

Supply Chain Management

Supply chain management is one of the key strategies for operating a sustainable business in order to be efficient in providing quality, timely, and economically cost-effective products or services both the budget and the using of operating resources of the company, with partner risk management and strategic purchasing and green procurement under the principle of operating with good governance principles, anti-corruption, labor care, safety, social responsibility and environmental stewardship.

Supply Chain Management Policy

1. The Procurement must be performed with honesty, fairness, and verifiable to management of supplier screening and auditing to be accurate, transparent in accordance with the good corporate governance principles, by operating with the relevant laws in screening business partners to carry out activities with the organization.
2. Procurement of goods and services must comply with the Company's Quality, Environment, Occupational Health, and Safety Policy.
3. Procurement has clear rules and procedures in accordance with the laws and regulations of society.
4. Procurement of the supplies is done in the best interest of the TTW's Company Group.
5. Supporting Green Procurement of products and services.
6. Strengthen and maintain relationships with business partners and stakeholders for the Company's business development.

Supplier Code of Conduct : SCOC

as published on the website

<https://www.ttwplc.com/storage/about/policy/20240206-ttw-supplier-coc-en.pdf>

Supply Chain Management Strategies in the Year 2024

Strategies	Guidelines / Measures	Actions Taken
1. Collaboration (Synergy)	The centralized procurement by the TTW Group's center has led to high order volumes, enhancing negotiation power.	The centralized procurement by the TTW Group's center throughout the year 2024 has resulted in the acquisition of goods or services in bulk, combining the order volumes of TTW Public Company Limited, Pathum Thani Water Co., Ltd., and Thai Water Operations Co.,Ltd. This has contributed to enhancing negotiation power and reducing operational costs.
2. Green Procurement	Procurement of products or services that are certified with environmental standards or have a 3 R (Reduce, Reuse, Recycle) policy.	The company sources chemicals from partners that are in the process of implementing the ISO 14001 standard system. Additionally, consumable products like document paper, toilet paper, and garbage bags incorporate recycled materials. Energy-saving items such as LED bulbs and environmentally friendly air conditioner refrigerant type R410A are also procured.
3. Risk mitigation	Mitigating risks in the supply chain by diversifying suppliers through purchasing products from multiple partners, aiming to prevent dependencies and consistently seeking new suppliers.	The company manages the risk related to dependency on a single supplier for chemicals used in water production and wastewater treatment. This is achieved by adopting a procurement strategy that involves purchasing products from multiple suppliers, distributing the proportion based on appropriateness, and enhancing negotiation power.
4. Process Excellence	The company is enhancing work processes to reduce redundancy and leveraging technology such as Cloud Systems and Software to improve efficiency both internally and in collaboration with partners.	The company conducts a review of its work processes to enhance efficiency, applying the principles of Kaizen (Eliminate, Combine, Rearrange, Simplify). Additionally, it utilizes cloud technology and Microsoft programs to create an online performance evaluation system for partners. Users of the company's products or services assess the performance of partners, and the evaluation data is stored, recorded, and processed for continuous improvement of partner capabilities.

Strategies	Guidelines / Measures	Actions Taken
5. Potential Enhancement	Explore the potential for partner development by dispatching a company representative to conduct an ESG Audit. This audit focuses on controlling the quality and logistics of trading partners, emphasizing environmental, social, and corporate governance aspects. The goal is to encourage and propel continuous improvement and development.	The company sends representatives to enhance the capabilities of partners through Environmental, Social, and Governance (ESG) audits. These audits cover quality control of products or services, transportation practices, and communication. Additionally, the company promotes and encourages partners to develop themselves and implement environmental work measures.

Performance Goals for year 2024

Detail	Goal	Operating results for 2023	Results compared to goals
1. Receiving goods on time as agreed with the buyer and seller or by the date specified in the purchase order	Not less than 90 %	98 %	achieve goal
2. Control the amount of chemical reserve (Liquid alum) The Bang Len Water Treatment Plant	<ul style="list-style-type: none"> ● Maximum volume (Max) not more than 633.60k Kilogram ● Minimum volume (Min) not less than 264 k Kilogram 	<ul style="list-style-type: none"> ● Maximum volume (Max) 599.28 k Kilogram ● Minimum volume (Min) 353.76 k Kilogram 	achieve goal
3. Control the amount of chemical reserve (Liquid alum) The Pathum Thani Water Treatment Plant	<ul style="list-style-type: none"> ● Maximum volume (Max) not more than 580.80k Kilogram ● Minimum volume (Min) not less than 234.60k Kilogram 	<ul style="list-style-type: none"> ● Maximum volume (Max) 561 k Kilogram ● Minimum volume (Min) 364.32 k Kilogram 	achieve goal

