Chartsutipol 2. Mr. Kongkrapan Intarajang</li> <li>• Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Purchases of goods or services	492	520	499
		<b>Statement of Financial Position Items</b>			
		Trade payables – related parties	89	101	34
GC Maintenance and Engineering Company Limited (GCME)	<ul style="list-style-type: none"> <li>• GC holds 60% of the shares and PTT holds 40%</li> <li>• Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Purchases of goods or services	17	20	56
		<b>Statement of Financial Position Items</b>			
		Trade receivables – related parties	29	-	-
		Other payables – related parties	5	8	21
		Payable to contractor – related parties	7	3	6
GC Logistics Solutions Company Limited (GCL)	<ul style="list-style-type: none"> <li>• GC holds 99% of the shares while SUN holds 1% of the shares</li> <li>• Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Other expenses	9	14	19
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	1	2	5

Company	Relationship (As of December 31, 2019)	Connected Transaction	2017	2018	2019
(Million THB)					
Thai Tank Terminal Company Limited (TTT)	<ul style="list-style-type: none"> <li>GC holds 51% of the shares</li> <li>Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	18	19	6
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	-	1	-
PTT Digital Solutions Company Limited (PTT Digital)	<ul style="list-style-type: none"> <li>GC holds 40%, PTT holds 20%, TOP holds 20%, and PTTEP holds 20% of the shares</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Other expenses	1	7	5
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	-	1	1
Eastern Fluid Transport Company Limited (EFT)	<ul style="list-style-type: none"> <li>GC holds 15% and TTT holds 15% of the share</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Purchases of goods or services	1	-	-
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	-	3	-
NPC Safety and Environmental Service Company Limited (NPC S&E)	<ul style="list-style-type: none"> <li>GC holds 100% of the shares</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Purchases of goods or services	8	9	16
		Other expenses	-	3	2
		<b>Statement of Financial Position Items</b>			
Dhipaya Insurance Public Company Limited (DHIPAYA)	<ul style="list-style-type: none"> <li>PTT holds 13.33% of the shares</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Purchases of goods or services	18	16	16
		<b>Statement of Financial Position Items</b>			
		Other receivables – related parties	12	12	14
Thai Oil Public Company Limited (TOP)	<ul style="list-style-type: none"> <li>PTT holds 47.53% of the shares</li> <li>Sales and purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	1,098	998	1,070
		Other income	2	5	2
		<b>Statement of Financial Position Items</b>			
PTT Oil and Retail Business Public Company Limited (PTTOR)	<ul style="list-style-type: none"> <li>PTT holds 100% of the shares</li> <li>Sales/purchase transactions of products</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	-	2,143	4,293
		Purchase of goods or services	-	43	74
		Other incomes	-	5	-
		<b>Statement of Financial Position Items</b>			
		Trade receivables – related parties	-	262	447
		Trade payables – related parties	-	(9)	6
		Payables to contractor – related parties	-	21	-

Company	Relationship (As of December 31, 2019)	Connected Transaction	2017	2018	2019
(Million THB)					
Energy Complex Company Limited (ENCO)	<ul style="list-style-type: none"> <li>PTT holds 50% of the shares and PTTEP hold 64.79% of the shares</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Other expenses	11	11	11
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	-	3	-
IRPC Public Company Limited (IRPC)	<ul style="list-style-type: none"> <li>PTT holds 48.05% of the shares</li> <li>Sales/purchase transactions of products and services</li> </ul>	<b>Statements of Income Items</b>			
		Sales of goods or services	-	227	212
		<b>Statement of Financial Position Items</b>			
		Trade receivables – related parties	-	36	64
		Other receivables – related parties	-	26	-
Business Services Alliance Company Limited (BSA)	<ul style="list-style-type: none"> <li>PTT holds 100% of the shares</li> <li>GC holds 25% of the preferred stock</li> <li>Service transactions</li> </ul>	<b>Statements of Income Items</b>			
		Purchases of goods or services	2	2	2
		Other expenses	7	8	8
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	2	3	2
TOP Solvent Company Limited (TS)	<ul style="list-style-type: none"> <li>TOP (PTT holds 48.03% of the shares) holds 100% of the shares</li> <li>Product services</li> </ul>	<b>Statements of Income Items</b>			
		Purchases of goods or services	1	2	-
TOP Solvent (Vietnam) LLC. (TOPSOLW)	<ul style="list-style-type: none"> <li>TOP (PTT holds 48.03%) holds 100% of the share</li> <li>Sales and purchase of products</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	3	-	-
NPC S&E Security Guard Company Limited (NPCSG)	<ul style="list-style-type: none"> <li>NPC S&amp;E holds 100% of the shares</li> <li>Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Purchases of goods or services	4	4	6
		Other expenses	-	2	1
		<b>Statement of Financial Position Items</b>			
		Other payables – related parties	-	1	1
Advanced Biochemical (Thailand) Company Limited (Advanced Biochemical)	<ul style="list-style-type: none"> <li>VNT (GC holds 24.98% of the shares) holds 100% of the shares</li> <li>Sales and purchase transactions of products and services</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	282	466	272
		<b>Statement of Financial Position Items</b>			
		Trade receivables — related parties	28	33	20
PTT International Trading Pte. Ltd (PTTT)	<ul style="list-style-type: none"> <li>PTT holds 100% of the shares</li> <li>Sales transactions</li> </ul>	<b>Statement of Income Items</b>			
		Sales of goods or services	-	-	46
		<b>Statement of Financial Position Items</b>			
		Trade payables – related parties	-	-	15
Emery Oleochemicals (M) Sdn. Bhd.	<ul style="list-style-type: none"> <li>GC holds 50% of the shares</li> <li>Sales and purchase transactions of products</li> </ul>	<b>Statement of Income Items</b>			
		Purchase of goods or services	-	2	19

Company	Relationship (As of December 31, 2019)	Connected Transaction	2017	2018	2019
(Million THB)					
GGC KTIS Bioindustrial Company Limited (GKBI)	<ul style="list-style-type: none"> <li>• GGC Bio holds 50% of the share</li> <li>• Common Directors               <ol style="list-style-type: none"> <li>1. Mr. Witoon Suewatanakul</li> </ol> </li> <li>• Executive who serves as both Director and Executive in GKBI               <ol style="list-style-type: none"> <li>1. Mr. Suwat Kamolpanus</li> <li>2. Mr. Yothin Budyochuntho</li> </ol> </li> <li>• Service transactions</li> </ul>	<b>Statement of Income Items</b>			
		Other Income	-	-	6
		<b>Statement of Financial Position Items</b>			
		Other receivables – related parties	-	-	6

### Necessity and Reasonableness of Connected Transactions

GGC's connected transactions for the fiscal year ended on 31 December 2019 were undertaken in the course of normal businesses under the general business terms, as reasonable people would do with contractual partners under similar circumstances on the Arm's Length Basis.

### Measures or Approval Procedure for Connected Transactions

To engage in transactions with related parties, GGC has reviewed all transactions and its suitability before such engagement and set prices and terms on an Arm's Length Basis.

When GGC or its subsidiaries have engaged in connected transactions applicable to Stock Exchange of Thailand (SET) and Securities and Exchange Commission (SEC) announcements on information disclosure and actions by listed companies on related transactions, the Board of Directors strictly ensures such actions conform to criteria, provisions, and procedures of the announcements together with disclosure of such transactions in the Annual Report and Form 56-1 to ensure transparency of related transactions and eliminate conflicts of interest.

If any director wishes to buy GGC's assets or sell assets to the Company or do business with it — whether by themselves or on behalf of others — GGC's regulations clearly specify that such transactions must obtain an approval of the Board of Directors in order for such transactions to bind the Company. In any case, under GGC regulations, any director with vested interests in asset purchase or sale, or in engaging with GGC, are not entitled to vote on such matters.

Apart from the approval of the Board of Directors, if engagement of GGC or its subsidiaries in related 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 any connected transactions in order to control, audit and excuse 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 operation. 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, the Internal Audit Department also closely monitors the movements to ensure that the Company has already set such connected transactions in alignment with the regulations and in accordance with the Internal Audit Plan and regularly reported to the Audit Committee.

#### **Policy or Trends of Connected Transactions**

If GGC wishes to engage in transactions with related parties, related transactions or connected transactions with parties of potential conflicts of interest or parties with vested interests, GGC must strictly conform to the above-mentioned policy, measures, and procedures. To this end, the Audit Committee regularly reviews the legality of connected transactions and the conformance to the SET requirements to ensure the reasonableness and maximum benefit for the Company.

# Financial Statements





## Report of the Audit Committee

Dear Shareholders,

The Audit Committee of Global Green Chemical Public Co., Ltd. (GGC) comprises of three independent directors, all of whom are nationally respected, competent and have a full understanding of, and experiences in law, agriculture and industry management. Some of the committee's members have sufficient accounting and financial management that enable them to provide reasonable assurance regarding the reliability of financial reporting or statements. The current Audit Committee consists of the following three members:

- |    |                   |             |                                 |
|----|-------------------|-------------|---------------------------------|
| 1. | Prof. Dr. Kumchai | Jongjakapan | Chairman of the Audit Committee |
| 2. | Ms. Kannika       | Ngamsopee   | Director of the Audit Committee |
| 3. | Mr. Apichart      | Jongskul    | Director of the Audit Committee |

The three directors fulfill the compositions and qualifications as stated in the announcement of the Stock Exchange of Thailand (SET). Ms. Kunakorn Witthayapaisarn, director of the Internal Audit Department, also serves as the Committee's secretary.

The Audit Committee's members performed their duties in line with the Charter that has been approved by the Board of Directors and aims to encourage GGC and its subsidiaries to carry out business operation as stated in the company's Good Corporate Governance Policy and sustainable development plan, law and related regulations. The Audit Committee members' duties included a review to ensure that the company has efficient and effective risk management plan as well as internal control system. The Committee was also committed to promoting the advancement of internal audit system in accordance with international standards.

In 2019, the Committee had a total of 15 meetings and all directors were present at all of these meetings. The following is a summary of key activities and opinions of the Committee:

### 1. Financial Report

The Audit Committee reviewed the financial report for 2018 and quarterly financial statements for 2019 that have been written in accordance with the generally accepted accounting principles. The management and auditors were present at all meetings. During the meetings, both sides jointly reviewed important matters such as accuracy and completeness of financial statements and disclosure of information that is correct, complete and sufficient. Moreover, the Committee was monitoring a key issue of the company's internal control over financial reporting raw material and inventory management agreements with the suppliers to compensate for raw materials with affected to the financial statement, factor analysis and the auditors' opinions. The Committee agreed that the company's financial reporting standards were reliable, sufficient and beneficial to the users of accounting information.

Moreover, the Committee held two special meetings with the auditors, excluding presence of the Management and the Internal Audit Office, to discuss issues relating to independence in performing duties and responsibilities, access to sources of information for audit, scope and plan for annual audit, risk factors, internal control, internal audit, and other matters. No notice has been given by the auditors.

## 2. Risk Management

The Audit Committee reviewed risk management by assessing internal and external audit report. The committee also acknowledge the 2019 progress report on risk management periodically which covered a wide range of issues such as risk management policy, risk assessment and risk mitigation measures.

## 3. Internal Control

The Company has valued the importance on Internal Control System, therefore in 2019 the company asked an external expertise to assess and give recommendation to improve on internal control process to increase its robustness and efficiency in sustainability manner.

The Audit Committee carefully reviewed an appropriate and adequate of the internal control system was in place which in line with the guideline of the Securities and Exchange Commission (SEC) . The internal control unit and auditors discovered no faults and damages that may lead to the company's failure to meet objectives and targets.

Moreover, the Committee closely monitored progress and acknowledged issues surrounding development on internal control. In addition to procurement and management process as well as inventory which have been reviewed in a previous year, the Company hired an external consulting firm to enhance effectiveness of the internal control system, business operation and other systems of the company for the long term. Meanwhile, the Management Department has stressed the importance of the revision based on recommendation from the Audit Committee, auditors and the internal control unit.

## 4. Corporate Governance Policy

The Audit Committee was responsible for the Company good corporate governance. The Committee shared comments on procedures for dealing with whistleblowing that the company has revised and sought an approval from the Corporate Governance and Sustainable Development Committee. Furthermore, the Committee paid attention to anti-corruption measures that have been implemented throughout the procurement process as well as distillation and have been adjusted based on recommendations from the Coalition Against Corruption (CAC) to ensure the Anti-Corruption Policy was put in place appropriately and effectively.

In 2019, the Committee proposed recommendations regarding procedures for dealing with whistleblowing and reviewed complaints that were in hands of the internal audit office The Committee continuously followed up and reviewed the progress report on the matter in line with their roles and responsibilities and stated in the company's Good Governance Policy to build confidence among the stakeholders.

## 5. Internal Audit

The Audit Committee continuously reviewed the internal audit office's charter while ensuring independence and professionalism. The present charter has become effective since 13 March 2019. Besides, the Committee has also stressed the importance of the annual audit plan in order to ensure consistency with the nature and the level of risks faced by the Company and aligned with the company's corporate strategy. and quarterly monitoring performance of the internal audit office (4 times per year) Including, review the findings per the audit report together with internal auditors and proposed recommendations needed to enhance good governance and effectiveness of the internal audit. The Committee also assessed

adequacy of overall manpower and encouraged the internal auditors to continuously develop their proficiencies. Evaluate the performance of the Chief of audit executive The Committee found that the internal audit office fulfilled their duties in compliance with plan and international standards on internal auditing while upholding ethics. The internal audit office also greatly supported work of the Audit Committee and created optimal values for the company.

## **6. Regulatory Compliance**

The Audit Committee was committed to review connected transactions and transactions that may cause conflict of interest in line with laws and regulations of the Stock Exchange of Thailand (SET) and relevant regulations to ensure that each transaction was reasonable, made to bring the great benefits to the company and disclosed to the public. The Committee also reviewed the auditors' report and no irregularities have been found.

The Committee found no irregularities or conflicts with law in the internal audit office's report that could harm the business operation. The Committee proposed a review and recommendation on regulatory compliance to make the internal control system more effective. Furthermore, none of complaints from the auditors, the third-party companies or the Management showed the company's violation of and non-compliance with laws or damage to the business operation.

## **7. Appointment of Auditors and Determination of Audit Fee**

The Audit Committee carefully reviewed and acknowledged the appointment of auditors through a bidding process while considering relevant information such as qualifications, knowledge of and experience in auditing in the same industry, audit approaches, assessment tools and data analytics. The Committee also paid attention to the auditors' independence and professionalism as well as appropriate audit service fees. Thus, the Committee proposed the appointment of auditors and determination of audit fee to the Board of Directors and the AGM of Shareholders for approval.

In 2019, the AGM agreed with the recommendation from the Audit Committee to select Deloitte Touche Tohmatsu Jaiyos Advisory Co., Ltd. to be the audit firm.

## **8. Effectiveness of the Audit Committee**

The Audit Committee continuously reviewed its Charter and the current version, which came into effect since 13 March 2019, has been approved by the Board of Directors. To support this, the Committee submitted its quarterly reports to the Board (4 times per year) and conducted two types of assessments, namely that of the Committee as a whole, that of each individual member as a self-assessment in 2019. The results of the assessment have been submitted to the Board of Directors for further recommendations to enhance the Committee's effectiveness in handling auditing internal units. The 2019 report was also disclosed to the public. Meanwhile, the Committee continued developing skills and relevant knowledge needed to enhance their performance.

In summary, the Audit Committee has performed its duties and responsibilities as stated in its Charter by utilizing knowledge, capacity, and with a due care and independence. The Committee expressed its frank opinions and provided recommendations while treating all stakeholders equally and with the utmost benefits.

The Audit Committee found that the company's financial report was in line with the generally accepted accounting standard, reliable and disclosed to the public which the Committee considered beneficial to the users of accounting information. The practices did not go against law and the company's Good Governance Policy. The risk management and internal control system were also sufficient and effective.

The Audit Committee performed its duties with prudence and transparency in line with the company's Good Corporate Governance Policy. The Committee remains committed to build up confidence of the shareholders and all stakeholders that will later lead to great benefits and long-term value to the company.

On behalf of the Audit Committee

(Signed) (Prof. Dr. Kumchai Jongjakapan)  
Chairman of the Audit Committee

## Management's Discussion & Analysis

### Executive Summary

In 2019, overall palm oil production and Crude Palm Oil (CPO) inventory remained high in both domestic and international markets, although the inventory plunged to a minimum record of year 2019 to the level of 300,000 tons, which was due to the lower palm oil output at the end of 2019 and the higher Crude Palm Oil (CPO) demand. It was the result of the government's measures pushing biodiesel B10 to be the mandatory diesel in 2020 leading sharply rise in Crude Palm Oil (CPO) and Crude Palm Kernel Oil (CPKO) prices at the end of 2019. Since early 2019, the stock of Crude Palm Oil was surged to 500,000 tons in 3Q2019, resulting in an average of Crude Palm Oil (CPO) and Crude Palm Kernel Oil (CPKO) prices decreased from FY2018. Even though, the government has agreed to set the guaranteed price of palm fresh fruit bunch at 4 Baht/kg. and encouraged biodiesel B10 and B20 consumption as fuel options throughout the year by using the State Oil Fund to subsidize the price of B10 and B20 to be lower than diesel price of standard grade by 1 Baht per liter and 5 Baht per liter respectively. This measure was terminated on September 2019, then adjusting to 2 Baht per liter and 3 Baht per liter respectively from October 2019 onwards. In addition, the Electricity Generating Authority of Thailand (EGAT) has been assigned to purchase Crude Palm Oil to produce electricity continuously. Natural Fatty Alcohols market in 2019 has slowed down from previous year due to the decline in purchasing power of Chinese consumers who are an important driving force for market, which was affected from US-China trade war and the depreciation of Yuan (CNY) against US dollar. Besides, the extreme fluctuation of Crude Palm Oil price in end of 2019 affected buying sentiment to be drop as buyers waited for the stabilized Fatty Alcohols price.

As aforementioned, the Global Green Chemicals Public Limited ( " GGC " or " the Company " ) recorded Methyl Ester sales volume in FY2019 at 415,882 tons, an increase of 40,960 tons or 11% compared to FY2018 due to the incremental capacity of Methyl Ester from Methyl Ester plant 2 which has commenced the commercial operation in 2Q2019. In addition, at the same time, the Company had the opportunity to export Methyl Ester amounted to 6,800 tons. Meanwhile, natural Fatty Alcohols sales volume was sold at 96,946 tons, a decrease of 17,838 tons or 16% from FY2018.

The total revenue in FY2019 was reported at THB 13,055 million, a decrease of THB 3,170 million or 20% compared to FY2018, corresponding to EBITDA which was at THB 499 million, decreased by THB 424 million or 46% from previous year. The profitability of Methyl Ester was pressured by stiffen competition with increasing supply in Thailand. Additionally, the declining of palm oil price and the falling global Glycerine price driven by Glycerine supply glut from increasing biodiesel blending rate of leading biodiesel producers in global market significantly affected to the Company's Methyl Ester business. However, Fatty Alcohols business had contributed EBITDA of THB 494 million.

