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OUR EARTH

—
自然永續
紙向淨零

2024 SUSTAINABILITY REPORT



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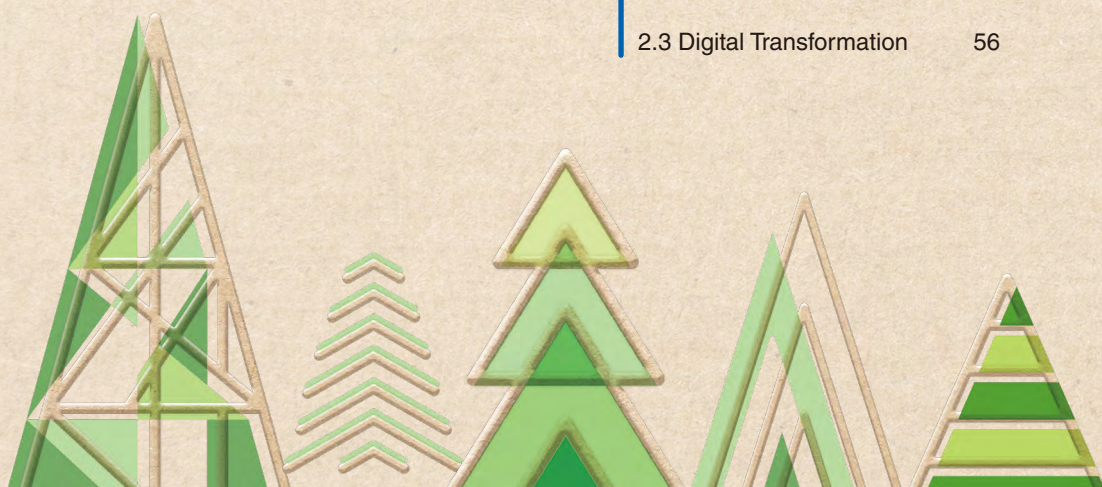
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About this Report

Contact Us

For comments or suggestions regarding CLC or this report, please contact us through the following channels.

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Report Download Link: http://www.clc.com.tw/_upload/files/2024ESG_EN.pdf



CLC Webpage



CLC ESG Webpage



CLC E-Newsletter

Design Concept of the 2024 Sustainability Report



In 2024, CLC marks its 65th anniversary with the Vision of "Sustainable Nature, Paper toward Net Zero," collaborating with internal and external partners and integrating resources to maximize positive influence. CLC advances environmental, ecological, and social benefits through paper as a key net zero solution.

CLC's 2024 Sustainability Report presents stakeholder engagement and sustainability initiatives with transparency and integrity. Since publishing Taiwan's 1st environmental report in the paper industry in 2011, CLC has issued annual sustainability reports since 2013, disclosing economic, environmental, social, and governance goals and results. Through this report, CLC seeks to collaborate with stakeholders to advance a sustainable future—Together for a Greener Future!

Reporting Period

CLC publishes a sustainability report annually. This report covers the period from January 1 to December 31, 2024, with certain information and performance data also referencing 2022 and 2023. The report is available in Chinese and English.

Current Version Release Date: August 2025 (English version released in October 2025)

Previous edition published July 2024

Next edition scheduled for August 2026

Disclosure Boundaries and Scope

This report covers CLC's key operational sites, including all locations in Taiwan—4 paper mills, 7 box plants, and Headquarters—as well as selected sites in Mainland China and Vietnam, representing 99.5% of 2024 consolidated revenue. It presents management and performance in financial, environmental, social, and corporate governance aspects. Financial data are consistent with audited financial statements. Some statistics are sourced from government agencies and relevant websites. Quantitative data of special significance are noted.

Note: The consolidated financial statements include CLC and its subsidiaries. For details, see the [CLC website](#) and the [2024 Annual Report \(P.86\)](#)

Principles of Report Writing and Guidelines

Issuing Unit	Guidelines, Frameworks, Regulations
Global Reporting Initiative (GRI)	GRI Sustainability Reporting Standards 2021 Edition
International Sustainability Standards Board (ISSB)	International Financial Reporting Standards(IFRS) Sustainability Disclosure Standards—IFRS S1 Sustainability-related Financial Disclosures and IFRS S2 Climate-related Disclosures
Sustainability Accounting Standards Board (SASB)	Framework of the Pulp and Paper Products Industry Standards
Financial Stability Board (Financial Stability Board, FSB)	Taskforce on Climate-related Financial Disclosures (TCFD) Framework
United Nations Development Programme (UNDP), United Nations Environment Programme Finance Initiative (UNEP FI), World Wide Fund for Nature (WWF), Global Canopy	Taskforce on Nature-related Financial Disclosures (TNFD) Framework
United Nations (UN)	United Nations Sustainable Development Goals (SDGs), Global Compact Disclosure Points
Financial Supervisory Commission, Ministry of Environment (Taiwan), Ministry of Economic Affairs, Ministry of Transportation and Communications, Ministry of the Interior, Ministry of Agriculture	Reference Guidelines for Identifying Sustainable Economic Activities (2nd Edition)
Taiwan Stock Exchange	Regulations for the Preparation and Submission of Sustainability Reports by Listed Companies

Report Management

Internal Review	1	The Taskforce of Sustainability Committee prepared the draft	2	Content accuracy and integrity reviewed by unit heads	3	Report data consolidation and report writing by the executive secretary of the Sustainability Committee	4	Reviewed by the chairperson of the Sustainability Committee	5	Submitted to the board of directors for approval and issuance
	External Verification	Quality: In April 2025, AFNOR Asia Ltd., an independent third party of the French Standards Association, in accordance with the AA1000AS v3 Type 1 moderate assurance standard. For assurance and verification methods and results, see Appendix – Independent Assurance Statement . Financial data: All financial data has been audited by KPMG, reported in New Taiwan Dollars (NTD), consistent with annual report disclosures. Management systems: All international management systems adopted by CLC, including ISO 9001, ISO 14001, ISO 14064-1, ISO 22000, FSSC 22000, ISO 45001, ISO 50001, ISO 27001, and ISO 14067 for certain products, which have been certified by world-leading certifications bodies, including the BSI, SGS, and DNV GL.								

Message from Top Management

To all partners who care about CLC's sustainable development:

In 2024, amid international instability, intensified US-China competition, and rising geopolitical risks, global economic growth was below expectations. The advancement of AI applications, Digitalization, and the low-carbon transition created new opportunities for industrial transformation. Marking its 65th anniversary, CLC maintained steady progress through collective innovation. We thank all partners for their support and trust, enabling us to advance and achieve Governance Co-Creation of sustainable value.



Chairperson



Innovation 3R PLUS: Nature-based Paper Sustainability Solutions

Since 1959, CLC has advanced 3R PLUS Total-Circulation Technologies, integrating agricultural and forestry resources with product, energy, and water cycles to enhance its circular economy model and low-carbon product benefits. In 2024, CLC achieved stable operation of new capacity in Vietnam, expanded application of eco weed control paper in agriculture, and obtained FSSC 22000 certification for Tayuan Box Plant. ChuPei Paper Mill operated Taiwan's largest biomass cogeneration system, reducing carbon intensity of household products and paperboard by 31.1% and increasing alternative fuel use to 47.6%. Tayuan Paper Mill optimized the recovered bleached pulp line, improving waste food paper container recycling. CLC will continue to drive technological innovation, expand overseas Total-Circulation capacity, construct biogas and biomass energy systems at Houli Paper Mill, and accelerate the third phase expansion in Vietnam. CLC will also increase investment in low-carbon packaging R&D to enhance paper value and support environmental, ecological, and social benefits.

Better Together: Enhancing Smart Manufacturing Competitiveness with Supply Chain Partners

In response to the global trend toward sustainable low-carbon supply chains, building and upgrading the industry talent pool is essential for international competitiveness. CLC adopted the "Better Together" approach, conducted a comprehensive supply chain assessment, and focused on four resilience actions: Low-carbon, Digitalization, Incentives, and Empowerment, with over 15 specific action goals. Key initiatives include supporting recycling operators in source separation for low-carbon and smart operations, introducing an on-site audit mechanism, and establishing the Sustainable Excellence Supplier Award to recognize outstanding supplier performance in sustainability. In 2023, CLC established the first Carbon Neutrality Alliance in the paper industry and developed an industry carbon database to accelerate low-carbon transformation across the supply chain. In 2024, CLC targeted 300 key supply chain partners, advancing a dual-axis Net Zero Intelligent Manufacturing strategy through the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program, integrating resources from industry, government, academia, and research to cultivate internationally competitive green talent and build a resilient, sustainable supply chain for the global net zero transition.

People-centered Workplace Empowered by AI Technologies for Sustainable Manufacturing

CLC identified talent development as critical to long-term sustainability and implemented a 10-year training plan. Through the CLC Talent Academy, 300 internal instructors are systematically trained, each receiving over 48 hours of training annually. CLC offers diverse courses and promotes domestic and international job rotations, emphasizing practical learning to build the smart papermaking 4.0 talent pool.

In 2024, CLC designated the Milestone Year of AI applications, leveraging AI Technologies Empowerment to advance smart manufacturing, improve production efficiency, strengthen energy-saving and carbon reduction monitoring, and optimize CRM customer service management. CLC integrates manufacturing, management, and sales, addresses workforce structure challenges in traditional industries by adopting Digitalization inspection and automated management Technologies, reduces reliance on manual labor, and enhances sustainable smart manufacturing capabilities.

CLC maintains a talent-centric approach, building a diverse and Social Inclusion workplace. The company has implemented annual salary adjustments for 18 consecutive years and developed an internationally competitive green-collar talent pool. CLC continues to improve the work environment, ensuring safety and comfort. In recent years, CLC has promoted the construction and renovation of employee dormitories to enhance post-work quality of life and encouraged participation in club activities to strengthen team cohesion and corporate culture.

Driving a Low-carbon Sustainable Future through Intelligent Manufacturing

Sustainability risks are a critical challenge for business operations. By 2025, CLC will prioritize production and sales upgrades, intelligent applications, low-carbon transformation, and risk management. CLC will leverage intelligent Technologies to optimize production and sales processes and advance low-carbon transformation for sustainable development. The company will enhance risk management systems and address ESG transformation and SDGs innovation opportunities to establish a foundation for long-term sustainability.

ESG Goals & Results

ESG Aspects / SDGs	Material Issues	Target	2024 Result	2025 Goals	2030 Goals	
Environment 6 CLEAN WATER AND SANITATION 7 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION 15 LIFE ON LAND	Climate Change Action	GHG Emission (Base Year: 2018)		-9.38%	-5%	-20%
	Waste-to-Resources	Waste-to-Resources Ratio ^{Note 1}	Taiwan Parent Company	97.8%	> 97%	> 97%
			Vietnam Binh Duong Mill	98.7%	> 95%	> 95%
	Sustainable Products and Development	Recovered Paper Utilization Rate ^{Note 1} *Industrial Paper	Taiwan Parent Company	97.7%	> 97%	> 97%
			Vietnam Binh Duong Mill	95.1%	> 94%	> 94%
	Biodiversity	FSC™ Pulp Ratio		97.6%	> 98%	100%
	Energy Management	Alternative Fuel Ratio ^{Note 1}	Taiwan Parent Company	19.58%	20%	25%
			Vietnam Binh Duong Mill	18.44%	> 15%	> 15%
		Unit Product Energy Consumption (Base Year: 2019)		-1.91%	-5%	-10%
	Water Resources Management	Unit Product Water Consumption *Containerboard Division (Base Year: 2019)		-20.7%	-5%	-10%
Green Procurement	Green Procurement Ratio		49.6%	50%	50%	
Air Quality Management	Air Quality Management (Base Year: 2019) NO _x		-48%	-18%	-33%	
Social 1 NO POVERTY 4 QUALITY EDUCATION 8 DECENT WORK AND ECONOMIC GROWTH 10 REDUCED INEQUALITIES	Talent Cultivation and Development	Training Hours per Employee ^{Note 1}	Taiwan Parent Company	60.8 hrs	> 45 hrs	> 48 hrs
			Consolidated Company	47.5 hrs	> 45 hrs	> 48 hrs
	Social Inclusion	Social Welfare Investment		NTD 33.01 million	> NTD 10 million	> NTD 10 million
		Paper Library		31	> 32	> 40
	Supply Chain Management	Local Procurement Ratio		68.0%	> 73%	> 75%
	Healthy Workplace	Health Promotion Participants		2,149 participants	2,000 participants	+5% per year starting in 2025
Governance 8 DECENT WORK AND ECONOMIC GROWTH 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 17 PARTNERSHIP'S FOR THE GOALS	Supply Chain Management	On-site Supplier Audit		81% completed (40 Suppliers)	87% completed	100% completed
	Product Responsibility and Customer Service	Customer Satisfaction Score ^{Note 1}	Taiwan Parent Company	88.5	89	90
			Consolidated Company	89.1	89	90
	Risk Management	Material Violation Incidents ^{Note 2}		1	0	0