Long-Term Goals (Year of 2024 – 2026)

100 %	5 %	100 %	None
Critical Tier 1 Suppliers that engage in transactions have been informed and agreed to adhere to the ethical standards of the company.	Reducing costs for the company by purchasing products or services below budget.	The company will conduct ESG risk assessments with Critical Tier 1 Suppliers, evaluating a minimum of 5 suppliers annually.	There have been no complaints regarding the work or ethics from Critical Tier 1 Suppliers.

The Significant Changes and Developments Related to the Review of Policies, Practices, and Supply Chain Management in the Past Year

- Procurement of goods or services must be carried out with honesty, fairness and can be verified to ensure that the management of screening and inspecting suppliers is accurate and transparent in accordance with corporate governance principles of the good governance and corporate governance. The operations are in accordance with relevant laws in screening suppliers to carry out activities with the organization.
- Procurement of goods or services must comply with quality and environmental policies, including policies on safety, occupational health, and working environment.
- Procurement of goods or services has clear criteria and procedures, by complying with the laws and regulations of society.
- Purchasing supplies together for joint operations to the greatest benefit of the TTW Group of Companies.
- Join in supporting environmentally friendly procurement.
- Strengthen and maintain relationships with suppliers and stakeholders for sustainable business development of the company.

Suppliers Management

In 2024, the company collaborated with partners/suppliers to sustainably conduct the following operations :

1. Enhancing the procurement and contracting process in collaboration with partners/suppliers and/or users.

1.1 The company has conducted training on 'Workplace Safety within the Company' to provide knowledge and understanding for partners. This aims to ensure that partners are well-prepared and consistently use safety equipment during work hours.

1.2 The company's warehouse unit has conducted training for partners to familiarize them with the guidelines for handling and loading goods, especially chemicals that are essential raw materials in the production of water supply.

1.3 The company assesses feedback from end-users and communicates the results back to partners, providing guidance based on user-specified recommendations. This allows partners to make improvements and enhance the efficiency of their processes.

1.4 The company has standardized the descriptions of parts in the inventory of every water production plant. This ensures uniform nomenclature according to a common standard.

2. Collaborative seminars and training sessions with partners/suppliers.

The company organizes activities between the company and suppliers to create participation and develop knowledge and skills regularly every year. By training and practicing to stop chlorine leaks with KIT-B equipment, maintenance of the chlorine system and use breathing equipment (Self-Contained Breathing Apparatus : SCBA) for employees, suppliers/deliverers/contractors have knowledge and understanding of the law, standards and regulations regarding chlorine gas, using liquid chlorine from a container safely, prevention and action in the event of an emergency (In case of chlorine leak).

Sustainable Supply Chain Management Process

1. Supplier Code of Conduct : SCOC

The company has implemented purchasing practices through regular reviews of supplier code of conduct (SCOC) to foster sustainable development. This involves adhering to principles of environmental, social, and governance (ESG), beyond business potential. The company emphasizes the importance of conducting business sustainably and has policies in place to prevent and counteract corruption. The supplier's code of conduct is categorized into four areas : business ethics, labor and human rights practices, safety and occupational health, and environmental management as follows :

Supplier Code of Conduct : SCOC			
Business Ethics	Labor Practices and Human Rights	Occupational Health and Safety	Environmental Management
(Governance : G)	(Social and Governance : SG)		(Environmental : E)
<ul style="list-style-type: none"> ✓ Preventing Corruption and Conflicts of Interest ✓ Preventing Anti-competitive Practices 	<ul style="list-style-type: none"> ✓ Forced Labor ✓ Child Labor ✓ Working Conditions (e.g., working hours, physical/mental requirements of the workplace, wages, benefits) ✓ Non-discrimination and Harassment ✓ Freedom of Association and Collective Bargaining 	<ul style="list-style-type: none"> ✓ Occupational Health and Safety of Employees, Contractors, and Stakeholders 	<ul style="list-style-type: none"> ✓ Greenhouse Gas Emissions and Energy Use ✓ Pollution Prevention and Waste Management ✓ Resource Efficiency ✓ Biodiversity Conservation or Environmental Care for Water, Soil, and Air Systems, such as forest conservation, waste management, and reducing electricity consumption and greenhouse gas emissions.

