

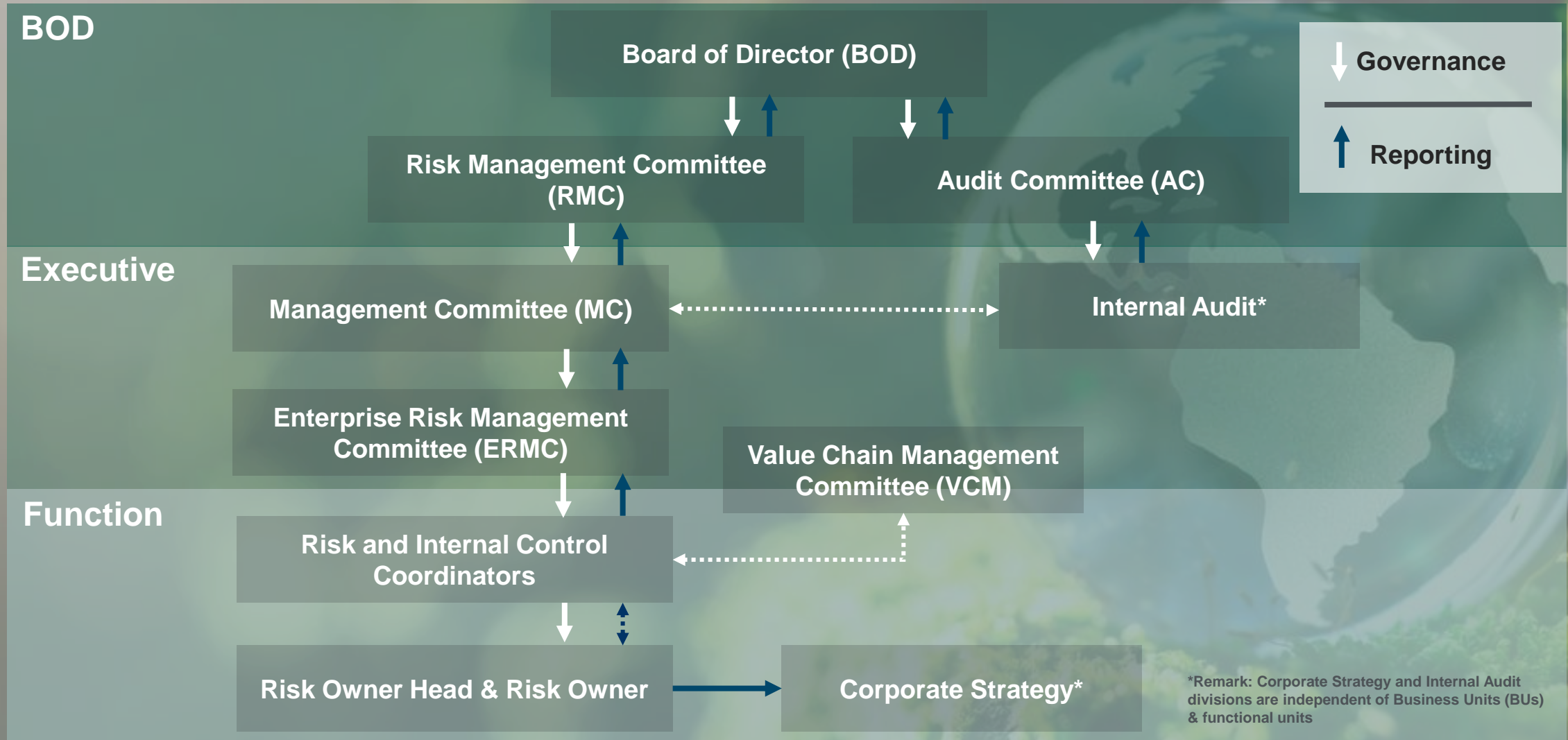
Risk Management Process



Global Green Chemical Public Company Limited

Date June 2023

Risk Management Framework



Risk Management Process

GGC assesses the business environment by analyzing both internal and external factors. Our evaluation includes trends in the economy, society, politics, technology, industry, and competitive landscape, among other relevant factors. Through this process, we identify potential risks for our clients, including current risks, future risks, and emerging risks.

In addition, **GGC has integrated the company's strategic planning and targets into the risk assessment process**, ensuring effective management of all identified risks. The risks have been classified into different perspectives, making it easy to operationally cascade and enhance risk tolerance. These perspectives include Strategic, Business, Operational, and Financial.