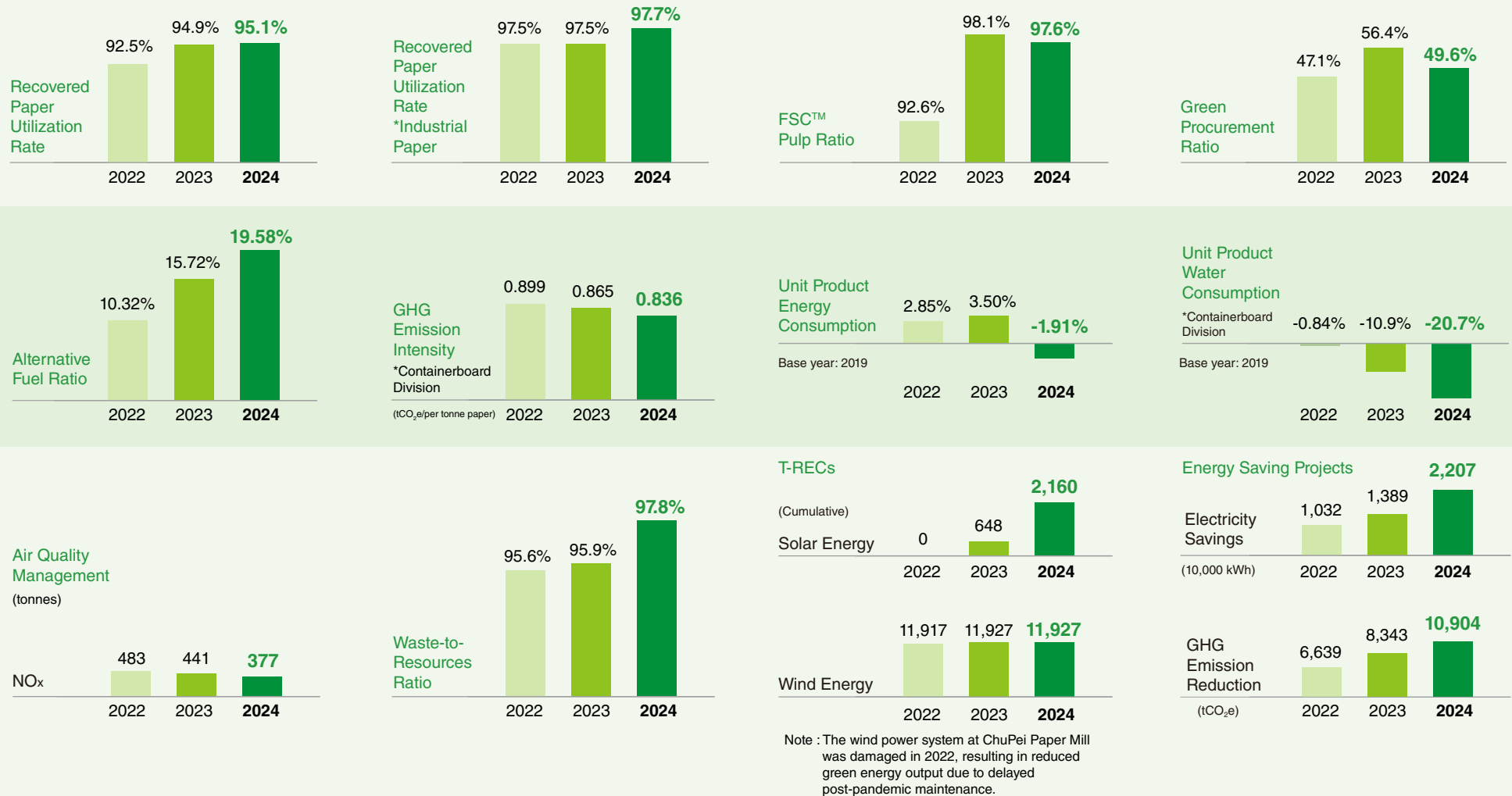
Note 1: Indicator data covers the Taiwan parent company, except for Waste-to-Resources Ratio, Recovered Paper Utilization Rate for Industrial Paper, Alternative Fuel Ratio, Training Hours per Employee, and Customer Satisfaction Score.

Note 2: For incidents with cumulative fines of NTD 1,000,000 or more, the Yanchao Old Plant was fined NTD 1,490,000 for violating the Building Act. CLC promptly completed corrective actions and personnel training to prevent recurrence.



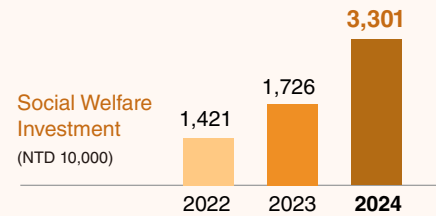
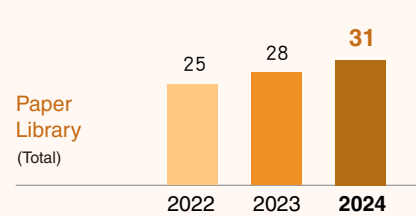
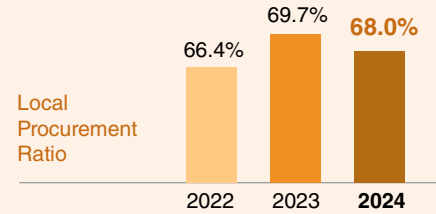
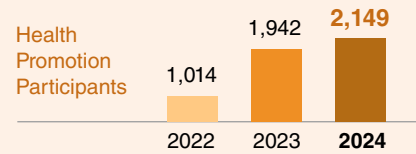
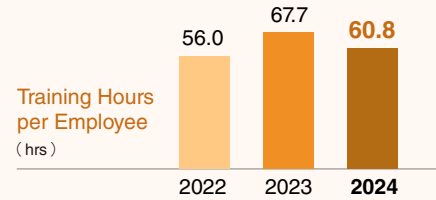
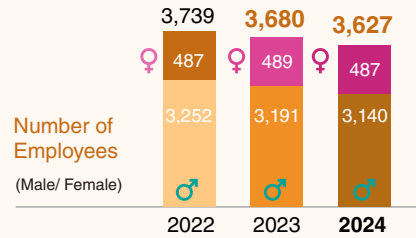
Key ESG Results in the Past 3 Years (Taiwan Parent Company)

Environment

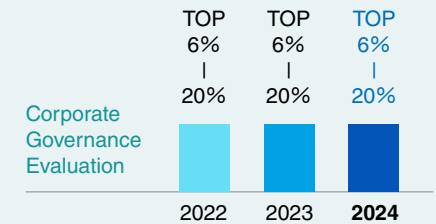
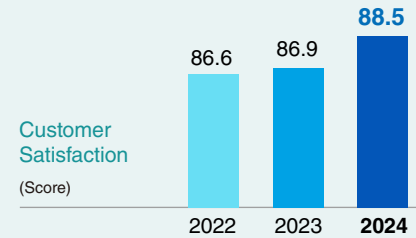
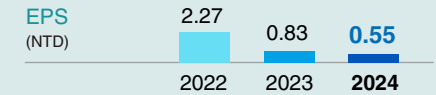
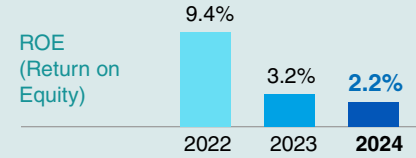
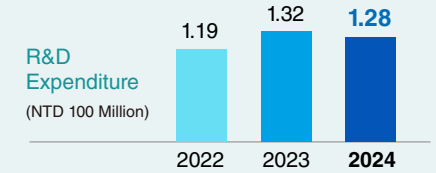
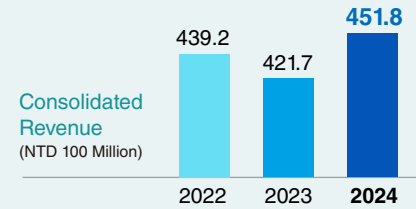




Social

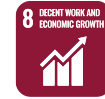


Governance



CLC Sustainability Practice

ESG: Climate change Action



CLC 65: Paper-driven Cross-disciplinary Sustainability Solutions

In 2024, CLC marked its 65th anniversary and continued to advance Paper-based Solutions (PbS) through innovation and 3R PLUS Total Resource Circulation Technologies. As one of the 1st TNFD Note 1 Early Adopter, CLC integrated multi-stakeholder resources and cross-sector collaboration to expand the scale and impact of circular sustainability, enabling a single sheet of paper to deliver environmental, ecological, and social benefits.



"Less is More" is the core of CLC's sustainability strategy. In addition to advancing Total-Circular technologies and striving to safeguard the environment with minimal manufacturing consumption, we also foster creativity to strengthen the industry's carbon reduction resilience. By bringing together external partners and resources, we maximize our positive influence."

Chairperson Jen-Ming Cheng

Emphasizing Nature-based Solutions, Expanding 3R PLUS Circular Economy Influence

CLC advances S.M.A.R.T. carbon reduction manufacturing by reducing tree felling and planting secondary forests. Through continuous enhancement of circular technologies, CLC's Taiwan manufacturing chain achieves a leading rate of recovered paper and waste resource utilization, and has established the only household paper brand certified with FSC™ Recycled, Environmental Label, and Carbon Footprint Label. Since 2018, CLC has expanded circularity through innovation and R&D, building a food paper container recovering supply chain using paper-plastic separation technologies, processing over 50% of Taiwan's waste food paper container and delivering significant carbon reduction. CLC integrates agricultural and forestry resources with product, energy, and water cycles, launching the 3R PLUS Total Resource Circular business model to strengthen circular economy impact. CLC also developed 100% recovered eco weed control paper, certified as organic material by the Ministry of Agriculture, reducing farmland plastic residue and lowering organic cultivation import costs for small farmers through local materials.

Note 1: TNFD (Taskforce on Nature-related Financial Disclosures)

Donated 10,000 kg of Organic Contract Rice to Nearly 1,000 Individual Recyclers

In line with the Group's 65th anniversary goals of "Nature Sustainability, Paper Towards Net Zero," CLC supported nature-friendly farming by developing eco weed control paper made from 100% recovered paper, addressing soil pollution from traditional plastic mulch and pesticide residues. CLC is promoting this solution for four major crop categories: fruit trees, vegetables, flowers, and specialty crops, to accelerate sustainable agriculture and decarbonization.

During the rice harvest, CLC mobilized its volunteer team to Dounan Township, Yunlin County, to inspect harvest results and exchange organic farming practices. CLC adopted 10,000 kilograms of contract-grown rice, sharing outcomes with employees and supply chain recyclers, and promoted food safety education through social welfare initiatives.

 CLC will continue to enhance the contract rice adoption project and expand sustainable agriculture efforts. For more information, please refer to the CLC website - [Press Release 1](#)



Plant for the Planet: Restoring Carbon Sink Value in Huisun Forests

Protecting forests is essential for preserving habitats of over 50% of known species and preventing the release of 30% of stored organic carbon, thereby mitigating global warming. CLC ensures all paper production avoids harm to primary forests by advancing recycled material and technologies, annually recycling over 1.6 million tonnes of recovered paper and establishing 21,000 hectares of secondary forest in Taiwan.

In response to increased wildfire risks from climate change, CLC implements sustainable forest and ecological restoration policies, focusing on soil carbon sequestration to enhance carbon reduction. CLC supports primary forest conservation and promotes integrated development of operational mills/plants and surrounding green belts.