2. Suppliers Screening and Analysis

2.1 Suppliers Screening Criteria

The company selects and screens suppliers based on the sustainability standards of the organization. This ensures that suppliers can deliver materials or services that meet the expected standards through a self-assessment questionnaire. The questionnaire covers issues outlined in the company's policies, practices, and procurement regulations as **“The criteria for screening both existing and new suppliers”**. The criteria for screening both existing and new suppliers include :

- Business Capability
- Governance/Corporate Responsibility
- Social Responsibility
- Environmental Responsibility

2.2 Suppliers Analysis

The company establishes criteria for analyzing general suppliers and critical suppliers, including direct critical tier 1 suppliers and indirect critical non-tier 1 suppliers. The criteria are as follows :

2.2.1 Critical Tier 1 Suppliers

- Suppliers directly provide chemical raw materials for the company's product manufacturing.
- Suppliers with high contract volumes, having an annual purchasing value of no less than 10 million baht.
- Suppliers are directly classified in the Approved Vendor List of the company, either as the owner of the product brand or the exclusive representative with sole representation in the market.

2.2.2 Critical Non-Tier 1 Suppliers

- Suppliers indirectly provide chemical raw materials for the company's product manufacturing.
- Suppliers with high contract volumes, having an annual purchasing value of no less than 10 million baht.
- Suppliers are indirectly classified in the Approved Vendor List of the company, either as the owner of the product brand or the exclusive representative with sole representation in the market.

Note : Critical Non-Tier 1 Suppliers refer to suppliers delivering goods or services to Critical Tier 1 Suppliers, playing a crucial role in the quality of the company's products.

2.2.3 General Suppliers

- General Suppliers refer to regular suppliers who do not fall within the criteria of Critical Tier 1 Suppliers and Critical Non-Tier 1 Suppliers.

2.3 Classification and Quantity of Suppliers

In 2024, the company engages with **a total of 1,456 suppliers**, categorized into two types :

1) Critical Suppliers and General Suppliers

Type of Suppliers	2023 (Suppliers)	2024 (Suppliers)	Percentage Breakdown of Total Purchases in 2024 (Percent)
1. Critical Suppliers			
1.1 Critical Tier 1 Suppliers	56	61	32
1.2 Critical Non-Tier 1 Suppliers	0	0	0
2. General Suppliers	1,263	1,395	68
(Not significant suppliers as defined in 1.1 and 1.2)			
Total	1,319	1,456	100

Note : The 61 direct significant suppliers come from both chemical suppliers and those listed in the Approved Vendor List for the year 2024. It is important to note that the total of 1,456 suppliers is derived from the entire Vendor List, comprising suppliers with transactions in 2024 and those without. The proportion to the total purchase volume is based solely on the purchase amount for the year 2024.

2) Local and regional suppliers

Type of Suppliers	Unit	2023 (Suppliers)	2024 (Suppliers)	Percentage Breakdown of Total Purchases in 2024 (Percent)
1. Local suppliers operating in the business areas of 6 provinces (Nakhon Pathom, Samut Sakhon, Pathum Thani, Ayutthaya, Chonburi, and Rayong)	Suppliers	83	89	19
2. Suppliers in other areas (excluding local suppliers as per section 1)	Suppliers	256	279	81
Total	Suppliers	339	368	100

Note : The total number of suppliers, 368, includes both local and non-local suppliers. The proportion of total purchases is based on transactions with these suppliers in the year 2024 only.

3. Promoting Critical Suppliers to Adhere to Supplier Code of Conduct

The company actively promotes adherence to the **Supplier Code of Conduct (SCOC)** among critical suppliers to foster sustainable business collaboration.

3.1 Business Operation Plan with Critical Suppliers

Type of Critical Suppliers	Operation Plan in 2024	Results of Operations for the Year 2024
Critical Tier 1 Suppliers	1) Acknowledged and agreed to adhere to the trade ethics of all 61 critical suppliers (100 percent). 2) Conducted Environmental, Social, and Governance (ESG) audits for 15 out of 61 suppliers (25 percent) to assess business sustainability.	1) Acknowledged and agreed to adhere to the trade ethics of all 61 critical suppliers (100 percent). 2) Conducted Environmental, Social, and Governance (ESG) audits for 9 out of 61 suppliers (15 percent) to assess business sustainability.
Critical Non-Tier 1 Suppliers	In the future, if there are Critical Non-Tier 1 Suppliers, the company will proceed according to the following plan : 1) Acknowledge and agree to adhere to the trade ethics of the company's critical suppliers or relevant direct trading partners, 100 percent. 2) Conduct Environmental, Social, and Governance (ESG) audits through relevant direct trading partners, 50 percent.	In the year 2024, the company had no Critical Non-Tier 1 Suppliers.