In 2019, the Company was impacted by extraordinary expenses amounting to THB 91 million, which are consist of accrued payable for labor regulation amendment of the employee's latest wage rate for an employee who has worked for 20 consecutive years or more, the advisory fee from the inventory shortfall

and the maintenance expenses from a major shutdown of Methyl Ester Plant 1, investigating and repairing plant's equipment of Methyl Ester Plant 2 and three times shut down for maintenance and catalyst changing of Fatty Alcohols Plant. As mentioned above, the Company posted net loss excluding extraordinary items of THB 16 million in FY2019, decreased by THB 503 million or 103% from the net profit before extraordinary items of FY2018.

In 2019, the Company entered into negotiations with certain suppliers and was able to reach agreements. The suppliers agreed to deliver outstanding raw materials to the Company over a period and the Company has been returning raw materials from suppliers of THB 16 million, consequence to declining of the amount of damages from inventory shortfall. Moreover, after the review of the reserve for damages from the inventory shortfall, the Company has reversed the reserve of approximately THB 217 million pursuant to an appraised value of the collateral under the aforesaid settlement agreements, providing that such reverse value is lower than the appraised price of the collateral because it was made on a conservative basis, based on the assumption of sale by auction. When offsetting by deferred tax items, the Company realized extraordinary items of THB 110 million. Hence, the net profit was recorded at THB 94 million, an increase of THB 1,255 million or 108% compared to the net loss including extraordinary items from the inventory shortfall in 2018 amount of THB 1,161 million.

As of 31 December 2019, the Company has total assets in the amount of THB 12,931 million which comprised of cash and short-term investment amounting to THB 3,311 million, with total liabilities of THB 3,283 million and total equities of THB 9,648 million. In this regard, the Company's financial position remains strong with low debt-to-equity ratio and high current ratio.

## Operating Performance

Exhibit 1: Consolidated Company's Performance

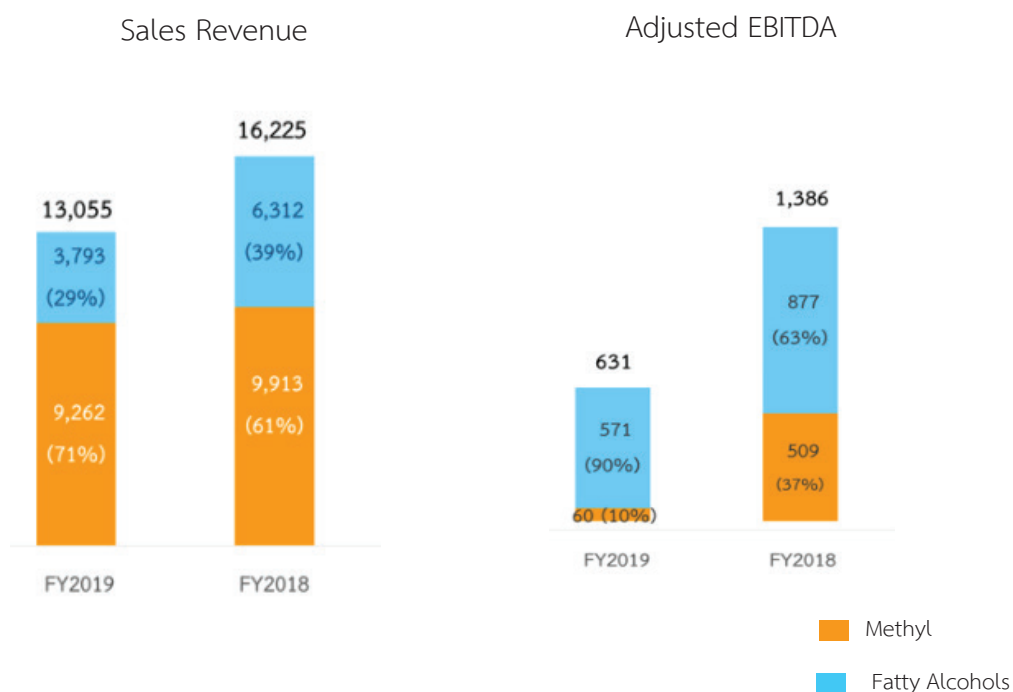
UNIT: THB million	FY2019	FY2018	% YoY
Sales Revenue	13,055	16,225	-20%
EBITDA	499	923	-46%
EBITDA Margin (%)	3.8%	5.7%	-1.9%
Stock Gain/(Loss) & NRV	-132	-463	-71%
Adjusted EBITDA <sup>(1)</sup>	631	1,386	-54%
Adjusted EBITDA Margin (%)	4.8%	8.5%	-3.7%
<b>Net Profit</b>	<b>-16</b>	<b>487</b>	<b>-103%</b>
Extra item net of tax <sup>(2)</sup>	110	-1,648	-107%
<b>Net Profit after extra items</b>	<b>94</b>	<b>-1,161</b>	<b>-108%</b>
EPS (THB/share)	0.09	-1.13	-108%

Note:

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

(2) Extra items were from raw material derogation and deferred tax assets/liabilities.

Exhibit 2 : Sales revenue and Adjusted EBITDA breakdown by business unit comparison of FY2019 vs. FY2018 (THB million)



## Market Overview by Business

### Methyl Ester (Biodiesel)

Exhibit 3: Product and Feedstock Prices

Average Price	FY2019	FY2018	% YoY
Methyl Ester (B100) (Baht per liter) <sup>(1)</sup>	22.36	24.15	-7%
Methyl Ester (B100) (Baht per kg) <sup>(2)</sup>	25.85	27.91	-7%
Crude Palm Oil (CPO) (Baht per kg) <sup>(3)</sup>	18.29	19.57	-7%
EPPO P2F (Baht per kg) <sup>(4)</sup>	4.77	5.19	-8%
Biodiesel Mandate	B7	B7	

Note : (1) Reference Price of EPPO

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

(3) Reference Price of DIT

(4) Market ME Price - Mixed Feedstock according to EPPO's B100 formula

An average of the FY2019 Crude Palm Oil price (CPO-DIT) was at 18.29 Baht per kilogram, a decrease of 1.28 Baht per kilogram, or 7% caused by the continuously increasing inventory to the level of 500,000 tons in 3Q2019, attributed to a bit higher Crude Palm Oil price level. Even though, the government has agreed to set the palm fresh fruit bunch guaranteed price at 4 Baht/kg. Also, the Electricity Generating Authority of Thailand (EGAT) completely purchased Crude Palm Oil amount of 160,000 tons in April 2019 to generate electricity in response to the government's delegation. According to the cabinet resolution previously approved on May 7, 2019, EGAT was assigned to purchase additional 200,000 tons of Crude Palm Oil, which total 66,250 tons was purchased and used in power generation. In addition, in December 2019, EGAT has purchased the additional Crude Palm Oil amounting to 101,700 tons that required the bidders to deliver Crude Palm Oil to EGAT from December 2019 until April 2020 (extended from January 2020). However, Crude Palm Oil price soared in 4Q2019 when the government officially announced the biodiesel B10 to be the mandatory diesel shifting from biodiesel B7 in 2020. As a result, biodiesel B10 mandate is expected to raise the consumption of Crude Palm Oil in energy sector approximately 30-40% which will become a major consumer instead of edible oil for consumption.

In FY2019, Methyl Ester demand was increased from FY2018 by 0.22 million tons or 16%, which was equal to 1.56 million tons due to maintaining the biodiesel mandated at B7 whole year. Additionally, major vehicle manufacturers have announced their readiness to comply with B20 and continually have promoted B20 to motorists, resulting to consecutively growing of B20 consumption. In addition, The Energy Ministry announced biodiesel B10 as the mandatory biodiesel in Thailand, replacing biodiesel B7 in 2020. Firstly, the government defined revision of B100 specification and quality on December 1, 2019, corresponding to preparing the stock of biodiesel B10 by fuel traders M.7. After that, all refineries are required to produce



biodiesel B10 on January 1, 2020. By March 1, 2020, biodiesel B10 will be available at all petrol station nationwide. Moreover, the government has continuously encouraged biodiesel B10 and B20 consumption by subsidizing the price of B10 and B20 to be cheaper than diesel of standard grade by 2 Baht per liter and 3 Baht per liter respectively from October 2019 onwards. Meanwhile, the average of FY2019 Methyl Ester price was declined to 25.85 Baht per kilogram, a decrease of 2.06 Baht per kilogram or 7% from FY2018, corresponding to Crude Palm Oil price downward.

The average EPPO P2F in FY2019 (the difference between ME EPPO price and mixed feedstock prices) was at 4.77 Baht per kilogram, decreased by 0.42 Baht per kilogram or 8% compared to FY2018 because the methanol price which is a factor in the ME EPPO price formula dramatically decreased.

## Fatty Alcohols

Exhibit 4: Products and Feedstock's prices

Average Price (USD per ton)	FY2019	FY2018	% YoY
Fatty Alcohols <sup>(1)</sup>			
- Short Chain	2,891	3,705	-22%
- Mid Cut	1,135	1,445	-21%
- Long Chain	1,107	1,251	-12%
Average Fatty Alcohols <sup>(2)</sup>	1,267	1,568	-19%
Crude Palm Kernel Oil (CPKO) <sup>(3)</sup>	633	914	-31%
Market P2F of Fatty Alcohols	507	471	8%

Note : (1) Reference Price of ICIS

(2) Average price of Fatty Alcohols with production proportion: Short Chain 8% Mid Cut 62% and Long Chain 30%

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

Average Crude Palm Kernel Oil price (MPOB) in FY2019 was at 742 USD per ton, a decrease of 281 USD per ton or 31% because in international Crude Palm Kernel Oil market, the inventory level stood at the high level in 2Q2019, especially Malaysia's inventory raised to 490,000 tons driven by their overwhelmed output. In the meantime, overall Crude Palm Kernel Oil demand is expected to be slow growth driven by the improving of consumer health concern trend and tariff barriers of international trade. However, Crude Palm Kernel Oil price increased suddenly in 4Q2019, mainly from the expectation of declining of palm oil and other vegetable oil outputs owing to the drought affected area.

On the demand side, natural Fatty Alcohols in FY2019 has slowed down from previous year, resulting from purchasing power of China depressed mainly from US-China trade war and depreciation of Yuan (CNY) against US dollar. Besides, the extreme fluctuation of Crude Palm Kernel Oil price in end of 2019 affected buying sentiment to be drop as buyers waited for the stabilized Fatty Alcohols price.

The market P2F of natural Fatty Alcohols in FY2019 was at 507 USD per ton, improved by 8% from FY2018 driven by tight supply.

## Operating Performance by Business Unit

### Methyl Ester (ME) Business Unit Operating Performance

Exhibit 5: Keys Operating Performance of ME Business Unit

Methyl Ester Business	FY2019	FY2018	% YoY
Utilization (%) <sup>(1)</sup>	82% <sup>(1)</sup>	113% <sup>(2)</sup>	-31%
Sales Volume (ton)	415,882 <sup>(3)</sup>	374,922 <sup>(4)</sup>	11%
Sales Volume (million liter) <sup>(5)</sup>	481	433	11%
Sales Revenue (THB million)	9,262	9,913	-7%
EBITDA (THB million)	5	429	-99%
EBITDA margin (%)	0.1%	4.3%	-4.2%
Stock Gain/(Loss) & NRV (THB million)	-55	-80	-31%
Adjusted EBITDA (THB million) <sup>(6)</sup>	60	509	-88%
Adjusted EBITDA Margin (%)	0.7%	5.1%	-4.4%

Note : (1) Nameplate Capacity 500,000 tons per year from Methyl Ester Plant 1 and Plant 2 with a nameplate 300,000 and 200,000 ton per year respectively. The Methyl Ester Plant 2 has commenced the commercial operation on April 5, 2019.

(2) Nameplate Capacity 300,000 tons per year from Methyl Ester Plant 1

(3) In FY2019, the Company had sales volume from Methyl Ester Plant 2 of 17,293 tons which could not be recorded in profit/loss statement because it was under testing run for commercial operation.

(4) FY2018, the Company reported sales volume from Methyl Ester Plant 2 amounting to 7,109 tons which could not be recorded in profit/loss statement because it was under testing run for commercial operation. However, sales volume for Methyl Ester as aforementioned was included in the total sales volume in 4Q2018 and FY2018 as table above.

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

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

In FY2019, the Company reported Methyl Ester sales revenue of THB 9,262 million, decreased from FY2018 by THB 651 million or 7% primarily from declining of Methyl Ester price following the soften of Crude Palm Oil price. Despite, the Company's Methyl Ester Plant 2 has been operating since 2Q2019 and exported Methyl Ester amounting to 6,800 tons, resulting in Methyl Ester sales volume in FY2019 increased by 11% from FY2018 up to 415,882 tons. If considering the Methyl Ester sales volume that could realize in profit/loss statement in FY2019 and FY2018 were at 398,589 tons and 367,813 tons respectively, attributed to sales volume in FY2019 increased by 30,776 tons or 8% compared to FY2018. Moreover, the Company has been impacted from the drastic diminishing of by-product price in relation to ample Glycerine supply and the average of Crude Palm Oil price dropped, attributed to lower in feedstock price discount and higher in product selling price discount, as a result, the Company's profitability of Methyl Ester decreased.

Besides, in FY2019, the Company recorded accrued payable for labor regulation amendment, in which the maximum severance pay rate is amended from 300 days to be 400 days of the employee's latest wage rate for an employee who has worked for 20 consecutive years or more. Moreover, the higher extraordinary expenses were recorded in this timing which were the maintenance expenses of Methyl Ester Plant 1 and Plant 2 shutdown and the advisory fee from the raw materials derogation issue.

Based on these factors, EBITDA was posted at THB 5 million, a decrease of 99% from FY2018. When deducting the effect of Stock Loss & NRV of THB 55 million, the Company reported Adjusted EBITDA of THB 60 million, a decrease of 88% from FY2018.

## Fatty Alcohol (FA) Business Unit Operating Performance

Exhibit 6 : Keys Operating Performance of FA Business Unit

Fatty Alcohols Business	FY2019	FY2018	% YoY
Utilization (%)	95%	115%	-20%
Sales Volume (Ton)	96,946	114,784	-16%
Revenue from Sales (THB million)	3,793	6,312	-40%
EBITDA (THB million)	494	494	0%
EBITDA margin (%)	13.0%	7.8%	5.2%
Stock Gain/(Loss) & NRV	-77	-383	-80%
Adjusted EBITDA (million baht) <sup>(1)</sup>	571	877	-35%
Adjusted EBITDA Margin (%)	15.0%	13.9%	1.1%

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

In FY2019, Fatty Alcohols business recorded revenue of THB 3,793 million, a decrease of 40% from FY2018 primarily from the declining of sales volume by 16% compared to the previous year. The primary cause was that the Company had shutdown of Fatty Alcohols Plant for maintenance and catalyst changing three times in FY2019 compared with twice in FY2018, in addition to decreasing natural Fatty Alcohols price following declining Crude Palm Kernel Oil price. However, the Company could generate EBITDA at THB 494 million equal to previous year. The Company had been impacted from Stock Loss & NRV of THB 77 million, attributed to Adjusted EBITDA of THB 571 million, a decrease of 35% from FY2018

**Consolidated Profit or Loss Statement***Exhibit 7 : Consolidated Profit or Loss Statement comparison FY2019 and FY2018*

	FY2019		FY2018		YoY	
	MB	%	MB	%	MB	%
<b>Sale Revenue</b>	<b>13,055</b>	<b>100</b>	<b>16,225</b>	<b>100</b>	<b>(3,170)</b>	<b>(20)</b>
Feedstock	(9,566)	(73)	(12,075)	(74)	2,509	(21)
Net Realizable Value (NRV)	(12)	(0)	(2)	(0)	(10)	500
<b>Product to Feed Margin</b>	<b>3,477</b>	<b>27</b>	<b>4,148</b>	<b>26</b>	<b>(671)</b>	<b>(16)</b>
Variable Costs	(1,741)	(13)	(1,936)	(12)	195	(10)
Fixed Costs	(743)	(6)	(556)	(3)	(187)	34
Stock Gain/(Loss)	(120)	(1)	(461)	(3)	341	(74)
SG&A	(441)	(3)	(368)	(2)	(73)	20
Other Income	67	1	96	1	(29)	(30)
<b>EBITDA</b>	<b>499</b>	<b>4</b>	<b>923</b>	<b>6</b>	<b>(424)</b>	<b>(46)</b>
Depreciation and Amortization	(513)	(4)	(520)	(3)	7	(1)
<b>EBIT</b>	<b>(14)</b>	<b>(0)</b>	<b>403</b>	<b>2</b>	<b>(417)</b>	<b>(103)</b>
Net Financial Costs	(18)	(0)	(24)	(0)	6	(25)
FX Gain/Loss <sup>(1)</sup>	(3)	(0)	6	0	(9)	(150)
Share of Profit/(Loss) from investment	29	0	102	1	(73)	(72)
Income Tax Expenses	(10)	(0)	0	0	(10)	n.a.
<b>Net Profit bef extra items</b>	<b>(16)</b>	<b>(0)</b>	<b>487</b>	<b>3</b>	<b>(503)</b>	<b>(103)</b>
<b>Extra item net of tax<sup>(2)</sup></b>	<b>110</b>	<b>1</b>	<b>(1,648)</b>	<b>(10)</b>	<b>1,758</b>	<b>(107)</b>
<b>Net Profit after extra items</b>	<b>94</b>	<b>1</b>	<b>(1,161)</b>	<b>(7)</b>	<b>1,255</b>	<b>(108)</b>

Notes : (1) Including Gain/(Loss) from FX and Derivatives

(2) Extra items were from raw material derogation and deferred tax assets/liabilities.

## Statement of Financial Position

Exhibit 8 : Consolidated Financial Position as of December 31, 2019 and as of December 31, 2018

Cash and Cash Equivalent	3,787	1,256	3,311	1,493	Other Liabilities
Account Receivable, Inventory, and other Current Assets	2,927	2,120	3,401	1,790	Interest Bearing Debt
PP&E	5,115	9,708	4,764	9,648	Shareholders' Equities
Non-Current Assets	1,255		1,455		
As of December 31, 2018		As of December 31, 2019			
THB 13,084 million		THB 12,931 million			

## Assets

As of December 31, 2019, the Company had total assets of THB 12,931 million, a decrease of THB 153 million when compared to December 31, 2018 in which key changes are described as follows;

1. PP&E decreased by THB 351 million due to depreciation in year of 2019
2. Deferred tax asset declined by THB 133 million due to recording deferred tax liabilities from the reversal of reserve for the damage from inventory shortfall and deferred tax asset adjustment.
3. Investment payment in joint venture Company, GKBI increased by THB 350 million
4. Current assets decreased by THB 2 million caused by declining of cash and cash equivalent, which was mainly due to investment payment for GKBI, Methyl Ester Plant 2 project construction payment and long-term loan from financial institution payment, offsetting by the rising of account receivables and other receivables, in addition to the rising of inventory in relation to increasing raw material price and Methyl Ester price. Also, the Company has the incremental of nameplate capacity Methyl Ester from Methyl Ester Plant 2 which had commenced the commercial operation in 2019, as a result, the amount of Company's inventory was increased.