For its 65th anniversary, CLC and the Academy of Circular Economy at National Chung Hsing University launched a restoration project for fire-damaged areas in Huisun Forest. On April 13, over 100 CLC employees, family members, and supply chain partners, led by Chairperson Jen-Ming Cheng and President Fuh-Jyh Jan, planted 500 saplings. The project applies NASA Landsat satellite monitoring and a six-year monitoring and maintenance plan to restore animal habitats and forest carbon sequestration lost to wildfires and to increase soil carbon storage.

 Local Atayal and Seediq communities participated in planting and future maintenance, supporting both ecological restoration and local employment. For more information, see the CLC website - [Press Release 2](#)

Note 2: Using 1 tonne of recovered paper preserves 20 trees. Each hectare supports 1,500 trees. Using 1,600,000 tonnes of recovered paper conserves 21,333 hectares of secondary forest.

People-centered: Developing Green Collar and AI Competencies to Strengthen Corporate Sustainability and Resilience

CLC implemented a 10-year talent development plan and established the CLC Talent Academy to systematically train internal instructors and build the smart papermaking 4.0 talent pool. In 2024, CLC increased employee training hours, holding 47 in-person courses with 1,878 participants. Of these, 9 AI-related courses were delivered in 21 sessions, accounting for nearly half of all training. A total of 105 training hours were completed, with 890 section chiefs and above participating. CLC advanced intelligent transformation across strategy, equipment, and talent management, focusing on production and sales capacity and carbon reduction, marking the Milestone Year of AI applications for low-carbon. CLC will continue to develop green and smart talent to enhance sustainable competitiveness.

Building a Diverse and Inclusive Workplace and Expanding the Green Talent Pool

CLC aligns talent development with corporate governance and sustainability planning. Internally, CLC implements a 10-year plan to train 300 internal instructors by 2030, increase average employee training to 48 hours, promote domestic and international job rotations, and encourage diversified career development. CLC has established a talent recommendation system and transparent feedback channels to strengthen international talent development and succession planning. Through the CLC Talent Academy's three frameworks—E-Learning platform, Total Productive Maintenance, and a company-wide best practice proposal system—CLC has improved operational and production efficiency, generating over NTD 1.2 billion in profit from 2021 to 2024.

Externally, CLC has established 31 paper libraries using 100% recovered paper, integrating experiential learning to raise environmental awareness among children. In 2022, CLC founded Asia's 1st Circular Economy Research Institute, focusing on agricultural and forestry resource recycling and natural carbon sink research. CLC launched CLC iPAS certification programs by connecting industry, government, academia, and research resources to enhance supply chain smart manufacturing competitiveness.

CLC advances industry-academia collaboration by offering internships, scholarships, and projects tailored to neighboring plant environments, including forestland restoration and biodiversity monitoring. CLC is committed to building a diverse, socially inclusive workplace and strengthening its international green talent pool to ensure long-term industry resilience and competitiveness.

Milestone Year of AI Applications: Integrating Manufacturing, Management, and Sales to Strengthen Smart Manufacturing Capabilities

In 2019, CLC launched Smart Papermaking 4.0, becoming the 1st paper company in Taiwan to implement intelligent production and sales, advancing low-carbon transformation. In response to rapid global AI technologies development and evolving sustainability trends, CLC designated 2024 as the Milestone Year of AI applications. CLC developed an internal GPT system to enhance administrative efficiency and HR service quality, and promoted smart factory transformation aligned with Industry 4.0, focusing on equipment integration, energy-saving and carbon reduction monitoring, and automation to address workforce structure challenges.

In 2024, CLC implemented 9 in-person AI application courses (21 sessions) and 10 online courses, training 1,722 employees (nearly 50%) to strengthen AI technologies understanding and application. CLC held an AI Application Competition with 31 participating teams to promote practical AI integration and cross-departmental collaboration.

The 1st prize team used AI to prepare business reports, tripling work efficiency. The 2nd prize team improved production efficiency in four areas with AI. The 3rd prize team applied AI to papermaking machine document management and automated safety and health certificate searches. CLC will continue investing in AI education and applications to support long-term low-carbon production and sales.

CLC AI Talent Development Annual Plan

March–May	June–October	November	December
Standard Learning	AI Training	AI Competition	Results Sharing
The Administration and Technology Divisions coordinated the AI training programs and held 2 AI standard speech sessions.	Conducted 21 in-person courses and 10 online courses, with a total of 1,722 participants.	31 teams participated; the TOP3 awards were selected.	Award-winning projects were uploaded to the E-learning platform and featured in the internal magazine.





Four Key Resilience Actions: Building a Sustainable Net-zero Value Chain

Building and upgrading the industry talent pool is essential for international competitiveness in the era of sustainable low-carbon supply chains. CLC assessed supply chain transformation and implemented four resilience actions: Low-carbon, Digitalization, Incentives, and Empowerment. These actions supported supplier upgrades, enhanced local supplier resilience, expanded international order and financing opportunities, and advanced the sustainable net-zero ecosystem.

Enhancing Industry Collaboration with 300 Key Partners to Advance Low-carbon Smart Manufacturing Competitiveness

CLC identified tariff risks and industrial opportunities in the zero-carbon economy and in 2023 established a carbon database. CLC partnered with 20 supply chain companies to form the papermaking industry's 1st Carbon Neutrality Alliance and completed Taiwan's first industrial paper carbon footprint inventory, achieving an annual reduction of nearly 12,000 tonnes of carbon and saving over NTD 55 million in energy costs. In 2024, CLC launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program to build a talent pool for industrial control cybersecurity and strengthen digitalization and risk management in the paper industry. President Ching-Biao Chang emphasized that sustainability requires collaboration, and CLC continues to advance supplier engagement to ensure CLC's low-carbon products remain the preferred choice for global corporations under the net-zero trend. To accelerate the industry's upgrade toward low-carbon smart manufacturing, CLC is driving dual transformation—Net Zero Transformation and Smart Manufacturing—for 300 key supply chain partners, with four major sustainable resilience actions and over 15 action goals.



CLC led the industry's low-carbon and smart transformation, becoming the only company in Taiwan's paper sector to be included for three consecutive years (2022~2024) in the Global 200 Clean Companies (CLEAN 200) by Corporate Knights. In 2024, CLC received a management-level rating in the CDP Climate Change Questionnaire and was listed on the Supplier Engagement Assessment (SEA) A List. Since 2019, CLC has implemented Internet of Things Technologies for real-time equipment monitoring and intelligent inspections to enhance energy efficiency and carbon reduction.



CLC's Four Key Supply Chain Resilience Actions

Action	Purpose	2030 Goals
1 Low-carbon Transition	Optimize local recycling supply chains to maximize resource circulation.	- Guide and manage 167 recycling suppliers - Support the transformation of 20 companies - Increase cooperating recyclers of waste food paper containers to >70
2 Digital Management	Deepen collaboration and audit of key supply chains to promote sustainable production and sales models.	100% FSC™ certified pulp ratio 100% - Green procurement ratio at 50%, and local procurement > 75% - On-site Supplier Audit 100%
3 Incentives Co-creation	Lead the 1+N Carbon Management Alliance to incentivize SMEs to build a carbon-neutral industrial chain.	- Consolidate > 70% carbon data from Tier 1 suppliers - Train > 100 carbon management specialists
4 Talent Empowerment	Strengthen green talent development across the supply chain and establish a collaborative smart talent pool.	- Industry chain collaborative learning with 50 key partners - Organize > 30 sustainability workshops, training more than 300 smart

In 2024, CLC established the Sustainable Supply Chain Program, integrating resources from industry, government, academia, and research institutions. In partnership with the Ministry of Economic Affairs, CLC launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program, aligned with Smart Production and Smart Networking and Industrial Control Cybersecurity certifications. The program combined lectures, practical training, and competency assessment, training nearly 70 interdisciplinary professionals to strengthen digitalization and risk management across the supply chain, enhancing smart manufacturing competitiveness.

Honors & Recognition

Corporate Knights



《Corporate Knights》CLEAN 200
Selected as the global TOP 200 clean company for 3 consecutive years (2022~2024)

The only papermaker in Taiwan



《Global Views Monthly》
Excellence in ESG: Low-carbon Operation Model Award, and listed at ESG TOP 36

The only papermaker in Taiwan



《CommonWealth Magazine》
The Excellence in CSR Award for the 11th time
Ranked No. 25 in the large manufacturing group

The only papermaker in Taiwan



《CDP》
Recognized on the "A List" of the Supply Chain Engagement Assessment (SEA)

《Vietnam Chamber of Commerce and Industry (VCCI)》
Won TOP 100 Sustainable Enterprises for 3 consecutive years (2022~2024)



《Vietnam's Binh Duong Provincial Department of Environment》
Awarded the Vietnam Green Book Award for 2 consecutive years (2023~2024)



《Vietnam Environmental Industrial Association》
Won TOP 100 Eco Green Factory and TOP 100 Green and Sustainable Enterprises for 2 consecutive years (2023~2024)

Environment

《Corporate Knights》	CLEAN 200 – Selected as the global TOP 200 clean company for 3 consecutive years
《Ministry of Environment》	6th 《National Environmental Protection Award》 – Bronze Award – Tayuan Mill
《Department of Water Quality, Protection, Ministry of Environment》	1st 《Water Purification Sustainability Award》 – Tayuan Mill
《Resource Circulation Administration, Ministry of Environment》	《Water Purification Sustainability Award》 – Silver Award – Tayuan Mill
《Ministry of Environment and local Environmental Protection Bureaus》	10 mills/plants received the 《National Green Procurement Award》
《Taichung City Environmental Protection Bureau》	Received the reward for reducing air pollution in public and private places (2023~2024) for the 2nd time, and the Taichung City Sustainable Health and Safety Plan - Houli Mill

Social

《1111 Job Bank》	Received the 《Happy Enterprise Award》 - Gold for 5th times
《Ministry of Health and Welfare》	10 mills/plants received the 《Healthy Workplace Certification》
《Common Health Magazine》	Committed to the 《Health Corporate Citizenship》 for 6 consecutive years and selected as 《Healthy 99 Enterprise》
《Taiwan Index Plus Corporation》	Selected as 《EMP 99 Index》 for 14 consecutive years
《Dong Nai Provincial Police》	Recognized as one of the 《Model Firefighting Enterprises in Dong Nai Province》 in 2024 - Vietnam Viva Tawana Plant

Governance

《Global environmental NPO - CDP》	Obtained management level for CDP Climate Change Questionnaire,
《CommonWealth Magazine》	The 《Excellence in CSR (No.25) Award》 for the 11th time
《Global Views Monthly》	《ESG Corporate Sustainability Award》 – Low Carbon Operations Model Award; included in the TOP 36 ESG
《Taiwan Institute for Sustainable Energy (TAISE)》	《TCSA Taiwan Corporate Sustainability Awards》 《TOP 100 Sustainable Model Enterprise Award》 《Platinum Award》 - Sustainability Report
《Vietnam Chamber of Commerce and Industry (VCCI)》	《TOP 100 Sustainable Enterprises Award》 – Vietnam Binh Duong Paper Mill for 3 consecutive years
《Vietnam Binh Duong Provincial Department of Environment》	《Vietnam Green Book Award》 – Binh Duong Paper Mill
《Vietnam Environmental Industrial Association》	TOP 100 Eco Green Factory, TOP 100 Green and Sustainable Enterprises – Binh Duong Paper Mill
《Vietnam Government》	《Vietnam National Quality Awards》 – Binh Duong Paper Mill
《Taiwan Stock Exchange》	Ranked among the TOP 6%~20% at 《TWSE》 Corporate Governance Evaluation for 5 consecutive years
《National Taipei University》	SEED Taiwan Sustainability Audit AA Rating

※Please refer to the [CLC corporate website](#) and related sections & chapters for complete recognition information.