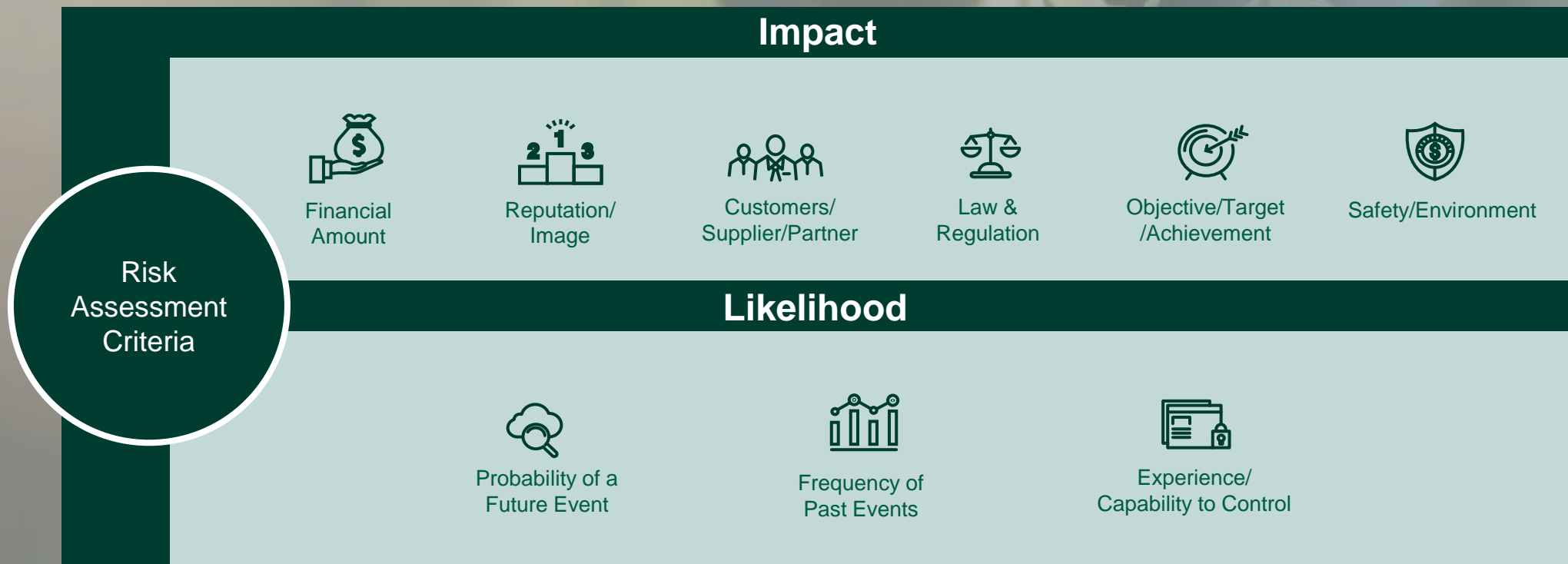
Risk Factors	Risk Perspectives
<p>Business as Usual Risk Factors</p> 	<p>Strategic</p> <p>Market</p> <p>Operation</p> <p>Compliance</p> <p>Sustainability</p>
<p>Strategic Risk Factors</p> 	<p>Competitiveness</p> <p>Growth</p> <p>Sustainability</p>

Risk Assessment Criteria – Impact & Likelihoods

GGC has established risk criteria, encompassing both **likelihood** and **impact**, which helps the Company assess and prioritize potential risks effectively. The impact of risk determines the level of its consequences, while the likelihood indicates its probability of occurrence. GGC has created a comprehensive and dependable **risk criteria matrix** that clearly outlines the levels of likelihood and impact. This system enables us to efficiently allocate resources and make informed decisions that are grounded in data and analysis.

Impacts – GGC has divided and prioritized the severity of risk impact into 5 levels. The risk aspects related to business operations have been categorized as follows: Financial Amount, Reputation/Image, Customer/Supplier/Partner, Law & Regulation, Objective/Target/Achievement, and Safety/Environment.

Likelihoods – GGC has divided the severity of likelihood impact into 5 levels. The risk aspects related to business operations have been categorized as follows: Probability of Future Events, Frequency of Past Events, and Capability to Control / Experience



Risk Criteria & Prioritization

Prioritization of identified risks, including mitigation actions

Impact	Other Impact: Reputation, Target Achievement, Customer/Supplier Behaviors, Law and Regulation Violations			
	1	2	3	4
	0% < x < 1%	1% ≤ x < 4%	4% ≤ x < 10%	x ≥ 10%
	L11	L21	M31	M41
	L12	M22	M32	H42
	M13	H23	H33	E43
	M14	H24	E34	E44

Risk Level:	Probability			
	Rare	Unlikely	Possible	Likely
Extreme				
High				
Medium	0% < x < 1%	1% ≤ x < 10%	10% ≤ x < 50%	x ≥ 50%
Low				

Likelihood

Risk Prioritization

Risk Matrices allow GGC to prioritize identified risks effectively and develop appropriate mitigation actions based on the severity and likelihood of each risk.