### Liabilities

As of December 31, 2019, the Company had total liabilities of THB 3,283 million, a decrease of THB 93 million or 3% when compared to December 31, 2018, mainly attributed to

1. long term borrowings from financial institutions decreased by THB 336 million due to loan repayment as per schedule;
2. account payables increased by THB 213 million because raw material prices rose compared to FY2018

### Shareholder's equities

As of December 31, 2019, the Company had total shareholder's equity of THB 9,648 million, decreased by THB 60 million or 1% due to the announcement of the payment of interim dividend to the Company's shareholders as the approval of the Company's Board of Directors on September 11, 2019 and the net profit of THB 94 million for FY2019.

### Statement of Cash Flows

The Company had cash from operating activities of THB 625 million due to the net profit of THB 94 million, offsetting by the adjustment for non-cash items, an increase of account payables, account receivables, other current assets, and decreasing of inventory.

The Company had cash used in investing activities of THB 144 million because there was cash spending for investment in GGC KTIS Bio Industrial Company Limited (GKBI) amounting to THB 524 million and cash spending for PP&E of THB 292 million mainly from investment in Methyl Ester Plant 2. The Company had received cash dividend from Thai Ethoxylate Co, Ltd. (TEX) amounting to THB 223 million and interest income of THB 51 million, while short-term investment at financial institutions decreased THB 400 million.

The Company had cash flow spending for financial activities of THB 563 million, which was spent for repayment of long-term loan from financial institute and interest payment, financial fee, financial leases and dividend payment.



## Report of the Board of Directors' Responsibility for Financial Reports

The consolidated 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 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 presents 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.

(Signed) Supattanapong Punmeechaow  
(Mr. Supattanapong Punmeechaow)  
Chairman

(Signed) Witoon Suewatanakul  
(Witoon Suewatanakul)  
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, 2019, 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 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, 2019, 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. These matters were 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 these matters.

Key Audit Matter	Audit Responses
<p><b>The measurement of inventories valuation</b></p> <p>Inventories of the Group are significant balance to the consolidated and separate financial statements. 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 9, respectively.</p>	<p>Key audit procedures included:</p> <ul style="list-style-type: none"> <li>Gaining understanding and performing test of design and implementation as well as operating effectiveness of the relevant controls over inventories valuation measurement process.</li> <li>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 commodity prices, and testing the accuracy of the calculation.</li> <li>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.</li> <li>Assessing the adequate disclosure in relation to the estimation of allowance for diminution in value of inventories in notes to the financial statements.</li> </ul>

Key Audit Matter	Audit Responses
<p><b>The existence of raw materials</b></p> <p>During the second quarter of 2018, the Company found the quantity of raw materials recorded in the system higher than the actual quantity stored at the suppliers' facilities. In consequence, the Company recognized expenses from raw materials derogation amounting to Baht 2,004 million for the year ended December 31, 2018 (owners of the parent net of tax amounting to Baht 1,261 million). The existence of raw materials is considered to be a key audit matter as such raw materials are stored at the suppliers' facilities, where the place are outside of the Company's location.</p> <p>The details are disclosed in note to the financial statements no. 4.</p>	<p>Key audit procedures included:</p> <ul style="list-style-type: none"> <li>• Gaining understanding and performing test of design and implementation of the relevant controls over raw materials management process.</li> <li>• Enquiring with management on procurement of raw materials, issuing and storage of raw materials process.</li> <li>• Reading the factual investigation report regarding the procurement and distribution process of raw materials, the fraud investigation report, the internal control report for the process on procurement of raw materials and the related minutes of meeting of the board of directors.</li> <li>• Attending the physical inventory count observation, sending the inventory confirmation letter for inventories at the storage facilities of the suppliers and reconciling confirmations with the accounting records.</li> </ul>

### Other Matter

The consolidated financial statements of Global Green Chemicals Public Company Limited and its subsidiaries and the separate financial statements of Global Green Chemicals Public Company Limited for the year ended December 31, 2018 (before the reclassification), presented herein as comparative information, were audited by another auditor, whose report thereon dated February 18, 2019 expressed an unmodified opinion on those 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 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 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

BANGKOK  
February 14, 2020

DELOITTE TOUCHE TOHMATSU JAIYOS AUDIT CO., LTD.

## Statements of Financial Position

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

#### STATEMENTS OF FINANCIAL POSITION

AS AT DECEMBER 31, 2019

Unit : Baht

	Notes	Consolidated		Separate	
		financial statements		financial statements	
		As at December 31, 2019	As at December 31, 2018	As at December 31, 2019	As at December 31, 2018
ASSETS					
CURRENT ASSETS					
Cash and cash equivalents	5	2,310,817,087	2,387,007,110	1,756,779,617	1,574,867,841
Temporary investments	6	1,000,000,000	1,400,000,000	1,000,000,000	1,300,000,000
Trade receivables	7	1,425,856,642	1,246,883,664	1,347,690,556	1,361,552,763
Other receivables	8	286,721,013	141,107,473	309,020,110	154,167,574
Value-added tax receivable		12,130,850	35,099,292	-	-
Inventories	9	1,596,174,222	1,489,975,317	1,352,307,127	1,182,794,932
Other current assets		80,175,230	14,211,290	77,490,665	12,965,428
Total Current Assets		6,711,875,044	6,714,284,146	5,843,288,075	5,586,348,538
NON-CURRENT ASSETS					
Investments in subsidiaries	10	-	-	2,210,350,000	1,686,000,000
Investments in an associate	11	28,172,298	48,078,949	66,600,000	66,600,000
Investments in joint ventures	11	1,087,291,177	736,783,442	690,500,000	690,500,000
Plant and equipment	12	4,763,982,211	5,114,750,705	4,422,865,770	4,755,008,175
Intangible assets	13	69,242,980	74,582,422	35,591,301	40,913,143
Deferred tax assets	14	243,640,838	376,826,320	224,330,063	265,840,470
Other non-current assets		27,129,463	19,152,806	27,129,463	19,152,806
Total Non-current Assets		6,219,458,967	6,370,174,644	7,677,366,597	7,524,014,594
TOTAL ASSETS		12,931,334,011	13,084,458,790	13,520,654,672	13,110,363,132

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, 2019

Unit : Baht

		Consolidated financial statements		Separate financial statements	
	Notes	As at December 31, 2019	As at December 31, 2018	As at December 31, 2019	As at December 31, 2018
LIABILITIES AND SHAREHOLDERS' EQUITY					
CURRENT LIABILITIES					
Trade payables	16	953,428,751	740,616,667	945,610,949	715,160,218
Other payables	17	343,785,802	286,687,969	288,735,119	232,230,892
Payables to contractors		105,972,636	166,092,729	105,319,936	165,507,079
Current portion of long-term borrowings from financial institutions	15	441,000,000	337,500,000	441,000,000	337,500,000
Current portion of finance lease liabilities	15	5,679,261	4,213,663	5,679,261	4,213,663
Total Current Liabilities		1,849,866,450	1,535,111,028	1,786,345,265	1,454,611,852
NON-CURRENT LIABILITIES					
Long-term borrowings from financial institutions	15	1,328,654,225	1,768,497,535	1,328,654,225	1,768,497,535
Finance lease liabilities	15	14,243,528	10,567,722	14,243,528	10,567,722
Non-current provision for employee benefit	18	89,521,425	62,612,123	89,521,425	62,612,123
Other non-current liabilities		905,000	-	905,000	-
Total Non-current Liabilities		1,433,324,178	1,841,677,380	1,433,324,178	1,841,677,380
TOTAL LIABILITIES		3,283,190,628	3,376,788,408	3,219,669,443	3,296,289,232
SHAREHOLDERS' EQUITY					
SHARE CAPITAL					
Authorized share capital	19				
1,023,666,700 ordinary shares of Baht 10 each		10,236,667,000		10,236,667,000	
1,048,333,300 ordinary shares of Baht 10 each			10,483,333,000		10,483,333,000
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	
1,023,666,700 ordinary shares of Baht 10 each			10,236,667,000		10,236,667,000
Share premium		89,240,250	219,066,911	89,240,250	219,066,911
Difference arising from business combination under common control		(4,134,457)	(4,134,457)	-	-
RETAINED (DEFICIT) EARNINGS					
Appropriated					
Legal reserve	20	32,024,000	245,621,000	32,024,000	245,621,000
Unappropriated (Accumulated deficit)		(193,820,060)	(989,550,072)	454,887,329	(887,281,011)
TOTAL SHAREHOLDERS' EQUITY		9,648,143,383	9,707,670,382	10,300,985,229	9,814,073,900
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		12,931,334,011	13,084,458,790	13,520,654,672	13,110,363,132

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, 2019

Unit : Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Revenues from sales	32	13,054,743,726	16,224,585,170	12,405,971,394	15,468,829,264
Cost of sales		(12,296,909,204)	(15,138,590,286)	(12,016,216,480)	(14,826,796,872)
Gross profit		757,834,522	1,085,994,884	389,754,914	642,032,392
Interest income and dividend income		49,994,149	47,835,629	661,159,617	130,439,312
Other income		67,514,668	95,615,938	101,816,477	123,828,733
Selling and distribution expenses		(387,189,784)	(398,685,393)	(220,245,636)	(226,975,255)
Administrative expenses		(451,602,613)	(380,596,339)	(421,299,953)	(362,432,106)
Reversal of (expense) from raw materials derogation	4	232,483,965	(2,003,572,582)	232,483,965	(2,003,572,582)
Net foreign exchange gain (loss)		(19,969,081)	9,514,208	6,716,821	8,267,531
Net derivatives gain (loss)		16,668,745	(3,700,667)	(432,376)	(1,692,778)
Finance costs	30	(67,982,852)	(71,677,329)	(67,982,852)	(71,677,329)
Share of loss of investments in an associate	11	(19,906,650)	(17,273,196)	-	-
Share of profit of investments in joint ventures	11	49,362,655	119,318,214	-	-
Profit (loss) before income tax income (expense)		227,207,724	(1,517,226,633)	681,970,977	(1,761,782,082)
Income tax income (expense)	31	(133,185,483)	356,452,928	(41,510,408)	243,939,297
<b>PROFIT (LOSS) FOR THE YEAR</b>		<b>94,022,241</b>	<b>(1,160,773,705)</b>	<b>640,460,569</b>	<b>(1,517,842,785)</b>
<b>PROFIT (LOSS) ATTRIBUTABLE TO:</b>					
Owners of the parent		94,022,241	(1,160,773,705)	640,460,569	(1,517,842,785)
<b>Profit (loss) for the year</b>		<b>94,022,241</b>	<b>(1,160,773,705)</b>	<b>640,460,569</b>	<b>(1,517,842,785)</b>
<b>BASIC EARNINGS (LOSS) PER SHARE (BAHT)</b>	24	<b>0.09</b>	<b>(1.13)</b>	<b>0.63</b>	<b>(1.48)</b>

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, 2019

Unit : Baht

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>PROFIT (LOSS) FOR THE YEAR</b>	94,022,241	(1,160,773,705)	640,460,569	(1,517,842,785)
<b>Other comprehensive income (loss)</b>				
<i>Items that will not be reclassified subsequently to profit or loss</i>				
Losses on remeasurements of defined benefit plans	-	-	-	-
Share of other comprehensive (loss) of investment in joint venture	-	-	-	-
<b>Total items that will not be reclassified subsequently to profit or loss</b>	-	-	-	-
<b>Other comprehensive income for the year, net of tax</b>	-	-	-	-
<b>TOTAL COMPREHENSIVE INCOME (LOSS) FOR THE YEAR</b>	<u>94,022,241</u>	<u>(1,160,773,705)</u>	<u>640,460,569</u>	<u>(1,517,842,785)</u>
<b>TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:</b>				
Owners of the parent	94,022,241	(1,160,773,705)	640,460,569	(1,517,842,785)
<b>TOTAL COMPREHENSIVE INCOME (LOSS) FOR THE YEAR</b>	<u>94,022,241</u>	<u>(1,160,773,705)</u>	<u>640,460,569</u>	<u>(1,517,842,785)</u>

Notes to the financial statements form an integral part of these statements

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES  
STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY  
FOR THE YEAR ENDED DECEMBER 31, 2019

	Notes	Consolidated financial statements					Total shareholders' equity	Unit : Baht
		Issued and paid-up share capital	Share premium	Difference arising from business combination under common control	Retained (Deficit) earnings			
					Legal reserve	Unappropriated (Accumulated deficit)		
Balance as at January 1, 2018		10,236,667,000	219,066,911	(4,134,457)	245,621,000	375,955,713	11,073,176,167	
Dividends paid	21	-	-	-	-	(204,732,080)	(204,732,080)	
Loss for the year		-	-	-	-	(1,160,773,705)	(1,160,773,705)	
Balance as at December 31, 2018		10,236,667,000	219,066,911	(4,134,457)	245,621,000	(989,550,072)	9,707,670,382	
Balance as at January 1, 2019		10,236,667,000	219,066,911	(4,134,457)	245,621,000	(989,550,072)	9,707,670,382	
Dividends paid	21	-	-	-	-	(153,549,240)	(153,549,240)	
Profit for the year		-	-	-	-	94,022,241	94,022,241	
Legal reserve	20	-	-	-	32,024,000	(32,024,000)	-	
Share capital reduction	22	(511,833,350)	(129,826,661)	-	(245,621,000)	887,281,011	-	
Balance as at December 31, 2019		9,724,833,650	89,240,250	(4,134,457)	32,024,000	(193,820,060)	9,648,143,383	

## Statements 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, 2019

Separate financial statements							Unit : Baht
	Notes	Issued and paid-up share capital	Share premium	Retained (Deficit) earnings		Total shareholders' equity	
				Legal reserve	Unappropriated (Accumulated deficit)		
Balance as at January 1, 2018		10,236,667,000	219,066,911	245,621,000	835,293,854	11,536,648,765	
Dividends paid	21	-	-	-	(204,732,080)	(204,732,080)	
Loss for the year		-	-	-	(1,517,842,785)	(1,517,842,785)	
Balance as at December 31, 2018		10,236,667,000	219,066,911	245,621,000	(887,281,011)	9,814,073,900	
Balance as at January 1, 2019		10,236,667,000	219,066,911	245,621,000	(887,281,011)	9,814,073,900	
Dividends paid	21	-	-	-	(153,549,240)	(153,549,240)	
Profit for the year		-	-	-	640,460,569	640,460,569	
Legal reserve	20	-	-	32,024,000	(32,024,000)	-	
Share capital reduction	22	(511,833,350)	(129,826,661)	(245,621,000)	887,281,011	-	
Balance as at December 31, 2019		9,724,833,650	89,240,250	32,024,000	454,887,329	10,300,985,229	

## Statements of Cash Flows

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

#### STATEMENTS OF CASH FLOWS

FOR THE YEAR ENDED DECEMBER 31, 2019

Unit : Baht

	Consolidated		Separate	
	financial statements		financial statements	
	2019	2018	2019	2018
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
Profit (loss) for the year	94,022,241	(1,160,773,705)	640,460,569	(1,517,842,785)
Adjustments for				
Depreciation	448,999,500	446,430,881	410,899,445	401,029,286
Amortisation	64,640,622	74,678,101	64,623,022	74,660,501
Interest income and dividend income	(49,994,149)	(47,835,629)	(661,159,617)	(130,439,312)
Finance costs	67,982,852	71,677,329	67,982,852	71,677,329
Unrealised (gain) loss on derivatives	524,902	(656,711)	(154,455)	22,646
Unrealised (gain) loss on exchange rate	(12,848,347)	10,202,211	(4,805,128)	2,730,791
(Reversal) of loss on inventories devaluation	12,178,152	1,548,608	(3,906,395)	1,548,608
(Reversal) of expenses from raw materials derogation	(232,483,965)	2,003,572,582	(232,483,965)	2,003,572,582
Expenses from raw materials derogation	1,318,771	-	244,672	-
Loss on inventories devaluation	721,083	-	721,083	-
(Gain) loss on disposal plant and equipment	128,725	(225,692)	128,725	(225,692)
Provision for employee benefit	27,538,728	8,696,777	27,538,728	8,696,777
Share of profit of investments in an associate and joint ventures	(29,456,005)	(102,045,018)	-	-
Income tax expense (income)	133,185,483	(356,452,928)	41,510,408	(243,939,297)
Profit from operations before changes in operation assets and liabilities	526,458,593	948,816,806	351,599,944	671,491,434
Changes in operating assets and liabilities				
Trade receivables	(175,968,702)	592,566,907	13,885,770	621,908,232
Other receivables	913,886	(2,067,870,753)	(7,473,075)	(2,072,055,601)
Value-added tax receivable	22,968,442	89,663,661	-	-
Inventories	126,348,368	1,282,568,768	80,193,722	1,180,131,747
Other current assets	(124,266,106)	(36,511,749)	(122,822,549)	(38,105,155)
Other non-current assets	(8,980,912)	(3,843,587)	(8,980,912)	(3,843,587)
Trade payables	201,343,519	326,502,484	218,981,697	328,644,381
Other payables	59,310,963	(86,870,009)	59,041,712	(85,097,290)
Cash paid for non-current provision for employee benefit	(629,426)	(77,152)	(629,426)	(77,152)
Net cash received from operating	627,498,625	1,044,945,376	583,796,883	602,997,009
Taxes paid	(2,749,388)	(5,526,402)	(2,744,601)	(5,443,357)
Net cash provided by operating activities	624,749,237	1,039,418,974	581,052,282	597,553,652

## Statements of Cash Flows

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

#### STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEAR ENDED DECEMBER 31, 2019

Unit : Baht

	Notes	Consolidated		Separate	
		financial statements		financial statements	
		2019	2018	2019	2018
CASH FLOWS FROM INVESTING ACTIVITIES					
Interest received		50,868,639	47,045,944	41,751,803	38,407,771
Dividend received		222,604,921	91,350,000	620,104,921	91,350,000
Decrease in temporary investments		400,000,000	300,000,000	300,000,000	400,000,000
Cash paid for acquisition of plant and equipment		(293,217,893)	(923,970,823)	(273,810,977)	(914,528,975)
Cash paid for acquisition of intangible assets		-	(4,050,150)	-	(4,050,150)
Cash paid for investment in an associate		-	(19,906,710)	-	(19,906,710)
Cash paid for investment in a subsidiary		-	-	(524,350,000)	(1,000,000)
Cash paid for investment in a joint venture		(523,750,000)	-	-	-
Net cash provided by (used in) investing activities		(143,494,333)	(509,531,739)	163,695,747	(409,728,064)
CASH FLOWS FROM FINANCING ACTIVITIES					
Interest paid	5.2	(66,713,606)	(70,168,800)	(66,713,606)	(70,168,800)
Dividends paid		(153,549,240)	(204,732,080)	(153,549,240)	(204,732,080)
Cash paid for payments of finance lease liabilities	5.2	(5,293,518)	(3,866,530)	(5,293,518)	(3,866,530)
Cash paid for payments of long-term borrowings from financial institutions	5.2	(337,500,000)	(280,125,000)	(337,500,000)	(280,125,000)
Net cash used in financing activities		(563,056,364)	(558,892,410)	(563,056,364)	(558,892,410)
Net increase (decrease) in cash and cash equivalents,					
before effect of exchange rates		(81,801,460)	(29,005,175)	181,691,665	(371,066,822)
Effect of exchange rate changes on cash and cash equivalents		5,611,437	(6,217,773)	220,111	(303,826)
Net increase (decrease) in cash and cash equivalents		(76,190,023)	(35,222,948)	181,911,776	(371,370,648)
Cash and cash equivalents at January 1,		2,387,007,110	2,422,230,058	1,574,867,841	1,946,238,489
Cash and cash equivalents at December 31,	5.1	2,310,817,087	2,387,007,110	1,756,779,617	1,574,867,841

Notes to the financial statements form an integral part of these statements

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 1. THE COMPANY'S OPERATIONS AND GENERAL INFORMATION

Global Green Chemicals Public Company Limited, (the "Company"), is incorporated in Thailand and has its registered offices as follows:

Head Office	: 555/1, Energy Complex, Building A, 4 <sup>th</sup> 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 Company was listed on the Stock Exchange of Thailand ("SET") on May 2, 2017.