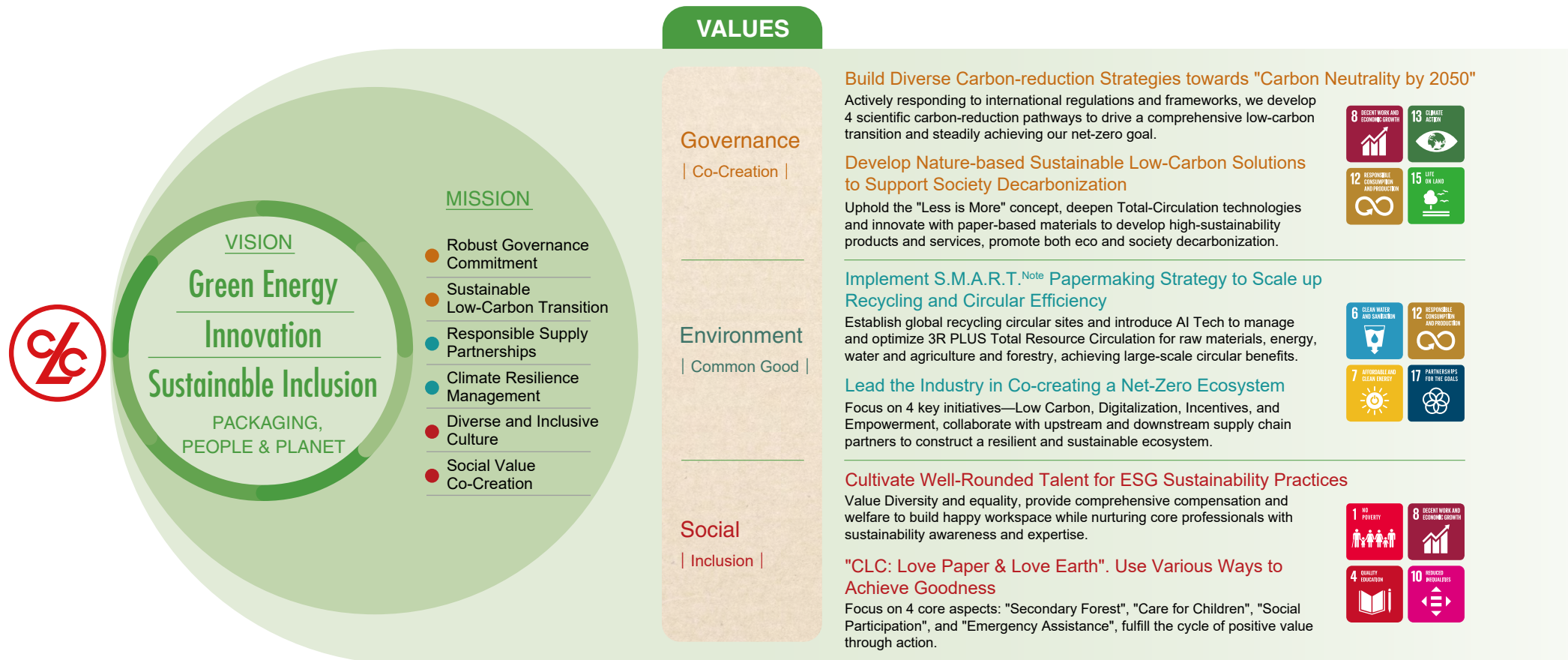


Sustainable Management

Strategy and Objectives

ESG Policy

With "Green Energy & Innovation, and Sustainable Inclusion" as the main axis of our sustainable development, CLC proactively links our value chain with the United Nations' Sustainable Development Goals (SDGs). We incorporate SDGs into the core of our corporate operations, reviewing the relevance of SDGs to our business activities, operational processes, and the upstream and downstream sectors in the value chain. By doing so, we aim to expand our positive impact and work hand in hand with stakeholders to achieve sustainable development goals.



Note: Subtraction, Material, AI, Recycling, Technologies



Note: For full details on the UN SDGs and CLC sustainability goals, please refer to the [CLC website – CSR Strategy and Committee](#)



Sustainability Committee

Sustainable Development Governance Structure

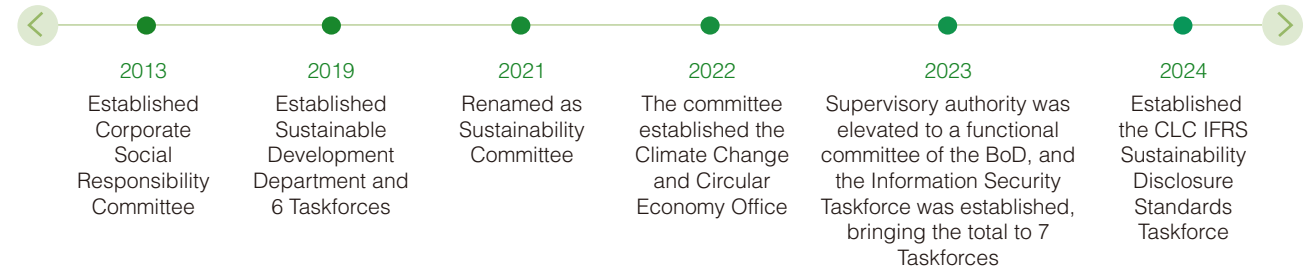
The CLC Board of Directors serves as the highest decision-making and supervisory body for sustainable development, annually reviewing sustainability project progress, management policies, and execution through reports from the sustainability committee and its executive secretary. The sustainability committee oversees 7 taskforces: Corporate Governance and Integrity, Environmental Sustainability, Employee Care, Supply Chain Management, Industry Services, Social Inclusion, and Information Security. Each taskforce comprises first-level supervisors and senior staff from relevant departments, with ESG responsibilities assigned by function and extended to subsidiaries. The committee established the Climate Change and Circular Economy Office, led by the President and the R&D supervisor as deputy, and consults external experts, including the Taiwan Green Productivity Foundation. The taskforces hold monthly meetings to track progress and effectiveness, reporting quarterly to the Board. The Board arranges annual corporate sustainability training for directors.

Note: For details on continuing education courses, refer to the 2024 Company Annual Report, [P.27~28](#)

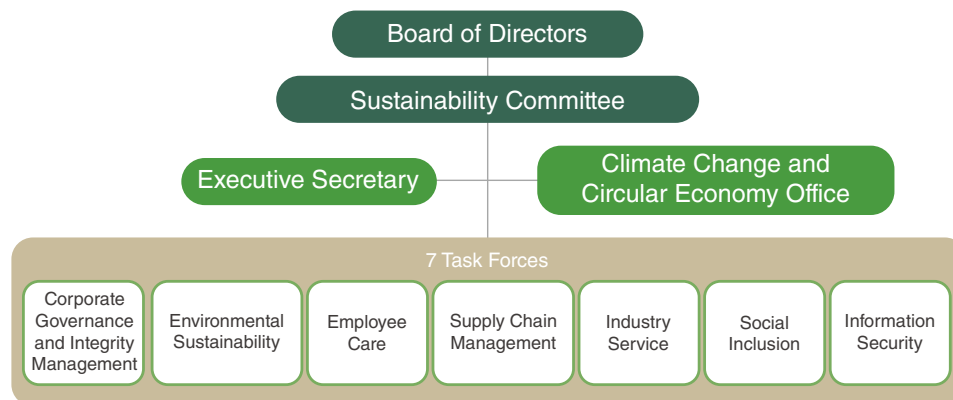
Sustainable Management

1. Identifying key sustainability issues and formulating action plans
2. Tracking sustainability performance and coordinating resource integration
3. Stakeholder Engagement and Communication
4. Hold at least 2 meetings per year and submit quarterly reports on execution results and work plans to the BoD

Evolution of the Sustainable Development Governance Framework



CLC Sustainability Committee



2024 Board of Directors Oversight of Sustainability Projects

- (1) Enhancing Net-Zero Transition Resilience and Carbon Risk Management.
- (2) Group Greenhouse Gas Inventory Progress Tracking.
- (3) Establish the Sustainability Report Preparation and Assurance Procedures and Sustainability Information Management Guidelines.
- (4) IFRS Sustainability Disclosure Standards Implementation Plan (S1/S2).
- (5) CDP Climate Change Questionnaire: Latest Results, Analysis, and Response Measures.
- (6) Review ESG performance and revise medium- and long-term ESG goals.
- (7) Submission of the 2023 Sustainability Report.
- (8) Stakeholder Engagement and Communication.

Note: Senior and executive staff served as members of 7 major Taskforce groups

IFRS Sustainability Disclosure Standards S1 and S2

CLC Sustainability Disclosure Guidelines

To comply with the FSC's Blueprint for Taiwan's Adoption of IFRS Sustainability Disclosure Standards, CLC is required to adopt these standards in 2026. In the second half of 2024, CLC established the CLC IFRS Sustainability Disclosure Standards Project Team, comprising Finance, R&D, Procurement, General Affairs, Legal, IT, and Management departments. Multiple sustainability training sessions were held, and external consultants were engaged for expert guidance. The IFRS Sustainability Disclosure Standards implementation plan was launched, with quarterly progress reports to the Board of Directors.

CLC identified 6 material issues—Climate Change Action, Energy Management, Waste-to-Resources, Sustainable Products and Development, Supply Chain Management, and Talent Cultivation and Development—based on the 2024 double materiality analysis and IFRS S1 and S2 standards. These issues represent sustainability and climate-related risks and opportunities expected to impact CLC's outlook. CLC will further analyze related financial influence and adjust disclosures to enhance completeness and organizational resilience.

★ Analysis and Planning

1. Established a Cross-departmental Taskforce to Implement IFRS Sustainability Disclosure Standards

CLC established the IFRS Sustainability Disclosure Standards Project Team, led by the President. The team comprises members from 11 departments: Accounting, Finance, R&D, IT, Audit, Management, Procurement, Planning, General Affairs, Security, and Sustainability Development, with defined responsibilities for each. Internal Audit is responsible for monitoring and evaluation, and external consultants are engaged to ensure effective project implementation.

Held IFRS Sustainability Disclosure Standards kick-off meeting with 70 senior management participants to define implementation timeline and key requirements. Conducted multiple in-person and online training sessions on the IFRS Sustainability Disclosure Standards implementation plan, focusing on process steps and detailed item-by-item comparison with annual and sustainability reports.

2. Preliminary Identification of Major Differences and Influence between Current Sustainability Disclosures and IFRS Sustainability Disclosure Standards

Conducted gap analysis of current sustainability disclosures (e.g., GRI, SASB) and initial identification of material impacts.

3. Preliminary Identification of Reporting Entities

Identified reporting entities consistent with consolidated financial statements, announced subsidiaries, and coordinated implementation of each phase of the integration plan.

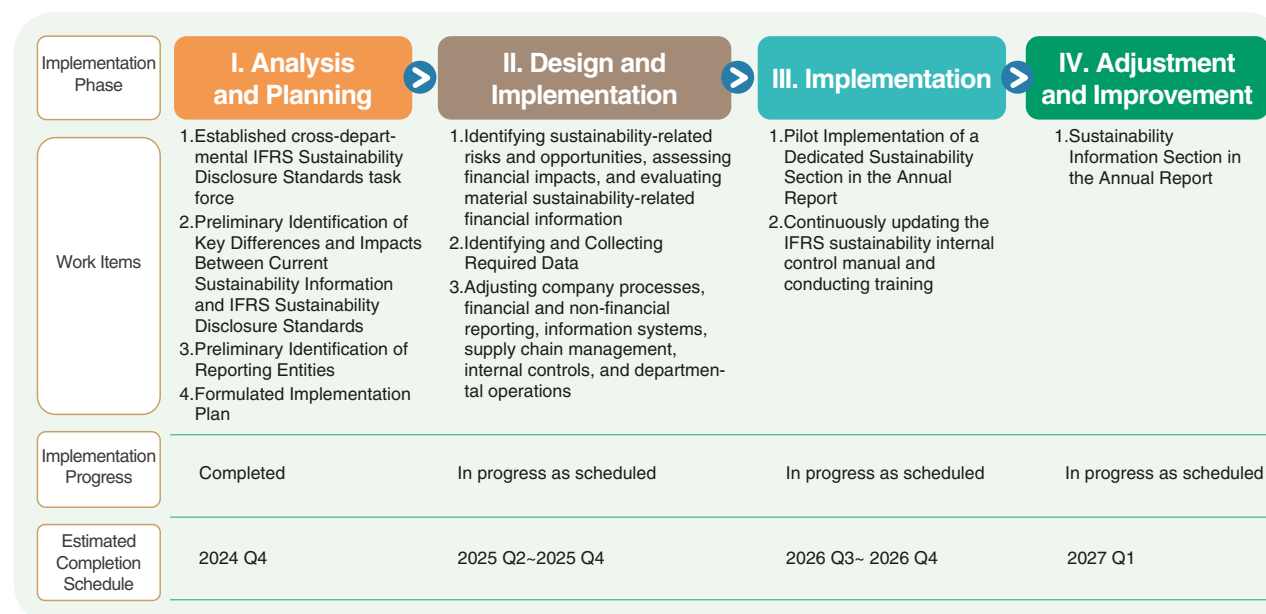
4. Formulate Implementation Plan

The CLC IFRS Sustainability Disclosure Standards Implementation Plan was developed based on CLC's operational scale and expert recommendations, and submitted to the Board of Directors in the 1st quarter of 2025 (March 11, 2025).