3.2 ESG Risk Assessment with Critical Suppliers

The company has implemented measures for assessing ESG risks (Suppliers ESG Program) and is overseen by senior management through monthly reporting cycles. The guidelines are as follows :

Type of Critical Suppliers	Type of Assessment	Reasons
1. Critical Tier 1 Suppliers	1.1 (On-site ESG Audit)	For the group of direct trading suppliers in the chemical sector, they are considered critical due to their direct impact on the water treatment and wastewater treatment processes, which are core business activities. On-site inspections are conducted covering environmental, social, and corporate governance aspects (ESG) to promote and stimulate continuous development of operational processes by the suppliers.
	1.2 Assessment by Interview	For other non-chemical critical direct trading suppliers, such as factories producing spare parts or distributors of imported spare parts, which may have limitations for on-site inspections, the company utilizes questionnaire surveys and telephone interviews with representatives of these trading suppliers instead.
2. Critical Non-Tier 1 Suppliers	Questionnaire	In the year 2024, the company had no any critical non-tier 1 suppliers. In the future, if there are critical non-tier 1 suppliers, the company will use a method of sending questionnaires through direct critical trading partners to request cooperation in assessing themselves and sending the data back to the company.

In the past, the company conducted a business potential risk assessment alongside an Environmental, Social, and Governance (ESG) risk assessment. The results of these assessments were used to review and establish business operation strategies, aligning with the assessed risks to develop trading partners accordingly. In the year 2024, the company assessed ESG risks with trading partners as follows :

Type of Critical Suppliers	Supplier	Percent	Revised and Amended
Total Suppliers	1,456	100	
1. Critical Direct Trading Suppliers (Direct trading partners with High/Urgent ESG risks)			
▪ Economic Aspect	9	0.62	9 Suppliers, 100%
▪ Social Aspect	9	0.62	9 Suppliers, 100%
▪ Environmental Aspect	9	0.62	9 Suppliers, 100%
2. Critical Non-Tier 1 Suppliers (Non-tier 1 suppliers with high/urgent ESG risks)			
▪ Economic Aspect	0	0	-
▪ Social Aspect	0	0	-
▪ Environmental Aspect	0	0	-

3.3 Supplier Risk Screening Tools

The company has developed tools for screening supplier's risks, categorizing suppliers based on industries, each with varying levels of risk as follows:

3.3.1 Chemical Industry Suppliers, this group carries risks associated with price fluctuations in chemicals, primarily linked to petrochemicals, which are heavily influenced by changes in oil prices. Additionally, importing chemicals exposes them to exchange rate fluctuations. Given the importance of chemicals in water treatment and wastewater treatment processes, this group is deemed critical by the company and categorized as direct critical suppliers. The company is inclined to conduct on-site ESG assessments or visit factories for close supervision.

3.3.2 Suppliers in other industries, this group entails lower price fluctuation risks compared to the chemical industry. However, there are still possibilities of being affected by exchange rate fluctuations or transportation issues, albeit less frequently.

In addition, risks are considered of company's screening process for Critical Tier 1 suppliers such as country specific risk, sector specific risk and company specific risk.

Criteria for Visiting Key Trading Partner Facilities

The company establishes criteria for conducting on-site Environmental, Social, and Governance (ESG) audits using the ESG Health Check guidelines published by the Stock Exchange of Thailand, along with an Audit Checklist following ISO9001 standards.

With a focus on Critical Tier 1 Suppliers who deliver chemicals used in water treatment and wastewater treatment processes, deemed core business activities, the organization plans monthly audit appointments tailored to the readiness of each critical supplier. The company sets out a plan to review both Critical Tier 1 Suppliers and General Suppliers, scheduling audit appointments for both types as follows :

Year 2023	Year 2024	Year 2025
5 Person	10 Person	15 Person

In this regard, suppliers found non-compliant with ESG guidelines or ISO9001 standards are required to submit a Corrective Action Plan to the company for further action.