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.

#### 2. BASIS FOR PREPARATION AND PRESENTATION OF THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

- 2.1 The Company and its subsidiaries (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 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 (Revised 2018) "Presentation of Financial Statements", which was effective for financial periods beginning on or after January 1, 2019 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.2) B.E. 2559" dated October 11, 2016.
- 2.3 The financial statements have been prepared under the historical cost convention except as disclosed in the significant accounting policies.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

- 2.4 An English version of the financial statements have been prepared from the financial statements that is in the Thai language under Thai laws. 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 Company and its subsidiaries, (the “Group”), after elimination of intercompany transactions, of which the percentage of shareholding as at December 31, 2019 and 2018, is as follows:

Name of the entity	Type of business	Country of incorporation	Ownership interest (%)	
			2019	2018
<b><i>Subsidiaries</i></b>				
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
<b><i>Associate</i></b>				
Thai Eastern Top Seeds Oil Co., Ltd.	Manufacturing and distributing crude palm kernel oil	Thailand	30	30
<b><i>Joint venture</i></b>				
Thai Ethoxylate Co., Ltd.	Manufacturing and distributing chemical and ethoxylate product	Thailand	50	50
<b><i>Indirect joint venture</i></b>				
GGC KTIS Bioindustrial Co., Ltd.	Manufacturing and distributing biofuel	Thailand	50	50



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

- 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 and new financial reporting standards and guidelines on accounting issued by the Federation of Accounting Professions which become effective for fiscal years beginning on or after January 1, 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. In addition, the Company has first-time adopted TFRS 15 “Revenue from Contracts with Customers”. The adoption of these Thai Financial Reporting Standards does not have any significant impact on the financial statements.

- 2.7 Thai Financial Reporting Standards announced in the Royal Gazette but not yet effective

The Federation of Accounting Professions has issued the Notification regarding the new and revised Thai Financial Reporting Standards that will be effective for the financial statements for the periods beginning on or after January 1, 2020 onwards. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards without material change in key concept except for the Thai Accounting Standards (TAS), Thai Financial Reporting Standards (TFRS) and Thai Financial Reporting Standard Interpretations (TFRIC):

The following TFRSs have revision or additional paragraph and accounting guidance:

#### **Thai Accounting Standards (“TAS”)**

TAS 12	Income Taxes
TAS 19	Employee Benefits
TAS 23	Borrowing Costs
TAS 28	Investments in Associates and Joint Ventures

#### **Thai Financial Reporting Standards (“TFRS”)**

TFRS 3	Business Combinations
TFRS 11	Joint Arrangements

The Group’s management will adopt the relevant TFRS in the preparation of Group’s financial statements when they become effective. The Group’s management has assessed the impact of the TFRS and considered that the adoption of the TFRS does not have any significant impact on the financial statements of the Group in the period of initial application.

The following new TFRSs have material change in key concept:

#### Group of Financial Instruments Standards

##### **Thai Accounting Standards (“TAS”)**

TAS 32	Financial Instruments: Presentation
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##### **Thai Financial Reporting Standards (“TFRS”)**

TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### Thai Financial Reporting Standard Interpretations (“TFRIC”)

TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

These group of Standards make stipulations relating to the classification of financial instruments and their measurement at fair value or amortised cost; taking into account the type of instrument, the characteristics of the contractual cash flows and the Company’s business model, the calculation of impairment using the expected credit loss method, and the concept of hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. These Standards will supersede the Standards and Interpretations relating to the financial instruments upon their effective date.

The Group’s management will adopt such TFRS in the preparation of the Group’s financial statements when they become effective. The Group’s management is in the process to assess the impact of the TFRS on the financial statements of the Group in the period of initial application. The Group’s management expected to apply the TFRS as an adjustment to the opening balance of retained earnings or other equity component as at January 1, 2020.

#### Thai Financial Reporting Standards No. 16 “Leases” (“TFRS 16”)

This TFRS provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors.

This TFRS will supersede the following lease Standards and Interpretations upon its effective date, which are Thai Accounting Standard No. 17 “Leases” (“TAS 17”), Thai Accounting Standard Interpretation No. 15 “Operating Lease - Incentives”, Thai Accounting Standard Interpretation No. 27 “Evaluating the Substance of Transactions involving the Legal Form of a Lease” and Thai Financial Reporting Standard Interpretation No. 4 “Determining whether on Arrangement contains a Lease”.

For lessee accounting, there are significant changes to lease accounting in this TFRS by removing the distinction between operating and finance leases under TAS 17 and requiring a lessee to recognise a right-of-use asset and a lease liability at commencement for all leases, except for short-term leases and leases of low value assets. However, the lessor accounting treatment continues to require a lessor to classify a lease either as an operating lease or a finance lease, using the same concept as TAS 17.

The Group’s management will adopt such TFRS 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 the TFRS on the financial statements of the Group in the period of initial application. The Group’s management expected to apply the TFRS using the cumulative effect recognised at the date of initial application as at January 1, 2020.

### 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 (the “Group”) and the Group’s interests in joint ventures and associates.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *Business combinations*

The Group applies the acquisition method for all business combinations when control is transferred to the Group, as describe 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 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.

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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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.

### 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.

## Note to Financial Statements

### **GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019**

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. However, foreign currency differences arising from the translation of qualifying cash flow hedges to the extent that the hedges are effective are recognised in other comprehensive income.

#### 3.3 Derivatives

Derivatives are used to manage exposure to foreign exchange, interest rate arising from operating and financing 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 the statement of 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 the statement of profit or loss.

The fair value of forward exchange contracts is based on their listed market price as the reporting date, if available. If a 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.

#### 3.4 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).

#### 3.5 Temporary investments

Temporary investments 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 doubtful accounts.

The allowance for doubtful accounts is assessed primarily on analysis of overdue aging and future expectations of customer payments. Bad debts are written off when incurred.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 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 estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

#### 3.8 Investments

##### *Investments in subsidiaries, joint ventures and an associate*

Investments in subsidiaries, joint ventures and associate in the separate financial statements of the Company are accounted for using the cost method and accumulated impairment losses (if any). Investments in joint ventures and an associate in the consolidated financial statements are accounted for using the equity method.

##### *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.

#### 3.9 Plant and equipment

##### *Recognition and measurement*

##### *Owned assets*

Plant and equipment are measured at cost less accumulated depreciation and accumulated 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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.

#### *Leased assets*

Leases in terms of which the Group substantially assumes all the risk and rewards of ownership are classified as finance leases. Plant and equipment acquired by way of finance leases are capitalised at the lower of their fair value and the present value of the minimum lease payments at the inception of the lease, less accumulated depreciation and impairment losses. Lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged directly to 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 - 20 years
Land improvement	5 - 20 years
Furniture, fixtures and office equipment	3 - 10 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.



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 3.10 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 accumulated 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 accumulated 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.

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 for the current and comparative periods are as follows:

Production licence fees	20	years
Other intangible assets	3-15	years

Amortisation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

#### 3.11 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.



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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.

#### 3.12 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.

#### 3.13 Trade and other payables

Trade and other payables are stated at cost.

#### 3.14 Employee benefits

##### *Defined contribution plans*

Obligations for contributions to defined contribution plans are recognised as an expense in the statement of profit or loss as the related service is provided.

##### *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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

The calculation of defined benefit obligations is performed every 3 years by a qualified actuary using the projected unit credit method.

Remeasurements of the net defined benefit liability, actuarial gain or loss are recognised immediately in other comprehensive income. The Group determines the interest expense on the net 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. Net interest expense and other expenses related to defined benefit plans are recognised in the statement of 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 the statement of 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 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 the statement of profit or loss in the period in which they arise.

#### *Termination benefits*

Termination benefits are recognised as an expense 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 recognised as an expense when 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.

### 3.15 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.

### 3.16 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 recognized when control of the goods has transferred to the customer, being at the point the goods are delivered to the customer.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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 principle outstanding and the applicable interest rate.

#### *Other income*

Other income is recognised on an accrual basis.

#### 3.17 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, fair value losses on financial assets at fair value through profit or loss, impairment losses recognised on financial assets (other than trade receivables), and losses on hedging instruments that are recognised in the statement of profit or loss.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in the statement of profit or loss using the effective interest method.

#### 3.18 Operating leases

Payments made under operating leases are recognised in the statement of profit or loss on a straight line basis over the term of the lease.

Contingent lease payments which the lease adjustment is confirmed are accounted for by revising the minimum lease payments over the remaining term of the lease.

#### 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 relate 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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 nor taxable profit or loss
- differences relating to investments in subsidiaries 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.

#### 3.20 Basic earnings per share

Basic earnings 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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.

Further information about the assumptions made in measuring fair values is included in Note 32 Financial instruments.

#### 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 date of the financial statements 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.

#### 4. EXPENSE 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 employees.

In consequence, the Company recognised 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

On January 31, 2019, the Company has entered into the settlement agreements with some suppliers in order to get compensate from those suppliers for the raw materials derogation which requires suppliers to deliver the pending quantity of raw materials under the period specified in the agreements. Consequently, the suppliers gradually delivered the pending raw materials to the Company during the year 2019 amounting to Baht 16 million. 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 in the consolidated and separate statements of profit or loss for the year ended December 31, 2019.

#### *Relevant lawsuit arising from raw materials derogation*

For the case that the Company was informed by a third party who received the transfer of the right to claim from the supplier for the payment of raw materials, which the supplier borrowed from the third party to purchase raw materials to sell to the Company and the Company had to pay for the raw materials to that third party under the transfer of right for the payment of raw materials. The Company reviewed the documents provided and the Company informed to such third party that these documents are not in the Company's system and there was no evidence regarding the delivery of raw materials as prescribed in the documents. Subsequently, on August 20, 2018, that third party filed a civil lawsuit against such supplier and the Company as joint defendants for violation of loan agreement and transfer of the right to claim, with damage claimed amounting to Baht 308.75 million with interest rate at 15% per annum amounting to Baht 15.90 million, totalling Baht 324.65 million. The Company's legal advisor considered the fact and the relevant evidences and provided opinion that the Company is not liable for allegation. Therefore, the Company appointed the lawyer and filed a statement of defense. The legal process is in the middle of plaintiff's witness hearing process. Based on the relevant evidences filing or defense the Company's the legal advisor provided opinion that the Company is not liable for allegation due to no evidence regarding the delivering the raw materials to the Company. As a result, there is no any obligation.

In addition, on February 27, 2019, a financial institution filed a civil lawsuit against the supplier, director of supplier and the Company as joint defendants for violation of credit limit agreement, sale of promissory notes, transfer of money, guarantee and forced mortgage, with damage claimed amounting to Baht 55.95 million and interest amounting to Baht 3.49 million, totalling Baht 59.44 million. The Company's legal advisor considered the fact and the relevant evidences and provided the opinion that the Company is not liable for allegation. Therefore, the Company appointed the lawyer and files a statement of defense. On October 28, 2019, the plaintiff submitted the motion for permission to withdraw the pliant for the Company and the Court granted such permission and struck the case out of the Case-List of the Court.

## 5. CASH AND CASH EQUIVALENTS

5.1 Cash and cash equivalents as at December 31, 2019 and 2018 consist of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Cash at banks - current accounts	4	-	4	-
Cash at banks - savings accounts	2,120	1,501	1,737	1,243
Cash at banks - foreign currency accounts	187	586	16	32
Highly liquid temporary investments	-	300	-	300
<b>Total</b>	<b>2,311</b>	<b>2,387</b>	<b>1,757</b>	<b>1,575</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 5.2 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, 2019

Unit : Million Baht

Unit : Million Baht									
	Consolidated financial statements								
	Balance as at January 1, 2019	Net financing cash flows	Interest expense	Non-cash changes				Others	Balance as at December 31, 2019
				Interest expense capitalized as part of fixed assets	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease		
Accrued interest expense	1	(67)	69	(3)	-	-	-	-	-
Finance lease liabilities	15	(5)	-	-	-	9	1	-	20
Long-term borrowings from financial institutions	2,106	(337)	-	-	1	-	-	-	1,770
<b>Total</b>	<b>2,122</b>	<b>(409)</b>	<b>69</b>	<b>(3)</b>	<b>1</b>	<b>9</b>	<b>1</b>	<b>-</b>	<b>1,790</b>

As at December 31, 2018

Unit : Million Baht

Unit : Million Baht									
	Balance as at January 1, 2018	Net financing cash flows	Interest expense	Consolidated financial statements					Balance as at December 31, 2018
				Non-cash changes					
				Interest expense capitalized as part of fixed assets	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Others	
Accrued interest expense	1	(70)	80	(11)	-	-	-	1	1
Finance lease liabilities	15	(4)	-	-	-	5	-	(1)	15
Long-term borrowings from financial institutions	2,385	(280)	-	-	1	-	-	-	2,106
<b>Total</b>	<b>2,401</b>	<b>(354)</b>	<b>80</b>	<b>(11)</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>2,122</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

As at December 31, 2019

Unit : Million Baht

	Balance as at January 1, 2019	Net financing cash flows	Interest expense	Separate financial statements Non-cash changes					Balance as at December 31, 2019
				Interest expense capitalized as part of fixed assets	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Others	
Accrued interest expense	1	(67)	69	(3)	-	-	-	-	-
Finance lease liabilities	15	(5)	-	-	-	9	1	-	20
Long-term borrowings from financial institutions	2,106	(337)	-	-	1	-	-	-	1,770
<b>Total</b>	<b>2,122</b>	<b>(409)</b>	<b>69</b>	<b>(3)</b>	<b>1</b>	<b>9</b>	<b>1</b>	<b>-</b>	<b>1,790</b>

As at December 31, 2018

Unit : Million Baht

	Balance as at January 1, 2018	Net financing cash flows	Interest expense	Separate financial statements Non-cash changes					Balance as at December 31, 2018
				Interest expense capitalized as part of fixed assets	Amortisation of deferred financing fees	Increase in finance lease liabilities	Amortisation of deferred interest of finance lease	Others	
Accrued interest expense	1	(70)	80	(11)	-	-	-	1	1
Finance lease liabilities	15	(4)	-	-	-	5	-	(1)	15
Long-term borrowings from financial institutions	2,385	(280)	-	-	1	-	-	-	2,106
<b>Total</b>	<b>2,401</b>	<b>(354)</b>	<b>80</b>	<b>(11)</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>2,122</b>

#### 6. TEMPORARY INVESTMENTS

Temporary investments as at December 31, 2019 and 2018 consist of:

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Time deposits with maturity of more than 3 months but not more than 1 year (interest rate of 1.25% to 1.65% per annum)	1,000	1,400	1,000	1,300
<b>Total</b>	<b>1,000</b>	<b>1,400</b>	<b>1,000</b>	<b>1,300</b>

Unit: Million Baht



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 7. TRADE RECEIVABLES

Trade receivables as at December 31, 2019 and 2018 consist of :

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
Related parties (see Note 23)	912	670	1,069	1,241
Other parties	514	577	279	121
<b>Total</b>	<b>1,426</b>	<b>1,247</b>	<b>1,348</b>	<b>1,362</b>
<u>Less</u> Allowance for doubtful accounts	-	-	-	-
<b>Net</b>	<b>1,426</b>	<b>1,247</b>	<b>1,348</b>	<b>1,362</b>

Trade receivables as at December 31, 2019 and 2018 are classified by aging as follows:

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
<b>Related parties</b>				
Within credit terms	912	670	1,069	1,241
<u>Less</u> Allowance for doubtful accounts	-	-	-	-
<b>Net</b>	<b>912</b>	<b>670</b>	<b>1,069</b>	<b>1,241</b>
<b>Other parties</b>				
Within credit terms	482	561	271	108
Overdue:				
Less than 3 months	32	16	8	13
	514	577	279	121
<u>Less</u> Allowance for doubtful accounts	-	-	-	-
<b>Net</b>	<b>514</b>	<b>577</b>	<b>279</b>	<b>121</b>
<b>Total</b>	<b>1,426</b>	<b>1,247</b>	<b>1,348</b>	<b>1,362</b>

The normal credit term granted by the Group ranges from 7 days to 60 days.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 8. OTHER RECEIVABLES

Other receivables as at December 31, 2019 and 2018 consist of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Prepaid expenses	248	40	245	38
Accrued income	4	7	3	22
Other receivables	25	86	51	87
Others	10	8	10	7
<b>Total</b>	<b>287</b>	<b>141</b>	<b>309</b>	<b>154</b>

#### 9. INVENTORIES

Inventories as at December 31, 2019 and 2018 consist of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Finished goods	744	602	516	346
Work in progress	59	44	59	44
Raw materials	467	419	467	419
Spare parts and factory supplies	316	369	288	345
Goods in transit	26	60	22	33
<b>Total</b>	<b>1,612</b>	<b>1,494</b>	<b>1,352</b>	<b>1,187</b>
<u>Less</u> Allowance for inventories devaluation	(16)	(4)	-	(4)
<b>Net</b>	<b>1,596</b>	<b>1,490</b>	<b>1,352</b>	<b>1,183</b>

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Inventories recognised as an expense and included in cost of sales of good account				
- Cost of sales	12,285	15,137	12,020	14,825
- Write-down to net realisable value	12	2	(4)	2
<b>Total</b>	<b>12,297</b>	<b>15,139</b>	<b>12,016</b>	<b>14,827</b>

#### 10. INVESTMENTS IN SUBSIDIARIES

	Unit: Million Baht Separate financial statements	
	2019	2018
As at January 1,	1,686	1,685
Acquisition	524	1
<b>As at December 31,</b>	<b>2,210</b>	<b>1,686</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Investments in subsidiaries as at December 31, 2019 and 2018 and dividend income for years ended December 31, 2019 and 2018 are as follows:

	Ownership interest		Paid-up capital		Separate financial statements		Cost - net		Dividend income	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
	(%)				Impairment					
<b>Subsidiaries</b>										
Thai Fatty Alcohols Co., Ltd.	100	100	1,060	1,060	-	-	1,685	1,685	398	-
GGC Biochemical Co., Ltd.	100	100	525	1	-	-	525	1	-	-
<b>Total</b>										
			2,210	1,686	-	-	2,210	1,686	398	-