5. Others

The project team is assessing the impact of IFRS Sustainability Disclosure Standards on daily operations, including process adjustments, financial and non-financial reporting, information systems, supply chain management, and internal controls. Departments are identifying relevant IFRS requirements, collecting necessary data, and coordinating cross-departmental discussions. The team is also determining required resources and budget, and planning phased training sessions.

CLC Sustainability Disclosure Standards Implementation Timeline

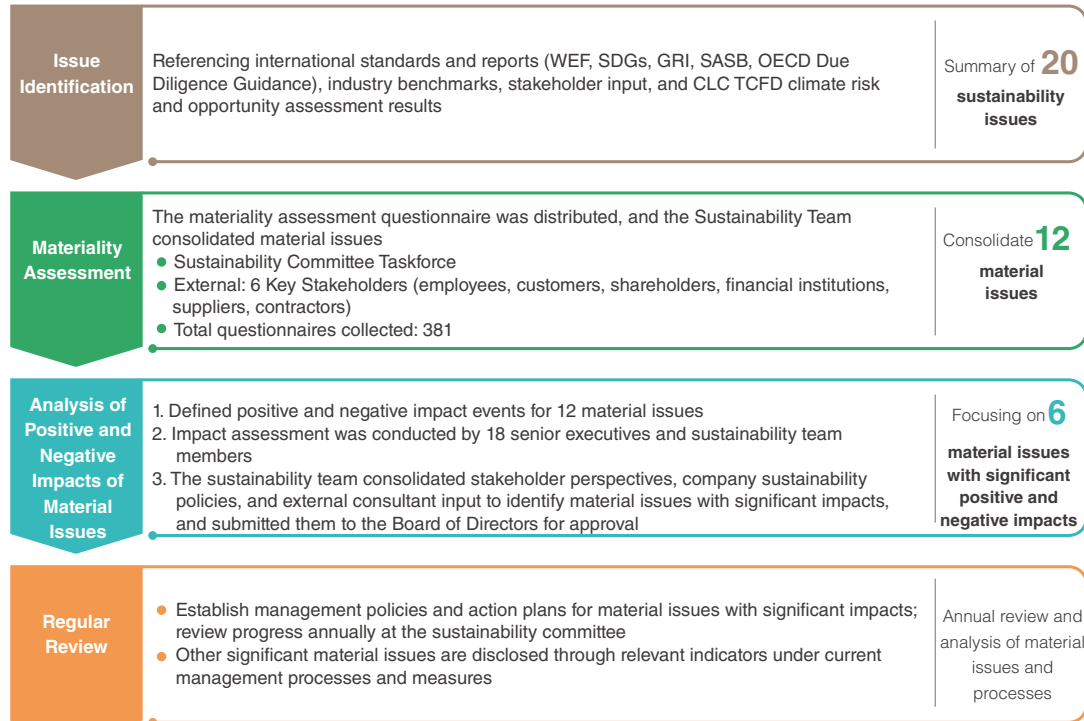




Identification of Material Issues and Stakeholders' Engagement

CLC's senior management and the sustainability committee Taskforce annually identify stakeholders and material issues, following GRI Standards (2021) and the EU Double Materiality principle to determine issues with significant impacts on both CLC and external economic, environmental, and social factors. Stakeholder scoring references the AA1000 Stakeholder Engagement Standard 2015, applying the principles of dependency, responsibility, tension/concern, influence, and diverse perspectives. The Taskforce conducts interviews with the Chairperson, President, and management, and completes stakeholder identification questionnaires to identify six main stakeholder groups: employees, customers, shareholders/investors/financial institutions, suppliers/contractors, government/industry associations, and society (media, neighboring communities, non-profit organizations, academic institutions). CLC engages these stakeholders through multiple channels, both regularly and as needed, to gather expectations and inform sustainability issue and impact assessments. The 2024 materiality identification process, analysis, and results are as follows:

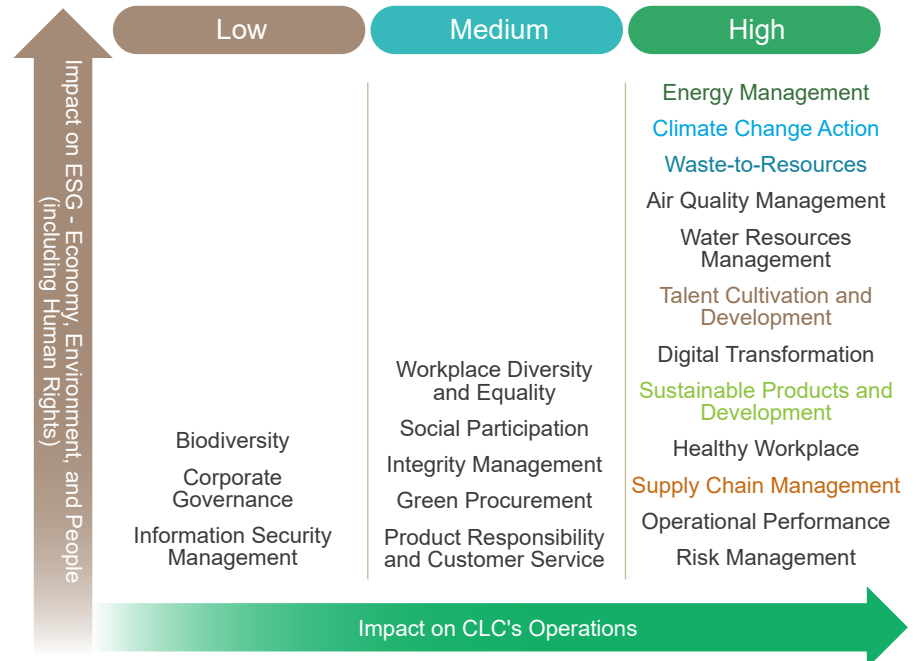
Material Issues Identification Flowchart



Material Issues Identification and Impact Analysis

CLC collected stakeholder and expert feedback, reviewed and adjusted stakeholder categories and concerns, and in 2024 issued a material issue identification questionnaire to internal and external stakeholders to evaluate 20 sustainability topics. Topics with significant impact on both CLC and the economy, environment, or people were defined as material issues. The Sustainability Task Force consolidated these into 12 and developed a materiality matrix. The sustainability team and external consultants identified positive and negative impact events for these material issues across economic, environmental, and social (including human rights) dimensions. Senior management and the Sustainability Taskforces assessed the scale, scope, impact, and likelihood of each event, considering financial or operational benefits for positive impacts and potential financial loss or operational disruption for negative impacts. The sustainability team integrated stakeholder input, company policy, and consultant advice to focus on 6 material issues: climate change action, energy management, waste resource utilization, sustainable products and development, supply chain management, and talent cultivation and development. The material issues identification and impact analysis results were submitted to the Board of Directors for approval.

CLC Material Issues Matrix





CLC 2024 Material Issues Assessment: Major Positive and Negative Impacts

For material issues with significant positive or negative impacts, CLC establishes management policies, formulates action strategies, sets quantitative indicators, and regularly tracks results.

Other material issues are disclosed to stakeholders through existing management processes and relevant indicators to facilitate understanding of CLC's overall sustainability performance.

: Positive Impact : Negative Impact

Material Issue	Value Chain Impact Assessment			Impact Assessment (1~5)						Key Positive and Negative Impacts	CLC Action	Response Section
	Upstream	CLC	Downstream	Economy		Environment		Human Rights				
	Supply Chain		Customer	Positive	Negative	Positive	Negative	Positive	Negative			
 Climate Change Action	V	V	V	4.1	4.4	4.2	3.9	-	-	+ Advancing Sustainable Smart Papermaking for Emission Reduction + Aligning Climate Frameworks for Carbon Reduction - Limited carbon-neutral biomass supply restricts emission reduction - Net-zero transition increases operating costs • Advancing Smart Low Carbon Transformation in Production and Sales • Advancing Circular Low Carbon Fuel Applications • Cross-domain Innovation in Carbon-Negative Technologies • Implementation of Internal Carbon Pricing (ICP) System	4.1. Climate Change Action	
 Waste-to-Resources	V	V	-	4.0	3.1	3.9	2.7	-	-	+ Reduce fossil fuel dependence to mitigate impacts + Utilizing surplus materials for waste-to-energy reduces costs - Inadequate waste flow management resulted in pollution - Failure to implement waste management damaged reputation • 3R PLUS Total Resource Circulation • Innovation in Waste Food Paper Container Recovering • Install biomass CFB boiler system • Waste Flow Audit and Management	4.5. Waste-to-Resources	
 Sustainable Products and Development	V	V	V	3.7	3.6	3.8	2.9	3.8	-	+ Paper-Based Natural Solutions for Low Carbon Opportunities + Expand Carbon Footprint Inventory and Promote Green Living - Insufficient innovation to meet market demand - Consumer behavior shifts reduced paper product consumption • Advancing sustainable paper-based materials innovation • Develop Diverse Low Carbon Sustainable Products • Expanding Product Carbon Footprint Management • Advancing Digital Transformation to Enhance Operational Efficiency	2.1. Sustainable Products and Development	
 Energy Management	V	V	-	4.1	3.6	4.0	3.2	-	-	+ Monitor energy usage and implement energy-saving measures + Installing renewable energy equipment creates business opportunities - Installing renewable energy increased operating costs - Ecological impact of renewable energy equipment investment • Promoting Energy Efficiency Through Energy Conservation and Emission Reduction Projects • Develop renewable energy and apply for energy certificates	4.2. Energy Management	
 Supply Chain Management	V	V	V	3.8	3.7	3.8	3.3	-	-	+ Supplier Management to Ensure Operational Continuity + Green Procurement Drives Industry Development - Low-quality recycling materials increase costs - Political and economic instability affected supply and caused price fluctuations • Optimizing Local Recovered Paper Supply Chain • Enhance Supply Chain Audit Management System • Set responsible and sustainable procurement goals • Industry Chain Carbon Neutrality Alliance Established	3.1. Supply Chain Management	
 Talent Cultivation and Development	V	V	-	3.6	3.4	-	-	3.4	2.8	+ Establish a comprehensive talent training and rotation system + Offer competitive compensation and talent development systems - Insufficient training limits employee development - Talent shortages caused by recruitment challenges • 10-Year Talent Development Plan • Optimize CLC Talent Academy Training System • Advancing Global Talent Development • Building a Diverse and Inclusive Workplace	5.2. Talent Cultivation and Development	

Note: The average impact score for positive events was 3.84; for negative events, 3.25. Events in bold had impact scores above the average.



2024 CLC Stakeholder Engagements

Communication Channels, Frequency, and Key Engagements

CLC addressed material issues of 6 key stakeholders in this report and disclosed relevant information through the official website and multiple platforms to facilitate stakeholder engagement.

“Engaging stakeholders through multiple channels enables CLC to better understand expectations and respond to social needs, supporting continuous improvement.”