The example of “**High Risks**” (the risks assessed as either “Extreme” or “High” level on the risk matrices) are listed below:

Business as Usual Risk Factor

- **Growth Project Execution Risk**
→ Risk associated with key GGC’s project risks
- **Price & Spread Volatility Risk**
→ Risk associated with sales and marketing
→ Risk associated with value chain management
- **Sale Volume Risk**
→ Risk associated with sales and marketing
- **Supply Chain Management**
→ Risk associated with value chain management
- **Foreign Exchange Rate**
→ Risk associated with currency exchange rates

Strategic Risk Factors

- **Operational Excellence**
→ Risk associated with operating and plant efficiency and reliability
- **Sustainable Sale & Market**
→ Risk associated with sales and marketing
- **Growth Project Execution Risk**
→ Risk associated key GGC’s project risks
- **High Value Product & Market Development**
→ Risk associated with sales and marketing



Risk Prioritization – High Risks

Descriptions of business impact and mitigation actions of the high risks

Risk associated with key GGC's project risks

Business Impact

One of GGC's significant investments is the Nakhonsawan Biocomplex Phase 2 project, which involves constructing infrastructure, power and steam generating systems, and water supply and treatment systems to support the growth of chemical and bioplastic industries as part of our corporate growth plan. However, this project is susceptible to external uncertainties and risks, including the Russian-Ukraine conflict and a possible global recession.

Mitigation

- Close monitoring to identify possible changes, especially those on market supply capacity.
- Continuously monitoring international trade policies, trade barriers policies, energy policies, and alternative-energy promotion policies toward net zero emissions and carbon emission reduction.
- Conducting a preliminary study on market demand of business partners and target groups.
- Conducting studies on other product substitutes and market alternatives as possible choices in case of investment project failure.

Risk associated with sales and marketing

Business Impact

Sales and marketing risks are mostly beyond GGC's control and significant to its performance. The volatility of market situations and feedstock prices, along with the uncertain policy on biodiesel composition, pose significant challenges. Incorporating alternative, cost-effective feedstock options should be considered to maintain a desirable spread between product prices and feedstock prices.

Mitigation

- The management committee monitors market trends and seeks alternative materials for fair pricing of feedstock and products. Weekly pricing updates are provided.
- Commercial arrangements and agreements with various business partners are made in both short and long terms to diversify risk exposure.
- Developing a forecast capability on market and feedstock prices by analyzing integrated quarterly forecasts of product sales and domestic feedstock prices of crude palm oil (CPO) closely.
- Working closely with the business and product development department to develop new products under the Home and Personal Care Platform (HPC Platform) to pursue new businesses and add value to the Fatty Acid product line.
- Increasing market shares of Fatty Acid manufactured under the Roundtable on Sustainable Palm Oil (RSPO) standard.
- Organizing marketing promotion to strengthen relations and confidence among customers.



Risk Prioritization – High Risks

Descriptions of business impact and mitigation actions of the high risks

Risk associated with value chain management

Business Impact

The Company is significantly affected by the price volatility of feedstock, palm oil, and crude palm kernel oil, which poses a major risk to its costs. The government announces the price reference, which is beyond GGC's control. Additionally, external factors such as weather conditions and climate change have an impact on supply volumes and prices. Consequently, the Company's risk management strategy concentrates on the entire value-chain under supply chain management, including feedstock management, logistics, and warehouse management, rather than any specific supply issue.

Mitigation

- Charging Value Chain Management Committee (VCM) to oversee feedstock and inventory management and external factors affecting the industry within RMC's risk management framework.
- Moving procurement agreements of palm oil and crude palm kernel oil into long-term agreements to minimize risk exposure to price volatility.
- Minimizing the dead stock by reducing the number of tanks for storing feedstock and raw materials ready for production.
- Abolishing the use of tanks for unnecessary products and replacing them with the delivered-duty-paid (DDP) or door-to-door delivery after sale.
- Managing advance delivery of feedstock during planned maintenance shutdowns.

Risk associated with currency exchange rates

Business Impact

Causing damage to the overall performance of the Company, recognizing that purchases and sales of products are also made in the US dollar (USD) currency and that GGC cannot avoid being exposed to financial exchange risks between foreign and Baht currencies.

Mitigation

- Entering financial arrangements with commercial banks, including forward contracts or options to provide financial risk protection.
- Managing overseas revenues and expenses in US dollars (natural hedging) to avoid unnecessary exchange rate risks.
- Seeking other financial tools from commercial banks to prevent financial risks borne by volatile exchange rates.
- Putting up USD forward sales contract to cover up invoices with excess value by selling the USD in advance at a higher rate than recorded in the accounting record to minimize foreign exchange losses in the profit/loss account.
- Closely monitoring exchange rate markets and exercising hedging with available financials tools.



Risk Prioritization – High Risks

Descriptions of business impact and mitigation actions of the high risks

Risk associated with operating and plant efficiency and reliability

Business Impact

Ineffective management practices can lead to disturbances in the production process, putting the safety of individuals and property at risk, and possibly causing environmental harm. Additionally, such practices can have a cascading impact on stakeholders throughout the supply chain, adversely affecting their operations. It is imperative to implement sound management strategies to avoid such negative consequences and ensure the smooth functioning of the organization.

Mitigation

- Developing a system to effectively manage the reliability and efficiency of machine.
- Integrating digital technology and data analytics to sharply increase the precision of the entire system and therefore increases process efficiency and production cost control as well as the Company's competitiveness.
- Consistently encouraging safety awareness and adherence to operating standards among all employees, including Process Safety Management (PSM) standards, energy consumption reduction plans, work safety rules, and waste reduction plans.



Thank you