Unit: Million Baht

## Note to Financial Statements

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### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 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. In 2019, the subsidiary passed a resolution to additionally invest of Baht 525 million and called for paid-up capital as follows:

No.	Number of Share (shares)	Baht per Share	Amount (Baht)	Payment date
1.	340,000	90	30,600,000	January 14, 2019
2.	1,500,000	25	37,500,000	April 5, 2019
3.	1,500,000	75	112,500,000	June 17, 2019
4.	850,000	100	85,000,000	July 15, 2019
5.	850,000	25	21,250,000	August 30, 2019
6.	9,500,000	25	237,500,000	October 2, 2019
<b>Total</b>			<b>524,350,000</b>	

#### 11. INVESTMENT IN AN ASSOCIATE AND JOINT VENTURES

Transaction movement of investments in an associate and joint ventures for the years ended December 31, 2019 and 2018 are as follows:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Associate</b>				
As at January 1,	48	45	67	47
Acquisition	-	20	-	20
Share of net losses of investments in an associate	(20)	(17)	-	-
<b>As at December 31,</b>	<b>28</b>	<b>48</b>	<b>67</b>	<b>67</b>
<b>Joint venture</b>				
As at January 1,	737	709	691	691
Share of net profits of investments in a joint venture	70	119	-	-
Dividend income	(223)	(91)	-	-
<b>As at December 31,</b>	<b>584</b>	<b>737</b>	<b>691</b>	<b>691</b>
<b>Indirect joint venture</b>				
As at January 1,	-	-	-	-
Acquisition	524	-	-	-
Share of net loss of investments in a joint venture	(21)	-	-	-
<b>As at December 31,</b>	<b>503</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total movements of investment in an associate and joint ventures</b>				
As at January 1,	785	754	758	738
Acquisition	524	20	-	20
Share of net profits of investments in an associate and joint ventures	29	102	-	-
Dividend income	(223)	(91)	-	-
<b>As at December 31,</b>	<b>1,115</b>	<b>785</b>	<b>758</b>	<b>758</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Investments in an associate and joint ventures as at December 31, 2019 and 2018 and dividend income for the years ended as at December 31, 2019 and 2018 are as follows:

Unit: Million Baht

	Ownership interest 2019	2018	Paid-up capital 2019	2018	Cost 2019	2018	Consolidated financial statements				Equity method - net 2018	Dividend income 2019	2018
							Equity method 2019	2018	Impairment 2019	2018			
<b>Associate</b>													
Thai Eastern Top Seeds Oil Co., Ltd.	30	30	222	222	67	67	28	48	-	-	28	-	-
					<b>67</b>	<b>67</b>	<b>28</b>	<b>48</b>	-	-	<b>28</b>	-	-
<b>Joint venture</b>													
Thai Ethoxylate Co., Ltd.	50	50	420	420	691	691	584	737	-	-	584	223	91
					<b>691</b>	<b>691</b>	<b>584</b>	<b>737</b>	-	-	<b>584</b>	<b>223</b>	<b>91</b>
<b>Indirect Joint venture</b>													
GGC KTIS Bioindustrial Co., Ltd.	50	50	1,048	-	524	-	503	-	-	-	503	-	-
					<b>524</b>	-	<b>503</b>	-	-	-	<b>503</b>	-	-
<b>Total</b>					<b>1,282</b>	<b>758</b>	<b>1,115</b>	<b>785</b>	-	-	<b>1,115</b>	<b>223</b>	<b>91</b>

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES  
NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED DECEMBER 31, 2019

	Ownership interest		Paid-up capital		Separate financial statements				Unit: Million Baht	
	2019	2018	2019	2018	Cost	Impairment	Cost - net	Dividend income	2019	2018
		(%)			2019	2019	2019	2018		
					2018	2018	2018	2018		
<b>Associate</b>										
Thai Eastern Top Seeds Oil Co., Ltd.	30	30	222	222	67	-	67	67	-	-
					<u>67</u>	<u>-</u>	<u>67</u>	<u>67</u>	<u>-</u>	<u>-</u>
<b>Joint venture</b>										
Thai Ethoxylate Co., Ltd.	50	50	420	420	691	-	691	691	223	91
					<u>691</u>	<u>-</u>	<u>691</u>	<u>691</u>	<u>223</u>	<u>91</u>
<b>Total</b>					<u>758</u>	<u>-</u>	<u>758</u>	<u>758</u>	<u>223</u>	<u>91</u>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### Associate and Joint ventures

The following table summarises the financial information of the associate and joint ventures as included in their own financial statements, adjusted for differences in accounting policies.

	Thai Ethoxylate Co., Ltd.		Thai Eastern Top Seed Oil Co., Ltd.		Unit: Million Baht GGC KTIS Bioindustrial Co., Ltd.	
	2019	2018	2019	2018	2019	2018
<b>For the years ended December 31,</b>						
<b>Statements of income</b>						
Revenue	3,494	4,343	548	311	-	-
Profit (loss)	133	245	(66)	(57)	(43)	-
Other comprehensive income (loss)	-	-	-	-	-	-
<b>Total comprehensive income (loss) (100%)</b>	<b>133</b>	<b>245</b>	<b>(66)</b>	<b>(57)</b>	<b>(43)</b>	<b>-</b>
<b>Total comprehensive income (loss) of the Group's interest</b>	<b>66</b>	<b>122</b>	<b>(20)</b>	<b>(17)</b>	<b>(21)</b>	<b>-</b>
Elimination of unrealised profit (loss)	4	(3)	-	-	-	-
<b>The Group's share of total comprehensive income (loss)</b>	<b>70</b>	<b>119</b>	<b>(20)</b>	<b>(17)</b>	<b>(21)</b>	<b>-</b>
	Thai Ethoxylate Co., Ltd.		Thai Eastern Top Seed Oil Co., Ltd.		Unit: Million Baht GGC KTIS Bioindustrial Co., Ltd.	
	2019	2018	2019	2018	2019	2018
<b>For the years ended December 31,</b>						
<b>Statements of financial position</b>						
Current assets	1,329	1,791	84	107	194	-
Non-current assets	398	401	325	353	1,615	-
Current liabilities	(521)	(688)	(217)	(170)	(640)	-
Non-current liabilities	(34)	(21)	(98)	(129)	(163)	-
<b>Net assets (100%)</b>	<b>1,172</b>	<b>1,483</b>	<b>94</b>	<b>161</b>	<b>1,006</b>	<b>-</b>
Ownership interest (%)	50	50	30	30	50	-
The Group's share of net assets	586	742	28	48	503	-
Elimination of unrealised profit (loss)	(2)	(5)	-	-	-	-
<b>Carrying amount of investments in associate and joint ventures</b>	<b>584</b>	<b>737</b>	<b>28</b>	<b>48</b>	<b>503</b>	<b>-</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	Thai Ethoxylate Co., Ltd.		Thai Eastern Top Seed Oil Co., Ltd.		Unit: Million Baht GGC KTIS Bioindustrial Co., Ltd.	
	2019	2018	2019	2018	2019	2018
Remark:						
a. Includes:						
- depreciation and amortisation	47	46	34	20	-	-
- interest expenses	2	-	9	5	-	-
- income tax expense	20	29	-	-	-	-
b. Includes cash and cash equivalents	565	764	1	36	98	-
c. Includes current financial liabilities (excluding trade and other payables and provisions)	3	1	149	108	24	-
d. Includes non-current financial liabilities (excluding trade and other payables and provisions)	4	1	98	129	162	-

#### Change in investment in an 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. The subsidiary holds 50% of the issued and paid-up capital while the remaining 50% of shares are held by KTIS Bioethanol Company Limited. For the year ended December 31, 2019, the subsidiary registered to increase share capital in the indirect joint ventures amounting to Baht 524 million and paid for capital in each time as follows:

No.	Number of Share (shares)	Baht per Share	Amount (Baht)	Payment date
1.	5,000	100	500,000	January 22, 2019
2.	295,000	100	29,500,000	February 6, 2019
3.	1,500,000	25	37,500,000	April 18, 2019
4.	1,500,000	75	112,500,000	June 26, 2019
5.	850,000	100	85,000,000	July 18, 2019
6.	850,000	25	21,250,000	September 6, 2019
7.	9,500,000	25	237,500,000	October 7, 2019
<b>Total</b>			<b>523,750,000</b>	



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 12. PLANT AND EQUIPMENT

Movement of plant and equipment during the years ended December 31, 2019 and 2018 were as follows:

	Consolidated financial statements						Unit: Million Baht
<i>Cost</i>	Plant, machinery, factory tools and equipment	Buildings and buildings improvement	Land improvement	Furniture, fixtures and office equipment	Vehicles	Assets under construction	Total
As at January 1, 2018	7,381	692	44	14	25	1,034	9,190
Additions	33	-	-	5	3	804	845
Transfers	77	25	3	-	-	(105)	-
Disposals	(1)	-	-	(2)	(1)	-	(4)
Reclassification	12	-	-	-	-	-	12
<b>As at December 31, 2018 and January 1, 2019</b>	<b>7,502</b>	<b>717</b>	<b>47</b>	<b>17</b>	<b>27</b>	<b>1,733</b>	<b>10,043</b>
Additions	32	-	-	5	6	55	98
Transfers	1,499	23	3	-	-	(1,525)	-
Disposals	-	-	-	(5)	-	-	(5)
<b>As at December 31, 2019</b>	<b>9,033</b>	<b>740</b>	<b>50</b>	<b>17</b>	<b>33</b>	<b>263</b>	<b>10,136</b>
<i>Depreciation</i>							
As at January 1, 2018	(4,102)	(333)	(26)	(9)	(15)	-	(4,485)
Depreciation charge for the year	(404)	(35)	(2)	(3)	(3)	-	(447)
Disposals	1	-	-	2	1	-	4
Reclassification	-	-	-	-	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>(4,505)</b>	<b>(368)</b>	<b>(28)</b>	<b>(10)</b>	<b>(17)</b>	<b>-</b>	<b>(4,928)</b>
Depreciation charge for the year	(402)	(38)	(2)	(3)	(4)	-	(449)
Disposals	-	-	-	5	-	-	5
<b>As at December 31, 2019</b>	<b>(4,907)</b>	<b>(406)</b>	<b>(30)</b>	<b>(8)</b>	<b>(21)</b>	<b>-</b>	<b>(5,372)</b>

GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES  
NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED DECEMBER 31, 2019

	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>							
<b>As at January 1, 2018</b>							
Owned assets	3,279	359	18	2	-	1,034	4,692
Assets under finance leases	-	-	-	3	10	-	13
	<u>3,279</u>	<u>359</u>	<u>18</u>	<u>5</u>	<u>10</u>	<u>1,034</u>	<u>4,705</u>
<b>As at December 31, 2018 and January 1, 2019</b>							
Owned assets	2,997	349	19	4	1	1,733	5,103
Assets under finance leases	-	-	-	3	9	-	12
	<u>2,997</u>	<u>349</u>	<u>19</u>	<u>7</u>	<u>10</u>	<u>1,733</u>	<u>5,115</u>
<b>As at December 31, 2019</b>							
Owned assets	4,126	334	20	4	1	263	4,748
Assets under finance leases	-	-	-	5	11	-	16
	<u>4,126</u>	<u>334</u>	<u>20</u>	<u>9</u>	<u>12</u>	<u>263</u>	<u>4,764</u>

The gross amount of the Group's fully depreciated plant and equipment that was still in use as at December 31, 2019 amounted to Baht 1,246 million (2018: Baht 1,230 million).

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

#### NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	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
<b>Cost</b>							
As at January 1, 2018	6,662	601	43	14	25	1,022	8,367
Additions	33	-	-	5	3	798	839
Transfers	62	25	3	-	-	(90)	-
Disposals	(1)	-	-	(2)	(1)	-	(4)
Reclassification	12	-	-	-	-	-	12
<b>As at December 31, 2018 and January 1, 2019</b>	<b>6,768</b>	<b>626</b>	<b>46</b>	<b>17</b>	<b>27</b>	<b>1,730</b>	<b>9,214</b>
Additions	18	-	-	5	6	50	79
Transfers <sup>(1)</sup>	1,494	23	3	-	-	(1,520)	-
Disposals	-	-	-	(5)	-	-	(5)
<b>As at December 31, 2019</b>	<b>8,280</b>	<b>649</b>	<b>49</b>	<b>17</b>	<b>33</b>	<b>260</b>	<b>9,288</b>
<b>Depreciation</b>							
As at January 1, 2018	(3,721)	(291)	(25)	(9)	(15)	-	(4,061)
Depreciation charge for the year	(363)	(31)	(2)	(3)	(3)	-	(402)
Disposals	1	-	-	2	1	-	4
Reclassification	-	-	-	-	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>(4,083)</b>	<b>(322)</b>	<b>(27)</b>	<b>(10)</b>	<b>(17)</b>	<b>-</b>	<b>(4,459)</b>
Depreciation charge for the year	(368)	(33)	(3)	(3)	(4)	-	(411)
Disposals	-	-	-	5	-	-	5
<b>As at December 31, 2019</b>	<b>(4,451)</b>	<b>(355)</b>	<b>(30)</b>	<b>(8)</b>	<b>(21)</b>	<b>-</b>	<b>(4,865)</b>

<sup>(1)</sup> On April 5, 2019, the Company's Methyl ester Plant 2 project where is located at Thai Eastern Industrial Land, Ampoe nong Yai, Chonburi has commenced the commercial operation with name plate capacity 200,000 tons per year.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	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>							
<b>As at January 1, 2018</b>							
Owned assets	2,941	310	18	2	-	1,022	4,293
Assets under finance leases	-	-	-	3	10	-	13
	<u>2,941</u>	<u>310</u>	<u>18</u>	<u>5</u>	<u>10</u>	<u>1,022</u>	<u>4,306</u>
<b>As at December 31, 2018 and January 1, 2019</b>							
Owned assets	2,685	304	19	4	1	1,730	4,743
Assets under finance leases	-	-	-	3	9	-	12
	<u>2,685</u>	<u>304</u>	<u>19</u>	<u>7</u>	<u>10</u>	<u>1,730</u>	<u>4,755</u>
<b>As at December 31, 2019</b>							
Owned assets	3,829	294	19	4	1	260	4,407
Assets under finance leases	-	-	-	5	11	-	16
	<u>3,829</u>	<u>294</u>	<u>19</u>	<u>9</u>	<u>12</u>	<u>260</u>	<u>4,423</u>

The gross amount of the Company's fully depreciated plant and equipment that was still in use as at December 31, 2019 amounted to Baht 1,122 million (2018: Baht 1,105 million).

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 13. INTANGIBLE ASSETS

Movement of intangible asset during the years ended December 31, 2019 and 2018 were as follows:

	Unit: Million Baht			
	Consolidated financial statements			
	Production license fees	Goodwill	Other intangible assets	Total
<b>Cost</b>				
As at January 1, 2018	88	33	8	129
Additions	-	-	4	4
Disposals	-	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>88</b>	<b>33</b>	<b>12</b>	<b>133</b>
Additions	-	-	-	-
Disposals	-	-	-	-
<b>As at December 31, 2019</b>	<b>88</b>	<b>33</b>	<b>12</b>	<b>133</b>
<b>Amortisation</b>				
As at January 1, 2018	(48)	-	(6)	(54)
Amortisation charge for the year	(4)	-	(1)	(5)
Disposals	-	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>(52)</b>	<b>-</b>	<b>(7)</b>	<b>(59)</b>
Amortisation charge for the year	(4)	-	(1)	(5)
Disposals	-	-	-	-
<b>As at December 31, 2019</b>	<b>(56)</b>	<b>-</b>	<b>(8)</b>	<b>(64)</b>
<b>Net book value</b>				
As at January 1, 2018	40	33	2	75
As at December 31, 2018 and January 1, 2019	36	33	5	74
As at December 31, 2019	32	33	4	69

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	Unit: Million Baht		
	Separate financial statements		
	Production license fees	Other intangible assets	Total
<b>Cost</b>			
As at January 1, 2018	88	8	96
Additions	-	4	4
Disposals	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>88</b>	<b>12</b>	<b>100</b>
Additions	-	-	-
Disposals	-	-	-
<b>As at December 31, 2019</b>	<b>88</b>	<b>12</b>	<b>100</b>
<b>Amortisation</b>			
As at January 1, 2018	(48)	(6)	(54)
Amortisation charge for the year	(4)	(1)	(5)
Disposals	-	-	-
<b>As at December 31, 2018 and January 1, 2019</b>	<b>(52)</b>	<b>(7)</b>	<b>(59)</b>
Amortisation charge for the year	(4)	(1)	(5)
Disposals	-	-	-
<b>As at December 31, 2019</b>	<b>(56)</b>	<b>(8)</b>	<b>(64)</b>
<b>Net book value</b>			
<b>As at January 1, 2018</b>	<b>40</b>	<b>2</b>	<b>42</b>
<b>As at December 31, 2018 and January 1, 2019</b>	<b>36</b>	<b>5</b>	<b>41</b>
<b>As at December 31, 2019</b>	<b>32</b>	<b>4</b>	<b>36</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 14. DEFERRED TAX

Deferred tax assets and liabilities as at December 31, 2019 and 2018 are as follows:

	Unit: Million Baht			
	Consolidated financial statements			
	Assets		Liabilities	
	2019	2018	2019	2018
Total	292	383	(48)	(6)
Offset of tax	(48)	(6)	48	6
<b>Net deferred tax assets</b>	<b>244</b>	<b>377</b>	<b>-</b>	<b>-</b>

	Unit: Million Baht			
	Separate financial statements			
	Assets		Liabilities	
	2019	2018	2019	2018
Total	272	270	(47)	(4)
Offset of tax	(47)	(4)	47	4
<b>Net deferred tax assets</b>	<b>225</b>	<b>266</b>	<b>-</b>	<b>-</b>

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, 2019	Profit or loss (Note 31)	Other comprehensive income	As at December 31, 2019
<b>Deferred tax assets</b>				
Provision for employee benefit	13	5	-	18
Plant and equipment	19	(4)	-	15
Tax loss carry forward	351	(92)	-	259
<b>Total</b>	<b>383</b>	<b>(91)</b>	<b>-</b>	<b>292</b>
<b>Deferred tax liabilities</b>				
Plant and equipment	(6)	1	-	(5)
Provision for expenses from raw materials derogation	-	(43)	-	(43)
<b>Total</b>	<b>(6)</b>	<b>(42)</b>	<b>-</b>	<b>(48)</b>
<b>Net</b>	<b>377</b>	<b>(133)</b>	<b>-</b>	<b>244</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Unit: Million Baht			
Consolidated financial statements			
(Charged) / credited to:			
As at January 1, 2018	Profit or loss (Note 31)	Other comprehensive income	As at December 31, 2018
<b>Deferred tax assets</b>			
Provision for employee benefit	11	2	13
Plant and equipment	18	1	19
Tax loss carry forward	-	351	351
<b>Total</b>	<b>29</b>	<b>-</b>	<b>383</b>
<b>Deferred tax liabilities</b>			
Plant and equipment	(6)	-	(6)
Inventory	(3)	3	-
<b>Total</b>	<b>(9)</b>	<b>-</b>	<b>(6)</b>
<b>Net</b>	<b>20</b>	<b>-</b>	<b>377</b>