Significance to CLC		Communication Channels and Frequency	Material Issues	CLC's Response	2024 Key Engagements
 Employee	Employees are CLC's core assets and creators of corporate value, with individual growth aligned to company development	• Department meeting / weekly • Plant affairs meeting / monthly • Enterprise union / annually • Labor-management meetings / quarterly • Welfare committee / semiannual • Outlook meeting / annually • CLC bimonthly Journal • EIP, Grievance mailbox, etc. / ad hoc • Proposal improvement mechanism / ad hoc • Employee feedback survey / ad hoc • Education and training, safety seminars, HSE talks & health promotion activities / ad hoc	Operational Performance Talent Development Healthy Workplace	→ Provide competitive compensation and benefits. → CLC established a 10-year sustainable talent development plan to systematically train internal instructors through the CLC Talent Academy, setting a group goal of 48 training hours per employee by 2030. → Promote domestic and international job rotations, establish a transparent talent recommendation and feedback mechanism, and enhance international talent development and next-generation succession planning. → Foster a strong health and safety culture by organizing OH&S seminars and health promotion activities. → Continuously constructing and expanding dormitories with integrated living and recreational facilities.	→ Salaries have been adjusted for 18 consecutive years, with annual increases of 1.5% to 3%. In 2024, salaries are 5.3% higher than in 2020. → A total of 332 internal instructors have been trained; average annual training hours per employees reached 60.8 for the parent company and 47.5 for the Consolidated Company. → Launched CLC AI Academy and organized AI competitions. → Implemented training programs to promote management succession; 66 supervisors with less than 5 years of service were promoted over the past 7 years. → Average OH&S training per person was 35.7 hours (+7.6 hours YoY); 2,149 participants in health promotion activities in person. → New dormitories at Tayuan Box Plant and ChuPei Paper Mill were completed and commenced operation in 2023 and 2024.
 Customer	Customer value creation driven by market and customer needs is CLC's competitive advantage	• Instan customer service hotline • Real-time customer complaint E-management system • Customer satisfaction surveys / annually, ad hoc • Innovative technologies and business exchange description / ad hoc • Business and related assessments / ad hoc • Customer meetings / ad hoc	Sustainable Products and Development Operational Performance Digital Transformation	→ Ongoing R&D investment focuses on developing Low Carbon packaging products and services, advancing paper-based solutions (pbs), and securing multiple patents. → Establish an ESG best practice management mechanism to encourage employee innovation. → With the strategy of enhancing Taiwan, streamlining China, and expanding Vietnam, CLC continues to increase recovered paper recycling capacity and advance circular economy operations. → Actively implement digital and intelligent tools to enhance customer management and service. Set a customer satisfaction score target of 90 by 2030, with annual reviews. → Established Information Security Center to strengthen risk management and foster an information security culture.	→ Invested NTD 128 million in R&D; 100% recovered paper eco weed control paper received organic agricultural material certification from the Ministry of Agriculture for 2 consecutive years. → Tayuan Box Plant obtained FSSC 22000 international food safety certification to ensure safe and reliable packaging solutions. → Excellent proposals generated a profit of NTD 169 million. → ChuPei Paper Mill operated Taiwan's largest biomass cogeneration system at full capacity; initiated the phase 3 expansion of the Vietnam Binh Duong Paper Mill. → Milestone Year of AI applications established, with 29 smart transformation projects implemented. → Arranged factory visits for 67 customers and conducted customer satisfaction surveys for 288 customers. The score reached 88.5 (+1.6 YoY) for the parent company and 89.1 for the consolidated company. → Upgrading ISO 27001 system to enhance information security.



Significance to CLC	Communication Channels and Frequency	Material Issues	CLC's Response	2024 Key Engagements
 Shareholders, Investors, Financial Institutions	The management team is accountable to all current and prospective CLC investors, which is central to corporate governance	• Spokesperson and stock affairs • Shareholders' meeting / annually • Corporate presentation / semiannual • Investment institution seminars, investor meetings, and conference calls / ad hoc • Company website / ad hoc • Email /ad hoc • Financial reports /	Risk Management → Emphasize sound governance and legal compliance by continuously refining regulations and conducting education and training. → Established the Risk Management Committee under the Board of Directors to enhance risk management systems, identify and manage risks, and mitigate operational impacts.	→ A total of 483 participants attended the Integrity Management and Anti-Corruption Education and Training series, offered both online and in person. → 2 risk management meetings were held to approve the risk assessment results and the status of risk management implementation. → The CLC IFRS Sustainability Disclosure Standards Taskforce was established to implement the IFRS adoption plan and regularly report to the BoD. → Arranged a NTD 5 billion sustainability-linked syndicated loan to support low-carbon smart papermaking. → EPS reached NTD 0.55 in 2024, with a cash dividend of NTD 0.45 per share and a payout ratio of 81.8%. Two online investor conferences were held on March 24 and August 16.
		Operational Performance	→ In response to the Financial Supervisory Commission's IFRS Sustainability Disclosure Standards roadmap. → Advancing full circular integration and Low Carbon smart papermaking to drive operational growth. → Maintain strong operational performance and deliver positive investment returns to investors.	
 Suppliers and Contractor	CLC fosters a stable and sustainable supply chain ecosystem through ongoing mutual support and growth	• Real-time supplier management system • On-site supplier audit and evaluation meetings / annually • Supplier visits / ad hoc • Supplier self-assessment questionnaire / annual • Supplier ethics advocacy / ad hoc • Supplier EHS communication and training / periodically • Supplier guidance / ad hoc • Supplier ESG conference / annually	Supply Chain Management → Focusing on Low-carbon, Digitalization, Incentives, and Empowerment, and regularly organizing ESG Sustainable Supply Chain Conferences and training to enhance supply chain resilience.	→ Hosted the 5th ESG Supply Chain Conference on October 17. Held 6 ESH training sessions with 115 suppliers. Coordinated 10 suppliers to establish the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program. → A climate questionnaire was conducted for 44 key Tier 1 suppliers. → Supported the transformation and upgrading of 14 recycling companies; added 2 new waste food paper container suppliers, totaling 56. → On-site audits were conducted for 40 additional key suppliers, totaling 251 and achieving 81% completion. → Waste-to-Resources ratio: 97.8% (Taiwan parent company, +1.9% YoY); 98.7% (Vietnam Binh Duong Paper Mill) Alternative fuel ratio: 19.58% (Taiwan parent company, +3.86% YoY); 18.44% (Vietnam Binh Duong Paper Mill). → Recovered paper utilization rate of industrial paper: 97.7% (Taiwan parent company), 95.1% (Vietnam Binh Duong Paper Mill); FSCTM pulp procurement rate: 97.6% (Taiwan parent company)
		Waste-to-Resources & Energy Management	→ Assist 2 local recovered paper companies annually in upgrading and transformation to drive industry chain advancement. → Set a 100% on-site supplier audit goal by 2030.	
		Sustainable Products and Development	→ Convert waste to energy, develop circular low carbon fuel, and set 2030 goals: waste resource utilization rate above 97%, alternative fuel proportion 25%. → Ensure all waste is properly managed or reused in compliance with regulations. → Committed to full resource recycling, with annual goals for the recycling rate of recovered paper in industrial paper to exceed 97% and for FSCTM pulp to reach 100% by 2030.	



Significance to CLC	Communication Channels and Frequency	Material Issues	CLC's Response	2024 Key Engagements
 Government, Industry Associations	Comply with government regulations and industry association initiatives; provide feedback on industry policies	• Official correspondence and visits / ad hoc • Face-to-face interviews, phone calls to provide industry experience and advice / ad hoc • Meetings / ad hoc • Public association communication platform / ad hoc	Risk Management → Enhance environmental and occupational health and safety management in accordance with ISO standards. → Collaborate with county and city Environmental Protection Bureaus to support disadvantaged recycling households and expand impact. Climate Change Action → Promote recovered paper sorting education through collaboration with industry, government, academia, and research institutions. → Actively participated in government and industry association meetings to advance regulations on net zero carbon emissions, renewable energy, and circular economy, supporting the development of a net zero island. Energy Management → Established the Climate Change and Circular Economy Office to manage climate change and biodiversity, and participated in international initiatives. Water-to-Resources → Implement digital ISO 50001 intelligent management to enhance energy efficiency, targeting a 10% reduction in unit product energy consumption by 2030 compared to the 2019 baseline. → Water resources are managed through circulation, recycling, and reuse to enhance overall efficiency. The goal is to reduce unit water consumption for industrial paper products by 10% by 2030 compared to the 2019 baseline.	→ Ranked in the top 6%~20% in the Corporate Governance Evaluation for 5 consecutive years. → A total of 141 site inspections were conducted by the Ministry of Environment (Taiwan), Occupational Safety and Health Administration, local environmental protection bureaus, fire departments, and other relevant authorities. → In response to Taiwan's carbon fee, a voluntary emissions reduction plan is being developed to reduce carbon fee expenditures and advance the net-zero transition. → Tayuan Paper Mill serves as the demonstration site for establishing the Group's standardized internal carbon pricing (ICP) assessment framework. → Obtained management level for CDP Climate Change Questionnaire, included in the Supplier Engagement Assessment (SEA) "A List". → Unit product energy consumption decreased by 1.91% from the base year; GHG emissions in Taiwan decreased by 9.38% from 2018. → Vietnam Binh Duong Plant and Bac Giang Box Plant obtained ISO 50001 Energy Management System certification. → Unit product water consumption of Containerboard Division decreased by 20.7% from the base year.
 Society: communities, non-profit organizations, academic institutions	CLC engages with media for information disclosure, prioritizes neighboring communities for core business social contribution, and collaborates with non-profit organizations and academic institutions to gain diverse perspectives	• Local community activities / ad hoc • Cheng Huo-Tien Charity Foundation • CLC Children's Foundation • Face-to-face, email, telephone interviews / ad hoc • Press conferences, advertisements, press releases / ad hoc • Seminar / ad hoc • Factory Visits / ad hoc • E-newsletter / quarterly • ESG section on company website / ad hoc	Sustainable Products and Development → The "CLC: Love Paper & Love Earth" Vision promotes secondary forest, care for children, social participation, and emergency assistance to foster sustainable consumption habits. → The factory receives over 2,000 external visitors annually and promotes the circular economy. Air Quality Management → Committed to improving air emission quality by introducing innovation technologies and equipment to reduce air pollution.	→ NTD 33.01 million was allocated to social welfare, including NTD 20 million for Hualien earthquake relief. → 65th Anniversary: Plant for the Planet—Restoring the carbon sinks of Huisun Forest. → There were 844 volunteer service instances totaling 2,593 hours, and the Corporate Volunteer Conference was held. → Information disclosure quality continues to improve, with 27 website press releases, 12 media messages, and 5 media interviews. → NOx emissions concentration decreased by 48% from the base year, with no fines for air pollution or odor violations.

For additional stakeholder communications, please refer to the [CLC website](#)

01

Sustainability Report

Grounded in sincerity and trustworthiness, we uphold ethical standards, comply with laws and international initiatives, maintain robust management systems, and pursue dual-track domestic and international strategies to achieve sustainable growth.

- 1.1 Operational Performance
- 1.2 Governance Structure
- 1.3 Risk Management
- 1.4 Information Security Management
- 1.5 Integrity Management

▲ NTD **18.2** billion low-carbon smart papermaking transformation loan (2022~2024)

▲ Advancing Total Resource Circular Integration to enhance operational efficiency
Paper & Paperboard: **2,502k** tonnes (Vietnam Binh Duong Phase 3 project broke ground in Q3 2024)

Corrugated Container: **1,919 million** m²

Recovered Bleached Pulp: **66k** tonnes

▲ Stable market share growth in Taiwan

Industrial Paper **> 40%** Corrugated Container **> 30%**

Household Paper **20%**

▲ Corporate Governance Evaluation ranked in the Top **6%~20%** for 5 consecutive years



1.1 Operational Performance

Material Issue

Operational Performance

Strategy

Strengthen Taiwan operations and pursue dual domestic and international strategies to become a low-carbon green energy paper company and achieve sustainable growth.



2030

2025

2024

Goals

- Expand green and low-carbon production sites to establish the circular economy benchmark in Asia's paper industry
- Promote resource recycling through technological R&D to achieve a low-carbon green energy transition

Goals

- Establish global circular economy hubs
 - ➔ Advancing Phase 3 construction at Vietnam Binh Duong Paper Mill and installing an additional corrugator at Ben Cat Plant to increase capacity
- Advance green energy transition
 - ➔ Planning an NTD 7.7 billion sustainability-linked syndicated loan
 - ➔ Planning to build a biogas green power system at Houli Paper Mill
 - ➔ Developing biomass cogeneration system at Houli Paper Mill

Goals and Results

- Establish circular economy sites domestically and internationally
 - ➔ Groundbreaking for the Binh Duong Paper Mill Phase 3 BM23 and G3 cogeneration and wastewater treatment plant expansion project in Vietnam took place in the 3rd quarter
 - ➔ Consolidated revenue reached NTD 45.18 billion; EPS was NTD 0.55
- Advance green energy transition
 - ➔ Secured a NTD 5 billion sustainability-linked syndicated loan to advance low-carbon smart papermaking
 - ➔ ChuPei Paper Mill operated Taiwan's largest high-efficiency biomass cogeneration system at full capacity

About CLC

CLC: Low-carbon Green Energy Paper Company

Paper is essential to daily life and a core circular economy industry. Since 1959, CLC has adopted the 3R strategy—Recycle, Reduce, Reuse—to optimize resource and energy circulation, delivering sustainable products and comprehensive paper packaging solutions.