Visiting Key Trading Partners/Suppliers

In the year 2024, the company conducted On-site ESG Audits for both Critical Tier 1 Suppliers and General Suppliers at their facilities. These audits were conducted by company personnel to promote and enhance process improvements, product and service development, fostering confidence and good relationships in business operations between the company group and suppliers. The focus areas of the ESG Audits, which could be utilized for supplier evaluations, were defined as follows :

1. Economic/Corporate Governance Aspect

Developing operational capabilities, such as product or service quality, business ethics, and handling complaints and feedback.

2. Social Aspect

Promoting community engagement in the vicinity of business/service areas, ensuring quality of life, safety, and public health, and respecting human rights.

3. Environmental Aspect

Procuring primary materials or services responsibly without negative environmental impact, managing environmental standards according to ISO 14001, utilizing energy efficiently, and reducing greenhouse gas emissions.

With the following list of Critical Tier 1 Suppliers who have undergone On-site ESG Audits at their facilities :

List of Critical Suppliers	Type of Business	Results of On-site ESG Audit		
		Economy/ Governance	Social	Environment
Suppliers no. 1	Water Quality Analysis Service	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 2	Chemicals in Lab Room Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 3	Alum Water Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 4	Valves and Gates Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 5	Pump Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 6	Valve Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 7	Polymer Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 8	Electrical Equipment Selling	Passed the criteria	Passed the criteria	Passed the criteria
Suppliers no. 9	Chemicals Selling	Passed the criteria	Passed the criteria	Passed the criteria

In 2024, the company had no disputes, complaints, or grievances regarding ethics, integrity in business operations, or any violation of human rights or laws against its trading partners. Simultaneously, the trading partners did not raise any disputes, complaints, or grievances regarding ethics, integrity in business operations, or any violation of human rights or laws against the company.

Additionally, the company provides opportunities for trading partners or stakeholders impacted by business operations to offer suggestions or file complaints through the following channels :

Post

Office of Managing Director, TTW Public Company Limited, 30/130 Moo 12 Buddha Monthon Sai 5 Road, Raikhing, Sampran, Nakhon Pathom Province, 73210

Email

cg@ttwplc.com

Telephone

(+622) 019-9490-3 (+622) 019-9484-9 ext. 1103, 1106

In the event that a trading partner fails to comply with the ESG requirements as per the Supplier Code of Conduct (SCOC), resulting in adverse effects on operations or causing damages in the delivery of goods or services, the company reserves the right to temporarily suspend procurement activities or remove the trading partner from its registry. The company will provide advance notice to the trading partner regarding the suspension. If the trading partner remains indifferent, the company may proceed with further suspension of procurement activities.

Training Sessions on Procurement Processes and Adherence to ESG Guidelines will be Conducted with Various Departments.

The company communicates with internal departments to ensure understanding of procurement processes and compliance with ESG guidelines, particularly among operational units such as water treatment plants. These units are key purchasers of goods and services within the company, with higher procurement volumes than other departments. Communication occurs on a monthly basis.

Regarding ESG training and communication with suppliers, the company utilizes communication during site visits or on-site supplier evaluations to impart knowledge and understanding of ESG principles. This ensures suppliers are aware of the importance of adhering to these guidelines in their operations.

Promoting Sustainable Business Practices among Suppliers

The company has a policy of treating all suppliers fairly, equitably, and transparently, adhering strictly to the terms, agreements, and contracts. This approach aims to promote and cultivate a sustainable business relationship built on integrity and mutual respect.

The invoicing and cheque receiving procedures for the group of companies are detailed as published on the website.

<https://www.ttwplc.com/en/business-opportunity/billing-and-payment>

The details of the billing and payment process for the group of companies are detailed as published on the website.

<https://www.ttwplc.com/storage/BS-Opp/billing-and-payment/ttw-2559.pdf>

In addition, the company also emphasizes appropriate financial management and regularly communicates with suppliers regarding business status. It maintains sustainable relationships with suppliers to ensure confidence by following established guidelines for dealing with them as follows :

- Drafting terms, agreements, and contracts with all types of suppliers accurately and legally, ensuring fairness, transparency, and non-discrimination.
- Avoiding any fraudulent practices, corruption, or withholding of important information that may harm the suppliers.
- Adhering strictly to the terms, agreements, and contracts made with all types of suppliers, ensuring accuracy and compliance.
- Establishing a rigorous payment system for goods and services to suppliers, including tight procedural controls, thorough verification processes, and robust internal oversight systems, ensuring transparency and timely payment within 30 days after goods/services delivery and invoicing, as specified in the respective agreements with each supplier.