Unit: Million Baht			
Separate financial statements			
(Charged) / credited to:			
As at January 1, 2019	Profit or loss (Note 31)	Other comprehensive income	As at December 31, 2019
<b>Deferred tax assets</b>			
Provision for employee benefit	13	5	18
Plant and equipment	18	(3)	15
Tax loss carry forward	239	-	239
<b>Total</b>	<b>270</b>	<b>-</b>	<b>272</b>
<b>Deferred tax liabilities</b>			
Plant and equipment	(4)	-	(4)
Provision for expenses from raw materials derogation	-	(43)	(43)
<b>Total</b>	<b>(4)</b>	<b>-</b>	<b>(47)</b>
<b>Net</b>	<b>266</b>	<b>(41)</b>	<b>225</b>



## Note to Financial Statements

**GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

	Unit: Million Baht			
	Separate financial statements			
	<u>(Charged) / credited to:</u>			
	As at January 1, 2018	Profit or loss (Note 31)	Other comprehensive income	As at December 31, 2018
<i>Deferred tax assets</i>				
Provision for employee benefit	11	2	-	13
Plant and equipment	18	-	-	18
Tax loss carry forward	-	239	-	239
<b>Total</b>	<b>29</b>	<b>241</b>	<b>-</b>	<b>270</b>
<i>Deferred tax liabilities</i>				
Plant and equipment	(4)	-	-	(4)
Inventory	(3)	3	-	-
<b>Total</b>	<b>(7)</b>	<b>3</b>	<b>-</b>	<b>(4)</b>
<b>Net</b>	<b>22</b>	<b>244</b>	<b>-</b>	<b>266</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 15. INTEREST-BEARING LIABILITIES

Interest bearing liabilities are defined as borrowings and finance lease liabilities as at December 31, 2019 and 2018 which are as follows:

	Consolidated financial statements		Unit: Million Baht Separate Financial statements	
	2019	2018	2019	2018
<b>Current</b>				
Current portion of long-term borrowings from financial institutions				
Unsecured	441	338	441	338
<b>Current portion of long-term borrowings</b>	<b>441</b>	<b>338</b>	<b>441</b>	<b>338</b>
Current portion of finance lease liabilities	6	4	6	4
<b>Total current interest-bearing liabilities</b>	<b>447</b>	<b>342</b>	<b>447</b>	<b>342</b>
<b>Non-current</b>				
Long-term borrowings from financial institutions				
Unsecured	1,332	1,773	1,332	1,773
Less Deferred financing service fee	(3)	(5)	(3)	(5)
<b>Long-term borrowings</b>	<b>1,329</b>	<b>1,768</b>	<b>1,329</b>	<b>1,768</b>
Finance lease liabilities	14	11	14	11
<b>Total non-current interest-bearing liabilities</b>	<b>1,343</b>	<b>1,779</b>	<b>1,343</b>	<b>1,779</b>
<b>Total</b>	<b>1,790</b>	<b>2,121</b>	<b>1,790</b>	<b>2,121</b>

The periods to maturity of interest-bearing liabilities, excluding finance lease liabilities, as at December 31, 2019 and 2018 are as follows:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Within one year	441	338	441	338
After one year but within five years	1,329	1,768	1,329	1,768
<b>Total</b>	<b>1,770</b>	<b>2,106</b>	<b>1,770</b>	<b>2,106</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Loans from financial institutions

Details of the Group's loans with 3 financial institutions as at December 31, 2019 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.

As at December 31, 2019, the Group had unutilised credit facilities totalling Baht 100 million (2018: Baht 100 million).

The Company is required to comply with certain covenants pertaining to maintenance of certain financial ratios, percentage of share held by the major shareholder and other conditions as specified in each agreement.

#### 16. TRADE PAYABLES

Trade payables as at December 31, 2019 and 2018 consist of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Trade payables - related parties (see Note 23)	64	186	59	164
Trade payables - other parties	889	555	887	551
<b>Total</b>	<b>953</b>	<b>741</b>	<b>946</b>	<b>715</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 17. OTHER PAYABLES

Other payables as at December 31, 2019 and 2018 consists of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Other payables	237	168	191	133
Accrued operating expenses	35	69	31	65
Advances received for goods	14	20	9	6
Value-added tax payable	47	15	47	15
Others	11	15	11	13
<b>Total</b>	<b>344</b>	<b>287</b>	<b>289</b>	<b>232</b>

#### 18. PROVISIONS FOR EMPLOYEE BENEFITS

Provision for employee benefits as at December 31, 2019 and 2018 consists of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Statement of financial position</b>				
<b>Provisions for:</b>				
Post-employment benefits	76	50	76	50
Other long-term employee benefits	14	13	14	13
<b>Total</b>	<b>90</b>	<b>63</b>	<b>90</b>	<b>63</b>
 <i>For the years ended December 31,</i>				
<b>Statement of comprehensive income:</b>				
<b>Recognised in profit or loss:</b>				
Post-employment benefits	26	7	26	7
Other long-term employee benefits	2	2	2	2
<b>Total</b>	<b>28</b>	<b>9</b>	<b>28</b>	<b>9</b>
 <i>For the years ended December 31,</i>				
<b>Recognised in other comprehensive income:</b>				
Actuarial losses recognised during the year	-	-	-	-
Cumulative actuarial losses recognised	21	21	17	17

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Movement in the present value of the defined benefit obligations:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
As at January 1,	63	54	63	54
<b>Recognised in profit or loss:</b>				
Current service costs	9	7	9	7
Interest on obligations	2	2	2	2
Past service cost	17	-	17	-
	<u>28</u>	<u>9</u>	<u>28</u>	<u>9</u>
<b>Others</b>				
Benefit paid by the plan	(1)	-	(1)	-
	<u>(1)</u>	<u>-</u>	<u>(1)</u>	<u>-</u>
<b>As at December 31,</b>	<u>90</u>	<u>63</u>	<u>90</u>	<u>63</u>
<b>Recognised in other comprehensive income</b>				
Actuarial losses (profit)	-	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>As at December 31,</b>	<u>90</u>	<u>63</u>	<u>90</u>	<u>63</u>

#### *Actuarial assumptions*

Principal actuarial assumptions at the reporting date (expressed as weighted averages) consists of:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Discount rate	2.9	2.9	2.9	2.9
Future salary increases	7.0	7.0	7.0	7.0
Resignation rate	0 - 3.0	0 - 3.0	0 - 3.0	0 - 3.0
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, 2019, the weighted-average duration of the defined benefit obligation is 18 years (2018: 18 years).

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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
<b>As at December 31, 2019</b>				
Discount rate (1% movement)	(14)	17	(14)	17
Future salary growth (1% movement)	14	(12)	14	(12)
<b>As at December 31, 2018</b>				
Discount rate (1% movement)	(9)	11	(9)	11
Future salary growth (1% movement)	9	(8)	9	(8)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

#### 19. SHARE CAPITAL

Share capital as at December 31, 2019 and 2018 consists of :

	Par value per share (Baht)	2019		2018	
		Number of share (Million shares)	Amount (Million Baht)	Number of share (Million shares)	Amount (Million Baht)
<b>Authorized</b>					
As at January 1,					
- Ordinary shares	10	1,048	10,483	1,048	10,483
<b>As at December 31,</b>					
- Ordinary shares	10	1,024	10,237	1,048	10,483
<b>Issued and paid-up</b>					
As at January 1,	10				
- Ordinary shares		1,024	10,237	1,024	10,237
<b>As at December 31,</b>					
- Ordinary shares (see Note 22)	9.5	1,024	9,725	1,024	10,237

#### 20. 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 21. DIVIDENDS PAID

At the Annual General Meeting of the shareholders of the Company held on April 5, 2018, the shareholders approved the appropriation of annual dividend for the year 2017 to the shareholders at Baht 0.35 per share, amounting to Baht 358.3 million. The Company had paid an interim dividend at Baht 0.15 per share, amounting to Baht 153.6 million in September 2017. The remaining dividend was paid at Baht 0.20 per share, amounting to Baht 204.7 million to the shareholders entitled to receive dividends. The dividend was paid to the shareholders in April 2018.

At the Board of Directors of the Company held on September 11, 2019, the Board approved the appropriation of interim dividend for first half of year 2019 operating result to the shareholders at Baht 0.15 per share, amounting to Baht 153.6 million to the shareholders entitled to receive dividends. The dividend was paid to the shareholders in October 2019.

#### 22. REDUCTION OF AUTHORIZED AND PAID-UP SHARE CAPITAL, TRANSFER OF SHARE PREMIUM AND LEGAL RESERVE TO COMPENSATE FOR ACCUMULATED DEFICIT

On April 2, 2019, the Annual General Shareholders' Meeting of the Company passed a resolution to approve the reduction of authorized share capital of unissued authorized share capital of 24,666,600 shares (par value of shares Baht 10 each) in which the new authorized capital will be Baht 10,236,667,000 and the number of authorized shares will be 1,023,666,700 shares at par value of Baht 10 each. The Company had completed the registration of this capital reduction at the Ministry of Commerce on April 17, 2019.

The Company transferred the legal reserve of Baht 245,621,000 and share premium of Baht 219,066,911, totalling Baht 464,687,911 to compensate for the accumulated deficit of Baht 887,281,011 and the Company reduced authorized and paid-up capital by reducing the par value of shares from Baht 10 to Baht 9.50 each, which resulted to the decrease of registered capital by Baht 511,833,350 whereby the remaining capital reduction of Baht 89,240,250 is recorded as share premium, which the Company had completed its in legal processes according to the reduction of the Company's authorized capital.

#### 23. 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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 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 Biochemical 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 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
Thai Tank Terminal Limited	Thailand	Other related party, shareholding by parent company



## Note to Financial Statements

**GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**NOTES TO THE FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

<b>Name of entities</b>	<b>Country of incorporation/ nationality</b>	<b>Nature of relationships</b>
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
Dhipaya Insurance Plc.	Thailand	Other related party, shareholding by the ultimate parent company
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
TOP Solvent Co., Ltd.	Thailand	Other related party, indirect shareholding by 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
Emery Oleochemicals (M) Sdn. Bhd.	Malaysia	Other related party, indirect shareholding by parent company
PTT International Trading Pte. Ltd.	Singapore	Other related party, indirect shareholding by ultimate parent company

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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

Significant transactions for the years ended December 31, 2019 and 2018 with related parties were as follows:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Ultimate parent</b>				
Sales of goods or rendering of services	102	2,333	102	2,333
Purchases of goods or receiving of services	757	2,134	757	2,134
Other income	21	49	21	49
Other expense	51	4	51	4
<b>Parent</b>				
Sales of goods	1,012	947	1,012	947
Purchases of goods or receiving of services	232	220	221	207
Other income	18	8	18	8
Other expense	104	96	97	90
Dividend paid	111	148	111	148
<b>Subsidiary</b>				
Sales of goods	-	-	3,093	4,977
Purchases of goods or receiving of services	-	-	13	(2)
Other income	-	-	36	29
Dividend income	-	-	398	-
<b>Associate</b>				
Purchases of goods or receiving of services	252	249	252	249
<b>Joint ventures</b>				
Sales of goods	1,095	1,743	-	-
Other income	10	5	10	5
Dividend income	-	-	223	91
<b>Other related parties</b>				
Sales of goods	5,874	3,873	5,874	3,873
Purchases of goods or receiving of services	740	636	612	520
Other income	2	-	2	-
Other expense	58	56	40	41
<b>Key management personnel</b>				
Key management personnel compensation				
Short-term benefits	28	22	28	22

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Balances as at December 31, 2019 and 2018 with related parties are as follows:

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
<b>Trade receivables - related parties</b>				
Parent	112	21	112	21
Subsidiaries	-	-	321	876
Joint ventures	164	305	-	-
Other related parties	636	344	636	344
Total	912	670	1,069	1,241
<u>Less</u> allowance for doubtful accounts	-	-	-	-
<b>Net</b>	<b>912</b>	<b>670</b>	<b>1,069</b>	<b>1,241</b>
<b>Other receivables - related parties</b>				
Ultimate parent	-	4	-	4
Parent	19	23	19	23
Subsidiaries	-	-	27	18
Joint ventures	7	2	7	2
Other related parties	14	77	12	75
Total	40	106	65	122
<u>Less</u> allowance for doubtful accounts	-	-	-	-
<b>Net</b>	<b>40</b>	<b>106</b>	<b>65</b>	<b>122</b>
<b>Investments in subsidiaries</b> (see Note 10)	-	-	2,210	1,686
<b>Investments in an associate</b> (see Note 11)	28	48	67	67
<b>Investments in joint ventures</b> (see Note 11)	584	737	691	691
<b>Investments in indirect joint ventures</b> (see Note 11)	503	-	-	-

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Trade payables - related parties</b>				
Ultimate parent	-	65	-	65
Parent	3	25	3	25
Associate	7	4	7	4
Other related parties	54	92	49	70
<b>Total</b>	<b>64</b>	<b>186</b>	<b>59</b>	<b>164</b>
<b>Other payables - related parties</b>				
Ultimate parent	1	3	1	3
Parent	65	39	62	36
Other related parties	40	24	30	21
<b>Total</b>	<b>106</b>	<b>66</b>	<b>93</b>	<b>60</b>
<b>Payables to contractor - related parties</b>				
Other related parties	6	27	6	27
<b>Total</b>	<b>6</b>	<b>27</b>	<b>6</b>	<b>27</b>

#### *Significant agreements with related parties*

As at December 31, 2019, the Company has significant agreements with related parties as follows:

#### *Methyl Ester Purchase and Sales Agreements*

The Company has 2 Methyl Ester Purchase and Sales Agreements with 2 related parties. Selling prices are determined based on B100 product price announced by Energy Policy and Planning Office, Ministry of Energy and the adjustment as specified in each agreement. These agreements are for the periods of 6 months and 1 year, commencing from the effective date as specified in each agreement and expiring in March 2020 and June 2020. These agreements are 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 15 years, commencing from the effective date as specified in the agreement and expiring in March 2024.

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 agreement. These agreements are for the period 15 years, commencing from the effective date as specified in each agreement and expiring in July 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 15 years, commencing from the effective date as specified in each agreement and expiring in March 2034, with the service charge as stipulated in the agreement.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

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 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 agreements.

#### *Service 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 2020, with the service charge as stipulated in the agreement.

The Group has Building Maintenance Services Agreement with a related party. These agreements are for the periods 5 years, commencing from the effective date as specified in each agreement and expiring in June 2023 with the service charge as stipulated in each agreements.

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 location. The agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2020, 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 location. The agreement is for the period of 2 years, commencing from the effective date as specified in the agreement and expiring in December 2020, with the service charge as stipulated in the agreement.

The Company has Emergency Control and Management Agreement with a related party for consulting and safety training, occupational health & safety and environment, and set up emergency control centre. The agreement is for the period of 3 years, commencing from the effective date as specified in the agreement and expiring in December 2020, with the service charge as stipulated in the agreement.

#### *Rental Agreement*

The Group has Land Lease Agreements with parent company, for the periods 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 agreement with a related company. The agreement is for the period of 3 years and will expire in September 2021 with rental and service rate and conditions as stipulated in the agreement.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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 2020. This facility bears interest based on market rate referenced to BIBOR plus margin.

#### 24. BASIC EARNINGS (LOSS) PER SHARE

The calculations of basic earnings (loss) per share for the years ended December 31, 2019 and 2018 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 periods.

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Profit (loss) attributable to ordinary shareholders of the Company (basic) (million Baht)	94.02	(1,160.77)	640.46	(1,517.84)
Weighted average number of ordinary shares outstanding (million shares)	1,023.67	1,023.67	1,023.67	1,023.67
<b>Basic earning (loss) per share (Baht)</b>	<b>0.09</b>	<b>(1.13)</b>	<b>0.63</b>	<b>(1.48)</b>

#### 25. SEGMENT INFORMATION

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 alcohol
Other	Other segment

Other operations in 2019 and 2018, 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 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 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

Information about reporting segments for the year ended December 31, 2019

	Unit: Million Baht			
	Methyl ester	Fatty alcohols	Other	Total
External revenues	9,261	3,794	-	13,055
<b>Total segment revenues</b>	<b>9,261</b>	<b>3,794</b>	<b>-</b>	<b>13,055</b>
Cost of sales	(8,815)	(2,982)	-	(11,797)
Selling and distribution expenses and administrative expenses	(275)	(318)	(2)	(595)
<b>Profit (loss) before interest expense, income tax, depreciation and amortisation</b>	<b>226</b>	<b>508</b>	<b>(2)</b>	<b>732</b>
Interest income	19	31	-	50
Finance costs	(36)	(32)	-	(68)
Depreciation and amortisation	(237)	(276)	-	(513)
Share of profit of investments in an associate and joint ventures	-	50	(21)	29
Others	3	(6)	-	(3)
<b>Profit (loss) before tax</b>	<b>(25)</b>	<b>275</b>	<b>(23)</b>	<b>227</b>
<b>Net profit (loss) for reportable segment</b>	<b>(72)</b>	<b>189</b>	<b>(23)</b>	<b>94</b>

Information about reporting segments for the year ended December 31, 2018

	Unit: Million Baht			
	Methyl ester	Fatty alcohols	Total	
External revenues	9,913	6,312	16,225	
<b>Total segment revenues</b>	<b>9,913</b>	<b>6,312</b>	<b>16,225</b>	
Cost of sales	(9,149)	(5,477)	(14,626)	
Selling and distribution expenses and administrative expenses	(432)	(343)	(775)	
<b>Profit before interest expense, income tax, depreciation and amortisation</b>	<b>429</b>	<b>494</b>	<b>923</b>	
Interest income	16	32	48	
Finance costs	(35)	(37)	(72)	
Depreciation and amortisation	(187)	(334)	(521)	
Share of profit of investments in an associate and joint venture	-	102	102	
Expenses from raw materials derogation	(1,688)	(316)	(2,004)	
Others	6	-	6	
<b>Profit before tax</b>	<b>(1,459)</b>	<b>(59)</b>	<b>(1,518)</b>	
<b>Net profit (loss) for reportable segment</b>	<b>(1,216)</b>	<b>55</b>	<b>(1,161)</b>	

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

	Unit: Million Baht				
	Methyl ester	Fatty alcohols	Other	Elimination	Total
<b>As at December 31, 2019</b>					
Investments in associate and joint ventures	-	613	502	-	1,115
Segment assets	6,806	5,588	504	34	12,932
Change in non-current assets	(211)	(309)	502	-	(18)
Segment liabilities	2,420	862	1	-	3,283
<b>As at December 31, 2018</b>					
Investments in associate and joint venture	-	785	-	-	785
Segment assets	5,915	7,135	1	34	13,085
Change in non-current assets	736	(293)	-	-	443
Segment liabilities	2,184	1,193	-	-	3,377

#### *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	
	2019	2018
Thailand	10,219	12,089
The People's Republic of China	778	1,256
India	583	654
Korea	212	345
Other countries	1,263	1,881
<b>Total</b>	<b>13,055</b>	<b>16,225</b>

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 mainly comprise of revenue from a customer of Methyl ester segment represents Baht 4,293 million (2018: consist of two customers amounting to Baht 4,476 million).



## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 26. SELLING AND DISTRIBUTION EXPENSES

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Distribution expense	372	381	218	224
Promotional expense	15	18	2	3
<b>Total</b>	<b>387</b>	<b>399</b>	<b>220</b>	<b>227</b>

#### 27. ADMINISTRATIVE EXPENSES

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Personnel expense	120	125	120	125
Secondment fee	64	60	64	60
Share service fees	37	33	31	27
Depreciation and amortisation	10	8	10	8
Others	220	155	196	142
<b>Total</b>	<b>451</b>	<b>381</b>	<b>421</b>	<b>362</b>

#### 28. EMPLOYEE BENEFIT EXPENSES

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
Salaries, bonus, wages and other welfares	251	222	251	222
Contribution to provident funds	11	9	11	9
Post-employment benefits (see Note 18)	26	7	26	7
Other long-term employee benefits (see Note 18)	2	2	2	2
<b>Total</b>	<b>290</b>	<b>240</b>	<b>290</b>	<b>240</b>

##### *Defined benefit plans*

Details of the defined benefit plans are given in Note 18.

##### *Defined contribution plans*

The defined contribution plans comprise provident funds established by the Company 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 Company 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 29. 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	
	2019	2018	2019	2018
Changes in inventories of finished goods and work in progress	114	(595)	187	(886)
Raw materials and consumables used	10,350	14,093	10,188	14,262
Depreciation	449	446	411	401
Amortisation	65	75	65	75
Employee benefit expenses	289	240	289	240
Distribution	373	381	219	224
Expenses (Reversal) from raw materials derogation	(232)	2,004	(232)	2,004
Others	1,495	1,277	1,298	1,100
<b>Total cost of sales of goods, selling and distribution expenses and administrative expenses</b>	<b>12,903</b>	<b>17,921</b>	<b>12,425</b>	<b>17,420</b>

#### 30. FINANCE COSTS

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Interest expense:</b>				
Bank loans	69	81	69	81
<b>Total interest expense</b>	<b>69</b>	<b>81</b>	<b>69</b>	<b>81</b>
Other finance costs	2	2	2	2
<b>Total</b>	<b>71</b>	<b>83</b>	<b>71</b>	<b>83</b>
<u>Less</u> amounts included in the cost of plant and equipment under construction	(3)	(11)	(3)	(11)
<b>Net</b>	<b>68</b>	<b>72</b>	<b>68</b>	<b>72</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 31. INCOME TAX EXPENSE

Income tax for the years ended December 31, 2019 and 2018 consists of:

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
<b><i>Current tax expense</i></b>				
Current year	-	-	-	-
Under provided in prior year	-	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b><i>Deferred tax expense</i></b>				
Movements in temporary differences (see Note 14)	133	(357)	41	(244)
<b>Total</b>	<u><b>133</b></u>	<u><b>(357)</b></u>	<u><b>41</b></u>	<u><b>(244)</b></u>

#### *Reconciliation of effective tax rate*

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
	<i>Rate (%)</i>		<i>Rate (%)</i>	
Profit (loss) before income tax expense		227		(1,517)
Income tax using the Thai corporation tax rate	20.00	45	20.00	-
Income not subject to tax		13		(17)
Utilisation tax losses		(31)		-
Loss carry forward which deferred tax asset was recognised		92		(351)
Expenses not deductible for tax purposes		14		11
Under provided in prior year		-		-
<b>Total</b>	<u><b>58.59</b></u>	<u><b>133</b></u>	<u><b>-</b></u>	<u><b>(357)</b></u>

	<b>Separate financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
	<i>Rate (%)</i>		<i>Rate (%)</i>	
Profit (loss) before income tax expense		682		(1,762)
Income tax using the Thai corporation tax rate	20.00	136	20.00	-
Income not subject to tax		(105)		(16)
Loss carry forward which deferred tax asset was recognised		-		(239)
Expenses not deductible for tax purposes		10		11
Under provided in prior year		-		-
<b>Total</b>	<u><b>6.01</b></u>	<u><b>41</b></u>	<u><b>-</b></u>	<u><b>(244)</b></u>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### 32. 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:

- (a) Exemption from payment of import duty and tax on machinery approved by the Board of Investment;
- (b) 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
- (c) A 50% reduction in the normal income tax rate on the net profit derived from certain operations for a period of five years and eight year, 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:

	Unit: Million Baht					
	Separate financial statements					
	2019			2018		
	Promoted businesses	Non-promoted businesses	Total	Promoted businesses	Non-promoted businesses	Total
Export sales	164	190	354	-	366	366
Local sales	2,307	9,745	12,052	-	15,103	15,103
<b>Total revenue</b>	<b>2,471</b>	<b>9,935</b>	<b>12,406</b>	<b>-</b>	<b>15,469</b>	<b>15,469</b>

#### 33. 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.

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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, 2019 and 2018 and the periods in which those liabilities mature or re-price were disclosed in Note 15.

#### *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:

	<b>Consolidated financial statements</b>		<b>Unit: Million Baht Separate financial statements</b>	
	<b>2019</b>	<b>2018</b>	<b>2019</b>	<b>2018</b>
<b><i>USD</i></b>				
Cash and cash equivalents	187	586	15	32
Trade accounts receivable	215	371	9	7
Other receivables	-	9	-	9
Trade accounts payable	(99)	(16)	(99)	(16)
Other payables	(10)	(37)	(5)	(15)
Payable to contractor	(12)	-	(12)	-
<b>Gross statement of financial position exposure</b>	<b>281</b>	<b>913</b>	<b>(92)</b>	<b>17</b>
<b>Currency forwards</b>	<b>9</b>	<b>(81)</b>	<b>9</b>	<b>-</b>
<b><i>Euro</i></b>				
Trade accounts payable	(14)	-	(14)	-
Other payables	(9)	(10)	(9)	(8)
Payable to contractor	(10)	-	(10)	-
<b>Gross statement of financial position exposure</b>	<b>(33)</b>	<b>(10)</b>	<b>(33)</b>	<b>(8)</b>
<b>Currency forwards</b>	<b>(6)</b>	<b>(14)</b>	<b>(6)</b>	<b>(14)</b>

As at December 31, 2019, the Company had sold forward contracts of USD 0.29 million equivalent to Baht 8.74 million and EUR 0.18 million equivalent to Baht 6.18 million (2018: USD 2.50 million equivalent to Baht 81.28 million and EUR 0.36 million equivalent to Baht 13.60 million).

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### *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 concentrations 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 related parties of the Group which the Group 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 and will demand a payment on a case to case basis and also has commercial credit insurance. Management does not anticipate material losses from its debt collection.

#### *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.

#### *Fair values of financial assets and liabilities*

As at December 31, 2019 and 2018, The carrying amounts of financial assets and financial liabilities approximate their fair values due to the short maturity period.

Carrying amount of long-term borrowings from financial institutions with floating interest rate is reasonable approximation of fair value.

### 34. COMMITMENTS WITH NON-RELATED PARTIES

As at December 31, 2019 and 2018, the Company and its subsidiaries had commitments with non-related parties as follows:

	Consolidated financial statements		Unit: Million Baht Separate financial statements	
	2019	2018	2019	2018
<b>Capital commitments</b>				
<b>Contracted but not provided for</b>				
Plant, machinery and equipment	206	107	206	107
<b>Total</b>	<b>206</b>	<b>107</b>	<b>206</b>	<b>107</b>
<b>Non-cancellable operating lease commitments</b>				
Within one year	37	3	37	3
After one year but within five years	68	15	68	15
After five years	97	101	97	101
<b>Total</b>	<b>202</b>	<b>119</b>	<b>202</b>	<b>119</b>
<b>Other commitments</b>				
Unused letters of credits	3	-	3	-
Bank guarantees	20	4	20	4
Other agreements	7	31	6	29
<b>Total</b>	<b>30</b>	<b>35</b>	<b>29</b>	<b>33</b>

## Note to Financial Statements

### GLOBAL GREEN CHEMICALS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

#### Utilities and Other Services Agreements with minimum purchase quantity

The Group has 1 utility and other services agreements which have minimum purchase quantity with other parties. These agreements are for the periods from November 1, 2007 to October 31, 2022. The minimum purchase quantity, the selling price of products and the renewal of the contract will be subject as specified in the agreements.

#### 35. EVENT AFTER THE REPORTING PERIOD

At the Board of Directors' meeting held on February 14, 2020, the Board approved to submit for dividend payment approval for the year 2019 to the Annual General Meeting 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 153.6 million was paid in October 2019 as discussed in Note 21. Thus, the remaining dividend will be at the rate of Baht 0.20 per share amounting to Baht 204.7 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

#### 36. RECLASSIFICATION

Certain reclassifications were made to the consolidated and separate statements of financial position as at December 31, 2018 to conform to the classifications used in the consolidated and separate statements of financial position as at December 31, 2019 as follows:

Transaction	Previous classifications	Current classifications	Consolidated financial statements	Unit: Baht Separate financial statements
Catalyst	Other non-current asset	Plant and equipment	12,004,251	12,004,251
Accumulated depreciation - catalyst	Other non-current asset	Plant and equipment	(391,661)	(391,661)

#### 37. APPROVAL OF THE FINANCIAL STATEMENTS

These financial statements have been approved for issue by the Board of Directors of the Company on February 14, 2020.



# Appendix





## Board of Directors

(As of 31 December 2019)

**Mr. Supattanapong Punmeechaow**  
**Chairman**

**Age : 60**

### Date of Appointment

17 February 2016

5 April 2018 (1<sup>st</sup> re-elected)

### Education/Training

- Master of Business Administration (M.B.A.) , Chulalongkorn University
- Bachelor of Engineering (Chemical Engineering), Chulalongkorn University
- Business Revolution and Innovation Network: BRAIN (Class 2), 2018, The Federation of Thai Industries (F.T.I.)
- Capital Market Academy Leadership Program (Class 23), 2016, Capital Market Academy
- The Rule of Law and Democracy Course (RLD) (Class 3), 2015, College of the Constitutional Court
- Corporate Governance Program for Directors and Senior Executive of State Enterprises and Public Organizations (Class 12), 2014, King Prajadhipok's Institute-State Enterprise Policy Office and Office of The Public Sector Development Commission
- The Executives Program in Energy Literacy for a Sustainable Future Class 4, Thailand Energy Academy (TEA)
- Oxford Energy Seminar 2013, United Kingdom
- Diploma , National Defence College , The National Defence Course Class 50, National Defence College of Thailand (NDC)
- Diploma , National Defence College , The Joint State-Private Sector Class 20, National Defence College of Thailand (NDC)
- Advanced Management Program, INSEAD , France

### Director Training :

- Role of the Chairman Program (RCP) (Class 30/2013), Thai Institute of Directors Association (IOD)
- Director Certification Program (DPC) (Class 131/2010), Thai Institute of Directors Association (IOD)

### Board member / Management in Listed Company - The Stock Exchange of Thailand : 3

- Chairman, Global Green Chemicals Public Company Limited
- Director and Director of Risk Management Committee, PTT Global Chemical Public Company Limited
- Director and Chairman of Risk Management Committee, PTT Public Company Limited

### Board member / Management in Non-Listed Company - The Stock Exchange of Thailand : None

### Positions in Other Company/Organization/Institution / Remarkable Positions : 5

- Commission Member, Strategic Transformation Committee
- Commission Member (Business Administration) , Office of the Public Sector Development Commission (OPDC)
- Commission Member in the Policy Committee for Integrated Provincial and Sub-Regional Administration, Office of the Public Sector Development Commission (OPDC)
- Director, Thai Institute of Directors Association (IOD)
- President, Chulalongkorn University Engineering Alumni

**Work Experience (in the Last 5 Years) :**

- 2014 – 2019 Senior Executive Vice President, PTT Public Company Limited
- 2014 – 2019 President & Chief Executive Officer, PTT Global Chemical Public Company Limited
- 2017 – 2019 Chairman, Global Power Synergy Public Company Limited
- 2017 – 2019 Director, PTTGC International Private Limited
- 2015 – 2019 Committee Member, Kamnoetvidya Science Academy (KVIS)
- 2015 – 2019 Council Member, Vidyasirimedhi Institute of Science and Technology
- 2014 – 2019 Vice President, Thailand Swimming Association
- 2014 – 2019 Member Council of Trustees, Petroleum Institute of Thailand
- 2014 – 2019 Vice President, the Power of Learning Foundation
- 2015 – 2018 Committee Member, Thai Listed Companies Association
- 2015 – 2018 Vice Chairman, The Federation of Thai Industries
- 2014 – 2017 Vice Chairman, Vinythai Public Company Limited

**Shareholding :** 50,000 shares (0.004884% of the total shares as of 31 December 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**Prof. Dr. Kumchai Jongjakapun**

**Age : 59**

**Chairman of Independent Directors / Chairman of Audit Committee**

**Date of Appointment :**

17 February 2016

2 April 2019 (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 National Defence Course Class 50, National Defence College of Thailand (NDC)
- Diploma , National Defence College , The Joint State-Private Sector Class 20, National Defence College of Thailand (NDC)
- Juridical Executives Program(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 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 Director / 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/Institution / Remarkable Positions : 3**

- Chairman, Pearl S. Buck Foundation (Thailand)
- Lega expert, the Stock Exchange of Thailand (SET)
- Member of the Committee of Council of State, Office of the Council of State

**Work Experience (in the Last 5 Years) :**

- 2014 – 2015      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 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**ACM Songtam Chokkanapitag**

**Age : 65**

**Independent Director / Chairman of Nomination and Remuneration Committee**

**Date of Appointment :**

17 February 2016

21 March 2017 (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)
- The National Defence Course (Class 50), National Defence College

**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, 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/Institution / 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

**Ms. Kannika Ngamsopee****Age : 63****Independent Director / Director to Audit Committee / Chairman of Risk Management Committee****Date of Appointment :**

17 February 2016

21 March 2017 (re-elected)

**Education / Training :**

- MBA, Sasin Graduate Institute of Business Administration, Chulalongkorn University
- M.Acc. (Accounting), Thammasat University
- LL.B. (Law), Thammasat University
- B.B.A (Accounting), 2nd Class Honors, Thammasat University
- Capital Market Academy Leadership Program (Class 3), Capital Market Academy
- The National Defence Course (Class 52), National Defence College
- 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

**Director Training :**

- Director Certification Program (DCP) (Class 21/2002), Thai Institute of Directors Association (IOD)
- Board Nomination and Compensation Program (BNCP) (Class 7/2019), Thai Institute of Directors Association (IOD)

**Board member / Management in Listed Company - The Stock Exchange of Thailand : 4**

- Independent Director / Director to Audit Committee / Chairman of Risk Management Committee, Global Green Chemicals Public Company Limited
- Independent Director / Chairman to Audit Committee / Director to Risk Management Committee, Scan Inter Public Company Limited
- Independent Director / Chairman to Audit Committee, Thonburi Healthcare Group Public Company Limited
- Independent Director / Director to Audit Committee, Siam Makro Public Company Limited

**Board member / Management in Non-Listed Company - The Stock Exchange of Thailand : 1**

- Independent Director, Premier Home Healthcare Company Limited (an affiliate of Thonburi Healthcare Group)

**Positions in Other Company/Organization/Institution / Remarkable Positions : 7**

- Member, Equitable Education Fund, Finance and Budget Sub-Committee
- Chairman, Audit Committee, Digital Government Development Agency (Public Organization) (DGA)
- Director, Ar Yu International Hospital, Republic of the Union of Myanmar
- Sub-Committee Member, Audit and Assessment of Public Sector Administrative Work, Office of Public Sector Development Commission
- Member, Asset Management Committee, Vajiravudh College
- Director, Audit Committee, Social Security Office
- Honorary Member, Financial Institutions Policy Committee, Bank of Thailand

**Work Experience (in the Last 5 Years) :**

- 2019 Sub-Committee member, Audit and Corporate Governance, Thai Arbitration Institute
- 2017 – 2019 Independent Director, Bumrungrum Plaza Limited (an affiliate of Thonburi Healthcare Group)
- 2017 Independent Director / Director to Audit Committee / 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 First Executive Vice President, Head of Audit Group, Siam Commercial Bank Public Company Limited
- 2013 – 2017 Director / Director to Audit Committee, Sukhumvit Asset Management Company Limited

**Shareholding :** 20,000 shares (accounting for 0.001954% of the total shares as of 31 December 2019 )

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**Mr. Payungsak Chartsutipol**

**Age : 67**

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

**Date of Appointment :**

6 January 2017

5 April 2018 (re-elected)

**Education / Training :**

- Honorary Doctorate Degree in Engineering (Manufacturing Engineering), Suranaree University of Technology
- Honorary Doctorate Degree in Philosophy, Organization Development Administration, Chaopraya University
- B.Eng. (Electrical Engineering), Chulalongkorn University
- Certificate of Management Development Program, Northwestern University, U.S.A.
- Top Executives in the Energy Education Program (Class 1), Thailand Energy Academy
- Phumpalung Phandin for Top Executives Program (Class 1), 2012, Chulalongkorn University
- Administrative Justice Program for Top Executives (Class 2), Administrative Court Office
- Capital Market Academy Leadership Program (Class 11), Capital Market Academy
- Top Executives Program in Commerce and Trade (Class 2), Commerce Academy, University of the Thai Chamber of Commerce

**Director Training :**

- Director Accreditation Program (DAP SCC/2004), Thai Institute of Directors Association (IOD)

**Board member / Management in Listed Company - The Stock Exchange of Thailand : 3**

- Independent Director / Chairman of Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited
- Independent Director / Chairman of Audit Committee / Chairman of Risk Management Committee, Global Power Synergy Public Company Limited
- Chairman, Glow Energy Public Company Limited

**Board member / Management in Non-Listed Company - The Stock Exchange of Thailand : 11**

- Chairman, Nakhonluang Capital Public Company Limited
- Director, NS-Siam United Steel Company Limited
- Chairman, Nakhonluang Capital Public Company Limited
- Director, Linde (Thailand) Public Company Limited
- Director, Sapthip Company Limited
- Chairman to Audit Committee / Chairman of the Corporate Governance Committee, Thailand Krungthai Panich Insurance Public Company Limited
- Director, Glow Company Limited
- Director, Glow SPP 2 Company Limited
- Director, Glow SPP 3 Company Limited
- Director, Glow IPP 2 Holding Company Limited
- Director, Glow SPP 11 Company Limited
- Director, Glow IPP Company Limited

**Positions in Other Company/Organization/Institution / Remarkable Positions : None**

**Work Experience (in the Last 5 Years) :**

- 2012 – 2014 Commission Member, Office of Insurance Commission
- 2011 – 2015 Chairman / Expert Director, Board of National Catastrophe Insurance Fund Committee
- 2011 – 2014 Chairman, Board of Executive Directors, Krungthai Bank Public Company Limited
- 2010 – 2014 Chairman, The Federation of Thai Industries
- 2010 – 2014 Council Member, Suranaree University of Technology
- 2010 – 2014 Director, Board of Investment
- 2007 – 2014 Director, Board of Trustees, Sirindhorn International Institute of Technology, Thammasat University