CLC ranked among the world's TOP 100 paper companies and served as a green supply chain partner for international brands. Its low-carbon operations resulted in selection for the Corporate Knights CLEAN 200 for 3 consecutive years (2022~2024).

Advancing S.M.A.R.T. Low-carbon Paper for 3R PLUS Total Resource Circulation

CLC implements the S.M.A.R.T. Low-carbon Papermaking Strategy—Subtraction is Addition, Waste to Material, AI leads in Digital Transformation, Recycling drives Circulation, and Technologies innovate Manufacture—to maximize carbon neutrality through integrated product, energy, and water cycles. CLC expands the use of plant fibers, biomaterials, and biofuels, and has established the 3R PLUS regenerative circular business model. By transforming factories into S.M.A.R.T. regenerative plants/mills, CLC strengthens green energy and smart papermaking advantages, accelerating progress toward net zero.

AI Pioneer in Papermaking: NTD 18.2 Billion ESG Syndicated Loans over 3 Years Advancing Low-carbon Smart Manufacturing

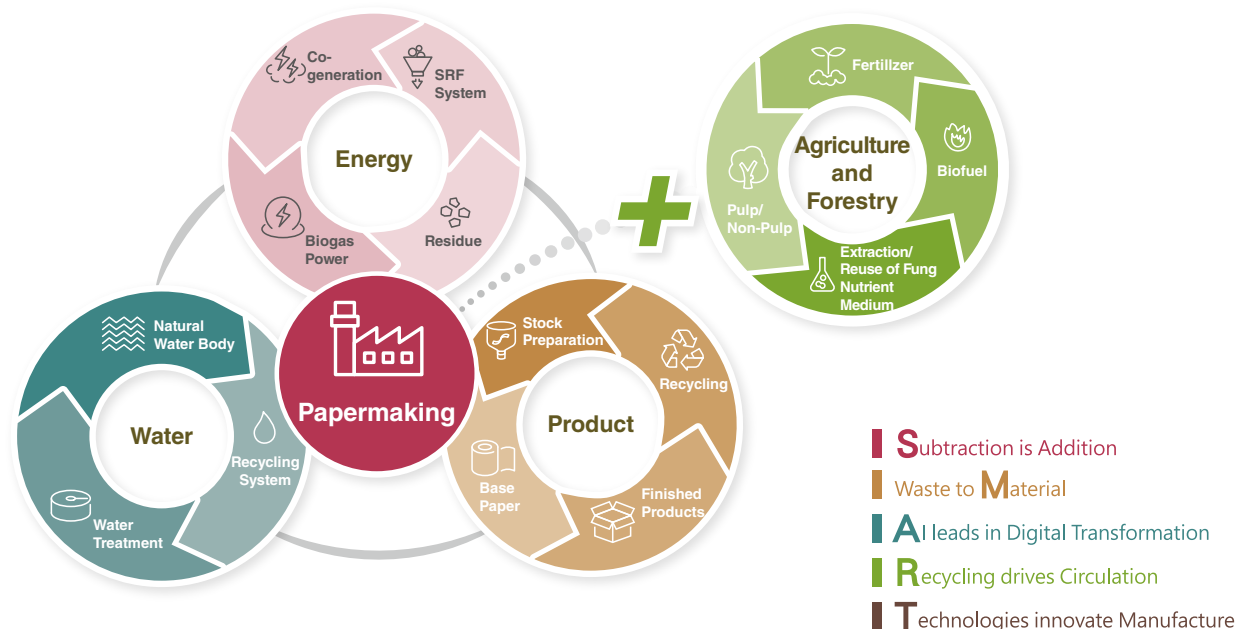
In 2024, CLC completed a NTD 5 billion sustainability-linked syndicated loan with First Bank and 8 other banks, leveraging sustainability performance indicators for interest and fee rate reductions. From 2022 to 2024, CLC secured NTD 18.2 billion in ESG loans. In 2025, CLC will launch an NTD 7.7 billion ESG syndicated loan to advance low-carbon intelligent paper transformation.

CLC and First Bank completed a NTD 5 billion ESG syndicated loan.



Note: For more information, please refer to the [CLC website—Press Release](#)

CLC S.M.A.R.T. Low-carbon Paper: 3R PLUS Total Resource Circulation



In 2025, the global economy is balancing geopolitical shifts and policy adjustments, with demand recovering at a slower pace and raw material prices remaining stable. Industries are restoring momentum through technology adoption and supply chain restructuring. CLC is advancing production and sales upgrades, intelligent applications, low-carbon transformation, and risk management through 6 business plans and execution guidelines to accelerate low-carbon transition and green development. CLC is also strengthening comprehensive risk management to address ESG transformation and green innovation, supporting long-term stability.

6 Key Business Plans and Implementation Guidelines



Maximizing Scale Efficiency



Marketing Upgrade Drives Market Share Growth



Smart Transformation and Talent Development



Advancing Innovation, Creating Value



Enhancing Risk Management Mechanisms



Advancing Sustainability Core

CLC Integrity & Prosperity



Business Philosophy

Sincerity and Trustworthiness (Loyalty to Shareholders, Honesty in Business, Pursuit of Improvement, Dedication to Excellence)



Vision

Caring for Life, Utilizing Resources Wisely, and Contributing to Society



Mission

New Low-carbon & Green Energy Paper Company in Asia

Name	Cheng Loong Corporation (CLC)
Total employees	6,785 worldwide; 3,627 in Taiwan
Established Date	February 4, 1959
Main Products and Services	Industrial Paper / Corrugated Container / Household Product / Form & Packaging Materials
Chairperson	Jen-Ming Cheng
President	Ching-Piao Chang
Headquarters	No. 1, Sec. 1, Minsheng Rd., Banqiao District, New Taipei City, Taiwan (R.O.C.)
Operational coverage	Taiwan, Mainland China, and Vietnam



- 1959 ● Establishment of the CLC.
- 1961 ● Integrating manufacturing and product marketing.
- 1971 ● Listed on the TWSE. (Stock code 1904TW)
- 1990~1993 ● Entering the fine paper and household tissue markets.
- 1995 ● Completion of CLC Headquarters: CLC Plaza Building.



- 2002~2010 ● Establishing Sales Points in Vietnam and China.
- 2005 ● Obtaining the 1st BSI ISO 14064-1 GHG certification.
- 2008 ● Establishment of "Chung Loong Paper Holdings Limited" to administer all companies invested in China.
- 2008 ● Taiwan's 1st international carbon credit certification company.



- 2011 ● Introducing low-carbon paper manufacturing machinery in Houli Mill. (BM10)
- 2015 ● Expanding household tissue operations in Chupei Mill. (TM16)
- 2016 ● Mass production of Taiwan's 1st dustproof clean container box plant.
- 2018 ● Completion of Binh Duong Paper Co., Ltd. in Vietnam.
- 2019 ● 60th anniversary. Deepening the circular economy and transfer into a low-carbon company.
- 2020 ● Start 60+ plan, Focus on Innovation, Circulation, Green Energy.
- 2021 ● Promote S.M.A.R.T. paper and layout circular economy completely.
- 2022 ● Build 3R PLUS Resource Circulation.
- 2023 ● Deepen Zero-carbon solutions based on "paper," collaborate with industry chain partners to form a national carbon reduction team, and create a new landscape for "Zero-carbon Smart Paper."



- 2024 ● **65th Anniversary - Sustaining Nature, moving towards Net Zero! Achieving ESG benefits and the key solutions of Net Zero with every sheet of paper.**

Corporate Structure

The organizational structure comprises headquarters, containerboard division, packaging division, and household products and paperboard division, with affiliated companies in domestic and international locations. Headquarters manages administration, finance, accounting, R&D, IT, and information security, and coordinates quality, production and sales, technology, strategic planning, and subsidiary governance.

Note: Please refer to [CLC website](#)

Membership of Associations

CLC advances industry sustainability by serving as directors, supervisors, and members of professional committees in industry associations.

Note: For complete information, please refer to the [CLC List of Participating Organizations](#)

Sustainable Economic Activities

CLC adopts a resource circular business model centered on low-carbon paper, paperboard, and carton manufacturing, processing, and services. Green products account for over 95% of revenue, providing diverse eco-friendly paper solutions to the market.

According to the Taiwan Sustainable Economic Activities Recognition Reference Guideline (2nd Edition), CLC produced paper and paperboard through a circular economy model, meeting the criteria under the General Economic Activities category. In 2024, CLC reported revenue of NTD 30.72 billion in Taiwan, with 52.93% both applicable to and compliant with sustainable economic activities. This covered the production of low-carbon industrial paper (linerboard and corrugated medium) and household paper (including toilet tissue made from virgin pulp). All activities met 3 criteria: substantial contribution to at least one environmental objective, no significant harm to any of the 6 environmental objectives—climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to circular economy, pollution prevention and control, and protection and restoration of biodiversity—and no significant harm to social safeguards.

Benchmarking Net Zero Smart Manufacturing in Asia's Paper Industry

Headquartered in New Taipei City, Taiwan, CLC operates 5 paper mills and 18 box plants in Taiwan, Mainland China, and Vietnam, with an annual capacity of 2,502k tonnes of paper and paperboard, 1.919 billion m² of box products, and 66k tonnes of recovered pulp. Focusing on recycling-driven circulation, CLC is expanding sustainable packaging lines, increases recovered paper recycling, and strengthens green energy and smart papermaking to drive growth in green economic value and renewable energy benefits.

ChuPei Paper Mill achieved full operation of its biomass CFB boiler system in 2024, reducing product carbon emission intensity by 31.17% and increasing the alternative fuel rate to 47.6%. Tayuan Paper Mill's recovered bleached pulp line began in 2023 and continues to optimize waste food paper container recycling performance. We are constructing biogas green power and biomass CFB boiler systems at Houli Paper Mill to enhance recycling and green energy integration.

CLC 2024 Compliance with the 2nd Edition of Sustainable Economic Activities Recognition Reference Guideline

Item	Parent Company	Total Applicability Ratio	Overall Compliance Rate
Revenue (Unit: NTD thousand)	30,724,013	52.93%	52.93%
Applicable Categories	General Economic Activities – Manufacturing Industrial Paper and Household Paper		
Assessment Results			
Compliance of Economic Activities with Guidelines	✓		
① Substantial Contribution to Environmental Objectives	✓		
Environmental Objectives	TSC (Technical Screening Criteria)	Product Categories	
		Industrial Paper (linerboard and corrugated medium)	Household Tissue (Including toilet tissue produced from virgin pulp)
Climate Change Mitigation	GHG Emissions per Unit Product	0.836 tCO ₂ e/Adt	
	Unit Energy Consumption	Linerboard:	1,976 Mcal/Adt
		Corrugated medium:	1,756 Mcal/Adt
Transition to Circular Economy	Unit Consumption of Virgin and Recycled Raw Materials	Linerboard:	0.89 Adt/ton
		Corrugated medium:	0.88 Adt/ton
	Industrial Waste Recycling Rate	97.65 %	
Pollution Prevention and Control	Industrial Waste per Unit of Product	0.21 ton/Adt	
	Unit COD Generation per Product	0.79 kg/Adt	
② No Significant Harm to 6 Environmental Objectives	✓		
③ No Major Adverse Impact on Social Security	✓		

Note: Calculation boundary is the parent company (Taiwan area).

Following the commencement of BM22 at Binh Duong Paper Mill (phase 2), Ben Cat Plant, and Bac Giang Plant in 2023, production capacity increased. In July–August 2024, construction began on Binh Duong Paper Mill phase 3, including the BM23 industrial paper machine (annual capacity 400,000 tonnes), G3 cogeneration system, and wastewater treatment expansion. Ben Cat Plant plans to add a corrugator. The Group is advancing to develop a million tonne integrated new low-carbon & green energy paper company in Vietnam.