**Shareholding :** 50,000 shares (0.004884% of the total shares as of 31 December 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None**

**Mr. Apichart Jongskul**

**Age : 64**

**Independent Director / Director to Audit Committee**

**Date of Appointment :**

6 January 2017

5 April 2018 (re-elected)

**Education / Training :**

- Honorary Doctorate Degree in Science (Geosocial-Based Sustainable Development), Maejo University
- M.Sc. (Environmental Management Technology), Mahidol University
- B.Sc. (Physics), Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 50, National Defence College of Thailand (NDC)
- Capital Market Academy Leadership Program (Class 17), Capital Market Academy

**Director Training :**

- Director Certification Program (DCP) (Class 109/2008), Thai Institute of Directors Association (IOD)
- Audit Committee Program (ACP) Batch (Class 30/2010), Thai Institute of Directors Association (IOD)

**Board member / Management in Listed Company - The Stock Exchange of Thailand : 1**

- Independent Director / Director to 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/Institution / Remarkable Positions : 1**

- Advisor / Deputy Secretary, Chaipattana Foundation

**Work Experience (in the Last 5 Years) :**

- 2016 Director, Integrated Forest Resources Restoration Committee, National Reform Steering Assembly (NRSA)
- 2016 Advisor to Sub-committee on Agricultural Economic Reform, National Reform Steering Assembly (NRSA)
- 2009 – 2016 Member, Sub-committee (Administration), Agricultural Futures Trading Commission
- 2015 Member, Sub-Committee on Broadcast Radio, Television and Telecommunications, National Reform Steering Assembly (NRSA)
- 2015 Member, Committee on Mass Communication Reform, National Reform Assembly (NRSA)
- 2015 Member, National Reform Steering Assembly (NRSA)
- 2014 – 2015 Chairman, Operating Committee on Cooperatives, Land Development Department
- 2014 – 2015 Chairman, Dairy Farming Promotion Organization of Thailand
- 2013 – 2015 Honorary Member, National Science and Technology Development Committee
- 2013 – 2015 Director-General, Land Development Department
- 2014 – 2015 Chairman, Soil and Water Reservation Association of Thailand

**Shareholding** : None

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries** : None

**Mr. Suphit Suwagul**

**Age: 63**

**Independent Director / Director to Corporate Governance and Sustainable Development Committee**

**Date of appointment :**

- 1 January 2018
- 2 April 2019 (re-elected)

**Education / Training :**

- Master's Degree, Development Economics, National Institute of Development Administration
- B.Econ., Thammasat University

**Director Training :**

- Board Matters and Trends (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 Companies – The Stock Exchange of Thailand : 1**

- Independent Director / Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies - The Stock Exchange of Thailand : None****Positions in Other Company/Organization/Institution / 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)
- 2012 – 2014 Executive Vice President, Organization Effectiveness, PTT Public Company Limited

Shareholding : None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None

**Maj.Gen. Titawat Satiantip****Age : 49****Independent Director / Director to Nomination and Remuneration Committee / Director to Corporate Governance and Sustainable Development Committee****Date of appointment :**

11 September 2019

**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

**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 / Director to Corporate Governance and Sustainable Development Committee, Global Green Chemicals Public Company Limited



**Board Member / Management in Non-listed Companies - The Stock Exchange of Thailand : None**

**Positions in Other Company/Organization/Institution / Remarkable Positions : 1**

- Operating Officer, Prime Minister Operation Center (PMOC)

**Work Experience (in the Last 5 Years) :**

- 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. Kongkrapan Intarajang**

**Age: 52**

**Director**

**Date of appointment :**

6 November 2019

**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
- 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**

- Director, 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, PTT Global Chemical Public Company Limited
- Director and Director to Risk Management Committee, Global Power Synergy Public Company Limited

**Board Member / Management in Non-listed Companies - The Stock Exchange of Thailand : 4**

- Chairman, PTTGC America Corporation
- Chairman, PTTGC America LLC
- Director, PTTGC International Private Limited
- Director, PTTGC International (USA) Inc.

**Positions in Other Company/Organization/Institution / Remarkable Positions : 7**

- Member, The Petroleum Institute of Thailand (PTIT)
- Co-Chairman, France-Thailand Business Forum
- Committee Member of Sustainable Energy Foundation
- Committee Member of Kamnoetvidya Science Academy
- Honorary Member of Vidyasirimedhi Institute Council
- Member of the Thailand Energy Academy
- Vice President (Supporting), Thailand Swimming Association

**Work Experience (in the Last 5 Years) :**

- 2017 – 2020 Director, Thai Tank Terminal Limited
- 2017 – 2019 Chief Operating Officer, Upstream Petrochemical Business, PTT Global Chemical Public Company Limited
- 2015– 2019 Director, President & CEO, PTTGC America Corporation
- 2015– 2019 Director, PTTGC Innovation America Corporation
- 2015– 2019 Director, PTTGC International (Netherlands) B.V.
- 2015– 2019 Director, Vencorex Holding
- 2008– 2019 Director, Emery Oleochemicals (M) Sdn. Bhd.
- 2008– 2019 Director, Emery Specialty Chemicals Sdn. Bhd.
- 2014 – 2018 Director, NatureWorks LLC
- 2014 – 2018 Director and Vice President PTTGC International (USA) Inc.
- 2014 – 2017 Executive Vice President – International Business Operations, PTT Global Public Company Limited

Shareholding : None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None

**Mr. Patiparn Sukorndhaman**

**Age : 58**

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

**Date of appointment:**

17 February 2016

21 March 2017 (re-elected)

**Education / Training :**

- Master of Business Administration (Finance), The American University, U.S.A.
- Bachelor of Arts in Political Science (Public Administration – Public Finance), 2nd Class Honors, Chulalongkorn University
- Diploma, National Defence College, The National Defence Course Class 59, National Defence College of Thailand (NDC) 2016
- The Executives Program in the Energy Literacy for a Sustainable Future Class 7, Thailand Energy Academy (TEA), 2015

- Leadership Development Program (LDP) 3, PTT Leadership and Learning Institute , 2014
- Breakthrough Program for Senior Executives, IMD, Executive Development Services, Swiss Confederation, 2014
- PTT Executive Leadership Program, General Electric, GE Institute, U.S.A. 2012
- Certificatetion Program for Senior Management 5 (Ex-PSM 5), Fiscal Policy Research Institute Foundation, 2009
- 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**

- President, PTT Global Chemical Public Company Limited
- Director / Director to Nomination and Remuneration Committee / Director to Risk Management Committee, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies - The Stock Exchange of Thailand : 7**

- Chairman, Solution Creation Company Limited
- Chairman, GC Marketing Solution Company Limited
- Chairman, GC Polyols Company Limited
- Chairman, HMC Polymers Company Limited
- Chairman, GC-M PTA Company Limited
- Chairman, Thai PET Rasin Company Limited
- Director, PTT Asahi Chemical Company Limited

**Positions in Other Company/Organization/Institution / Remarkable Positions : None**

**Work Experience (in the Last 5 Years) :**

- 2016 – 2019 Chief Operation Officer, Downstream Petrochemical Business, PTT Global Chemical Public Company Limited
- 2017 – 2019 Chairman, GC Oxyren Company Limited
- 2016 – 2019 Chairman, GC Glycol Company Limited
- 2016 – 2019 Chairman, GC Styrenics Company Limited
- 2015 – 2017 Director / Director to Nomination and Remuneration Committee, Global Power Synergy Company Limited
- 2012 – 2019 Director, PTT Phenol Company Limited
- 2009 – 2016 Director, Thai Fatty Alcohols Company Limited
- 2012 – 2015 Director, PTT Chemical International Private Limited
- 2011 – 2015 Director, PTT ICT Solutions Company Limited
- 2011 – 2015 Executive Vice President, Finance & Accounting, PTT Global Chemical Public Company Limited

**Shareholding :**

23,000 shares (0.002247%  
as of 31 December 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None**

**Witoon Suewatanakul****Age : 54****Director / Director to Risk Management Committee****Date of appointment :**

1 July 2019

**Education / Training :**

- B.Eng. (Chemical Engineering), Chulalongkorn University
- MS (Chemical Engineering), The University of Texas at Austin, USA
- Ph.D. (Chemical Engineering), The University of Texas at Austin, USA

**Director training :**

- Driving Company Success with IT Governance (ITG) Class 5/2017, Thai Institute of Directors Association (IOD)
- Successful Formulation & Execution of Strategy (SFE) Class 27/2016, Thai Institute of Directors Association (IOD)
- Family Business Government for Sustainability (FBS) Class 2/2015, Thai Institute of Directors Association (IOD)
- Risk Management Committee Program (RMP) Class 4/2014 Thai Institute of Directors Association (IOD)
- Director Certification Program (DCP) Class 186/2014, Thai Institute of Directors Association (IOD)

**Board member / Management in Listed Company - The Stock Exchange of Thailand : 2**

- Director and Secretary to the Board / Director to Risk Management Committee / Managing Director, Global Green Chemicals Public Company Limited
- Senior Vice President, Downstream Petrochemical Business, PTT Global Chemical Public Company Limited

**Board member / Management in Non-Listed Company - The Stock Exchange of Thailand : 4**

- Chairman, Thai Fatty Alcohols Company Limited
- Chairman, GGC Biochemicals Company Limited
- Director, GGC KTIS Bioindustrial Company Limited
- Director, Thai Ethoxylate Company Limited

**Positions in Other Company/Organization/Institution / Remarkable Positions : None****Work Experience (in the Last 5 Year) :**

- 2013 – 2018      Director, Executive Director, Chairman of Risk Management Committee and Managing Director, Thai Vegetable Oil Public Company Limited

**Shareholding** : None**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries** : None

## Executives

(as of 31 January 2020)

### Witoon Suewatanakul Managing Director

Date of appointment: 1 July 2019

( Details in Board of Directors Information)

### Mr.Suwat Kamolpanus Age : 56 Deputy Managing Director, Project and Business Development

Date of appointment: 1 January 2020

#### Education / Training :

- B.Eng.(Electrical Engineering), Chulalongkorn University
- MSc in Paper Science and Engineering, Miami University, Oxford, Ohio, USA
- Management Development Program (Mini MBA) Conducted by The Wharton School, University of Pennsylvania under SCG management development program
- Executive Program in Energy Literacy for a Sustainable Future, Class 4, Thailand Energy Academy
- The National Defence Course (Class 61), National Defence College

#### Board member / Management in Listed Company - The Stock Exchange of Thailand : 1

- Deputy Managing Director, Project and Business Development, Global Green Chemicals Public Company Limited

#### Board member / Management in Non-Listed Company - The Stock Exchange of Thailand : 3

- Chairman, Thai Eastern Pulp and Paper Co., Ltd.
- Director, AT Energy Solution Co., Ltd.
- Director, GGC KTIS Bioindustrial Company Limited

#### Work Experience (in the Last 5 Years) :

- 2017 - 2019 Chairman of Renewable Energy Industry Club, The Federation of Thai Industries
- 2014 - 2017 Managing Director, Alternative Energy Business

Shareholding : None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None

### Mr. Nikom Kasempura Age : 58 Deputy Managing Director, Operational Excellence

Date of appointment: 1 July 2019

#### Education / Training :

- B.S.Tech.Ed. (Electrical Engineering), King Mongkut's University of Technology North Bangkok
- B.Econ. (Economics), Sukhothai Thammathirat Open University
- B.P.H. (Occupational Health and Safety), Sukhothai Thammathirat Open University
- M.P.H. (Industrial Environment Management), Sukhothai Thammathirat Open University

#### Board member / Management in Listed Company - The Stock Exchange of Thailand : None

- 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) :**

- 2018 – 2019 Vice President, SHE Management, PTT Global Chemical Public Company Limited
- 2015 – 2018 Vice President, SHE standard and Policy, PTT Global Chemical Public Company Limited
- 2013 – 2015 Vice President, Technical and Enhance SHE, PTT Global Chemical Public Company Limited

**Shareholding :** None

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**Ms. Kunakorn Witthayapaisarn**

**Age : 53**

**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 Companies – The Stock Exchange of Thailand : 1**

- Vice President, Internal Audit, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand : None**

**Work Experience (in the Last 5 Years) :**

- 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. Uramanee Puttong**

**Age: 56**

**Vice President, Corporate Affairs and Corporate Secretary**

**Date of appointment :** 1 January 2018

**Education / Training :**

- M.A. (Communication), Ramkhamhaeng University
- B.A. (Management), Valaya Alongkorn Rajabhat University under the Royal Patronage
- Director Accreditation Program (DAP) Class 155/2018, Thai Institute of Directors Association (IOD)
- Advances for Corporate Secretaries, Class 2/2017, Thai Listed Companies Association
- Company Secretary Program (CSP) Class 24/2007, Thai Institute of Directors Association (IOD)
- Board Reporting Program (BRP) Class 15/2014, Thai Institute of Directors Association (IOD)
- Anti-Corruption: The Practical Guide (ACPG) Class 4/2013, Thai Institute of Directors Association (IOD)
- Modern Public Relations Business Plan (MPR 33), Public Relations Society of Thailand

**Board Member / Management in Listed Companies – The Stock Exchange of Thailand : 1**

- Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemical Public Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand :** None

**Work Experience (in the Last 5 Years) :**

- 2018 – 2019 Vice President, Corporate Affairs and Corporate Secretary, Global Green Chemical Public Company Limited
- 2011 – 2017 Division Manager, Corporate Governance and Corporate Secretary, PTT Global Chemical Public Company Limited

**Shareholding** 1,000 Shares (0.0000976% as of 31 December 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**Ms. Wanlapa Sophiskhaunkhant** **Age : 40**  
**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
- Director Certification Program (DCP) Class 270/2019, Thai Institute of Directors Association (IOD)

**Board Member / Management in Listed Companies – The Stock Exchange of Thailand : 1**

- VicePresident, Corporate Finance and Accounting, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand: 3**

- Director, GGC Biochemicals Company Limited
- Director, Thai Fatty Alcohols Company Limited
- Director, Thai Eastern Top Seeds Oil Company Limited

**Work Experience (in the Last 5 Years)**

- 2014 – 2015 Division Manager, Strategic Partnership and Business Administration, International Business Administration Unit, PTT Global Chemical Public Company Limited

**Shareholding** : None

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries :** None

**Mr. Apichart Kullavanijaya****Age: 45****Vice President, Corporate Strategy and Acting Vice President, Business and Product Development****Date of appointment :** 1 July 2016**Education / Training :**

- B.Eng. (Industrial Engineering), Kasetsart University
- Petrochemicals Market and Forecast
- Joint Venture Development Framework
- Enterprise Risk Management (ERM)
- Internal Audit ISO 14001 and Environment Auditing (U.K.)
- Director Certification Program (DCP) Class 271/2019, Thai Institute of Directors Association (IOD)

**Board Member / Management in Listed Companies - The Stock Exchange of Thailand : 1**

- Vice President, Corporate Strategy and Acting Vice President, Business and Product Development, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies - The Stock Exchange of Thailand : 1**

- Director and Managing Director, GGC Biochemicals Company Limited

**Work Experience (in the Last 5 Years) :**

- 2011 – 2016 Division Manager, Portfolio Management, 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 : 47****Vice President, Supply Planning and Feed Sourcing****Date of appointment:** 1 December 2019**Education / Training :**

- M.B.A, Chulalongkorn University
- B.Eng. (Chemical Engineering), Chulalongkorn University

**Board member / Management in Listed Company - The Stock Exchange of Thailand : 1**

- Vice President, Supply Planning and Feed 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) :**

- June – November 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 Director, Oil Trading Business and Acting Senior Manager ,Crude Oil Procurement and Trading Division, Bangchak Corporation Public Company Limited
- April – September 2006 Senior Manager, Supply Planning Division and Acting Senior Manager, Crude Oil Procurement and Trading Division, Bangchak Corporation Public Company Limited
- 2001 – 2006 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 Deemungmee**

**Age : 46**

**Vice President, Marketing and Commercial**

**Date of appointment:** 1 April 2019

**Education / Training :**

- M.B.A. (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 Commercial, 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) :**

- April – November 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

**Ms. Narungsi Kaiwikaigumnurd**

**Age: 52**

**Vice President , HR and Corporate Support**

**Date of appointment:** 15 December 2018

**Education / Training :**

- B.A. (English Literature), Srinakharinwirot University
- M.P.A. (Public Administration), National Institute of Development Administration

**Board Member / Management in Listed Companies – The Stock Exchange of Thailand : 1**

- Vice President, HR and Corporate Support, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand: None**

**Work Experience (in the Last 5 Years) :**

- 2014 – 2018 Vice President, Learning & Development, PTT Global Chemicals Public Company Limited

Shareholding : None

Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries : None

**Mr.Thodsaphorn Phienchob**

**Age : 52**

**Vice President, Operations**

**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**

**Age : 41**

**Vice President, Process Technology**

**Date of appointment :** 31 January 2020

**Education / Training :**

- M.B.A., 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 Companies – The Stock Exchange of Thailand : 1**

- Vice President, Process Technology, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies – 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. Sayan Saesue****Age : 48****Vice President, Engineering and Maintenance****Date of appointment :** 1 October 2015**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 Companies – The Stock Exchange of Thailand : 1**

- Vice President, Engineering and Maintenance, Global Green Chemicals Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand: None****Work Experience (in the Last 5 Years) :**

- 2015 – 2019 Vice President, Operations, Global Green Chemical 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 : 50****Vice President, Reporting to the Managing Director****Date of appointment :** 1 October 2016**Education / Training :**

- M.A. (Economics), Kasetsart University
- B.Eng. (Chemical Engineering), Kasetsart University

**Board Member / Management in Listed Companies – The Stock Exchange of Thailand : 1**

- Vice President, Reporting to the Managing Director, Global Green Chemicals Public Company Limited

**Board Member / Management in Non-listed Companies – The Stock Exchange of Thailand : None****Work Experience (in the Last 5 Years) :**

- 2018 – 2019 Vice President, Engineering and Maintenance / Project Management, Global Green Chemicals Public Company Limited
- January – July 2019 Director, GGC KTIS Bioindustrial Company Limited
- 2018 – 2019 Director, Thai Eastern Top Seeds Oil Company Limited
- 2016 – 2018 Vice President, Projects, Global Green Chemicals Public Company Limited

**Shareholding**

: 33,000 Shares (0.00322% as of 31 December 2019)

**Family Relationship with other Directors, Executives, Major Shareholders of GGC or its Subsidiaries**

: None

## Vice President appointed as Executives of GGC's Subsidiaries and Joint Venture

### 1. Mr. Piya Suri

Vice President, Reporting to the Managing Director

Secondment as Managing Director Thai Ethoxylate Company Limited

### 2. Mr. Yothin Budyochuntho

Vice President, Reporting to the Managing Director

Secondment as Managing Director GGC KTIS Bio Industrial Company Limited

## Abbreviation

### Definitions

SET	The Stock Exchange of Thailand
The Company either	(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
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
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
GC	PTT Global Chemical Public Company Limited
Glycol	GC 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
VNT	Vinythai Public 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 Alcohols	Fatty 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 can be 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

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