CLC aims to strengthen its global leadership by driving innovation and advancing green, low-carbon packaging for sustainable growth.



Groundbreaking for the Binh Duong Paper Mill Phase 3.

Green Low-carbon Products and Services

CLC delivers Total Low-carbon Paper & Packaging Solutions through vertical integration of papermaking and paper converting. Core products include industrial paper, paper containers, household products, and paper packaging materials. CLC provides low-carbon and diverse paper and packaging services to meet customer needs, enhances product differentiation and market competitiveness through integrated production and a comprehensive product line, and serves as a sustainable packaging partner for international brands.



Industrial Paper

Including linerboard, white linerboard, corrugated medium, coated white paperboard, and paper tube board, etc.



Corrugated Container

Corrugated sheetboard, corrugated container, decorative corrugated container, waterproof corrugated container, and paper pallet are supplied leading global brands.



Household Products

Toilet tissue, facial tissue, kitchen paper towels, hand towels, diapers, personal and household cleaning products.



Business Paper Products

Include credit card slips, computer printouts, gift certificates, invoices, prescription bags, labels, and specialized office paper and packaging materials.

2024 Production Volume and Market Share

Product Category	Production Volume		Taiwan Market Share
	Taiwan	Consolidated Company	
Paper and Paperboard	1,506 million tonnes (+0.8% YoY)	2,249 million tonnes (+26.5% YoY)	Industrial paper >40% Household paper 20%
Corrugated Container	680 million m ² (+1.5% YoY)	1,570 million m ² (+18.4% YoY)	>30%



Leading Integrated Industrial Paper and Corrugated Container Producer in Taiwan and Asia 61st Largest Global Paper Company Worldwide

Production and Sales Locations

5 paper mills

Taiwan 4 Tayuan, Hsinchu, Chupei, Houli
Vietnam 1 Binh Duong

18 box plants

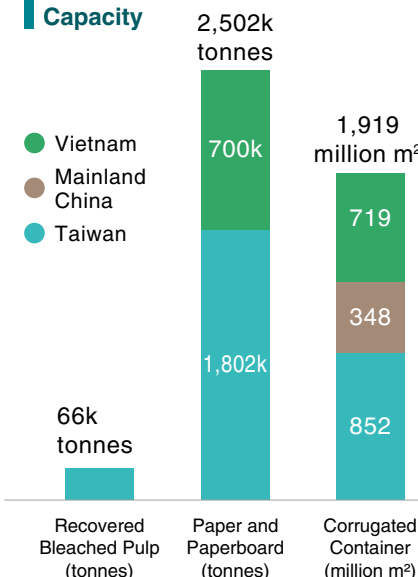
Taiwan 7 Banqiao, Tayuan (2)¹, Miaoli, Taichung, Talin, Yenchoo
Mainland China 6 Shanghai, Kunshan, Suzhou, Dongguan (2)¹, Chengdu
Vietnam 5 Binh Duong, Ben Cat, Dong Nai, Long An, Bac Giang

Note 1 : Tayuan area includes Tayuan Box Plant 1 and 2;
Dongguan area includes CLC Guangdong Paper and Dongguan Ming Long Paper

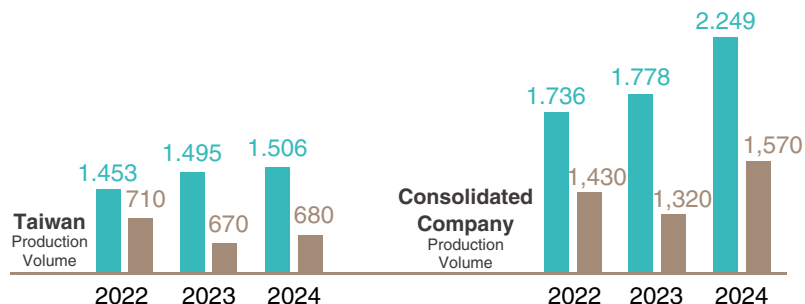
Note 2 : Updated June 2025



Production Capacity



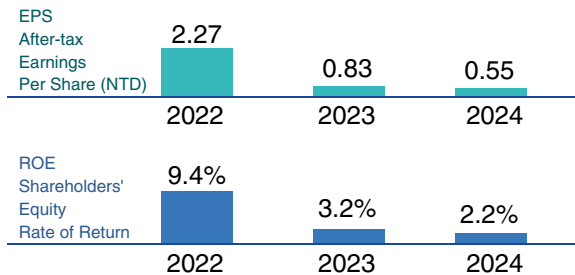
■ Paper and Paperboard : million tonnes ■ Corrugated Container : million m²



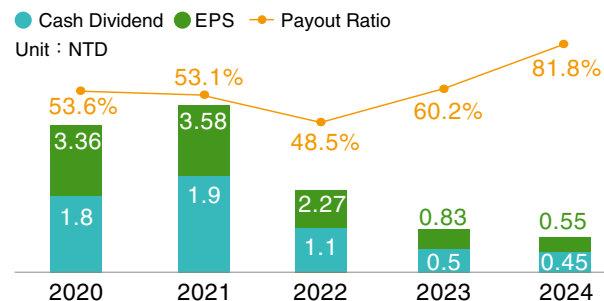
Financial Performance

In 2024, persistent oversupply and geopolitical instability continued to increase global paper industry costs. CLC enhanced operational efficiency and implemented intelligent management and customer relationship strategies, achieving steady growth in delivery volume and revenue. Consolidated revenue reached NTD 45.18 billion (+7.14% YoY), with NTD 30.72 billion from the Taiwan area. Net profit after tax was NTD 657 million (-34% YoY), and after-tax earnings per share were NTD 0.55.

In 2025, CLC anticipates ongoing market uncertainties due to U.S. policy changes and weak demand in China, and will continue to improve management efficiency and implement smart manufacturing to strengthen operational performance.



Shareholders receive annual earnings as dividends. In 2024, a cash dividend of NTD 0.45 per share will be distributed, with a **payout ratio of 81.8%**.



Financial Performance

Unit: NTD thousand

Item	2022	2023	2024
Total Assets	56,833,090	56,265,139	56,081,697
Debt Ratio	50.1%	48.7%	47.3%
Equity Ratio	49.9%	51.3%	52.7%
Direct Economic Value			
Operating Revenue	32,631,563	29,125,870	30,724,013
Economic Value Distribution			
Operating Costs	26,723,272	23,267,891	25,090,429
Employee Compensation and Benefits	4,040,522	3,757,943	3,700,201
Payment to Investors	2,324,942	1,477,376	917,657
Government Payments	323,141	377,335	495,700
Community Investment	4,709	7,996	14,050
Retained Economic Value	(785,023)	237,329	505,976

Note: CLC entity (Taiwan area); information is consistent with annual report disclosures.

Unit: NTD thousand

Item	2022	2023	2024
Total Assets	70,010,480	70,626,797	72,509,633
Debt Ratio	58.2%	57.9%	58.0%
Equity Ratio	41.8%	42.1%	42.0%
Direct Economic Value			
Operating Revenue	43,921,728	42,165,465	45,177,687
Economic Value Distribution			
Operating Costs	36,588,956	34,505,351	37,811,195
Employee Compensation and Benefits	5,258,520	5,069,533	5,072,516
Payment to Investors	2,572,321	2,148,281	1,566,625
Government Payments	729,231	1,252,501	849,260
Community Investment	5,071	8,717	14,892
Retained Economic Value	(1,232,371)	(818,918)	(136,801)

Note: Consolidated Company; information aligns with the annual report.

Tax Policy and Governance

CLC formulates [tax policies](#) and management procedures to ensure effective tax governance and compliance. The Accounting Department oversees tax matters, submits required filings in accordance with regulations, and obtains necessary approvals. CLC supports government policies on innovation, R&D, and tax incentives, and is committed to transparent tax information.

CLC addresses tax compliance risks by enhancing tax expertise through continuous professional training. For unfamiliar tax matters, CLC consults tax authorities and external experts to ensure compliance with tax laws and reporting requirements, thereby reducing the risk of legal penalties, financial loss, and reputational damage. CLC fulfills tax obligations in accordance with the law.

Income Tax Information

Unit: NTD thousand

	2022	2023	2024
Taiwan Region	213,705	187,069	163,888
Mainland China	202,696	151,359	126,596
Southeast Asia	71,070	69,360	27,131
Total Income Tax Expense (A)	487,471	407,788	317,615
Net Profit Before Tax (B)	3,196,960	1,340,751	974,520
Effective Tax Rate (C = A/B)	15.25%	30.41%	32.59%

Note: Information is consistent with annual report disclosures.



1.2 Governance Structure

Material Issue

Corporate Governance

Strategy

Commit to ethical conduct and integrity through top-down management mechanisms to ensure effective and efficient operations.



2030

2025

2024

Goals

Goals

Goals and Results

- Strengthen Board functions to advance corporate sustainability value

- Advance corporate governance

- Enhance information disclosure quality

- Continuous improvement of Corporate Governance Evaluation performance

- Conduct board performance evaluations
 - ➔ Conduct external Board performance evaluations every 3 years
- Strengthen corporate governance regulations

- Strengthen corporate governance and establish ethical management mechanisms
- Strengthen anti-corruption education, training, and information disclosure

- Enhance information disclosure quality

- Enhance Corporate Governance Evaluation performance

- Conduct BoD performance evaluations
 - ➔ Completed the 2024 BoD performance internal evaluation and reported to the Board in Q1 2025
- Corporate governance requirements were completed
 - ➔ Established the Sustainability Report Preparation and Assurance Procedures and the Sustainability Information Management Guidelines; revised the Articles of Incorporation, Board of Directors Rules of Procedure, and Audit Committee Charter
- Strengthen corporate governance and establish ethical management mechanisms
 - ➔ A total of 483 participants attended the Integrity Management and Anti-Corruption Education and Training series through online and in-person courses
- No corruption cases were reported in 2024
 - ➔ 0 cases
- Enhance Information Disclosure Quality
 - ➔ Held 2 online investor conferences on March 28 and August 16
- Enhance Corporate Governance Evaluation results
 - ➔ Corporate Governance Evaluation results ranked in the top 6%~20% for 5 consecutive years
 - ➔ FTSE4Good Taiwan ESG Index score reached 3.2 out of 5
 - ➔ National Taipei University SEED Taiwan Sustainability Evaluation AA
 - ➔ S&P Global Rating: 37 points
 - ➔ 2024 Sustainability ESG Risk Rating was 18.98, the best in the industry



Enhancing Corporate Governance Structure: Four Functional Committees Strengthen Resilience

CLC adheres to sound governance and legal compliance, with an organizational structure that includes the Audit Office, Audit Committee, and Compensation Committee under the Board of Directors to strengthen oversight and transparency. In 2023, the Board established the Sustainability Committee and Risk Management Committee to advance sustainability strategies and enhance resilience to uncertainties.



Organizational Structure



CLC established performance goals to enhance board efficiency, conducted board performance evaluations, promoted board diversity, and appointed a corporate governance officer. Directors' liability insurance was secured to clarify responsibilities and protect shareholder interests. Directors with conflicts of interest recused themselves from discussions and voting, and did not serve as proxies. Cross-shareholding and related party disclosures were published on the Market Observation Post System, the company website, and in the [2024 Annual Report \(p. 56~58\)](#).

Enhance Compliance Mechanisms and Information Transparency

The Board of Directors oversees management and governance. In 2024, CLC amended its Articles of Incorporation to increase independent director seats to at least one-third and limit terms to 3 (maximum 9 years), in accordance with the FSC's 2023 Sustainable Development Action Plan and updated OECD Principles of Corporate Governance, with full compliance required by 2027. CLC also revised the Rules of Procedure for Board Meetings and the Audit Committee Charter. The company established the Procedures for the Preparation and Assurance of Sustainability Reports and the Guidelines for Sustainability Information Management to ensure timely, accurate, and compliant sustainability disclosures for stakeholders.

The CLC Board of Directors convened 6 times in 2024, achieving a 98% attendance rate. The 18th Board's term is from June 10, 2022 to June 9, 2025.

Strengthening ESG and Risk Management for Sustainable Competitiveness

The Chairman of CLC serves on the management team and leads monthly management meetings, overseeing management reports, operational strategies, and ESG issues such as climate change, risk management, and economic development. The Chairman regularly evaluates investment projects to ensure CLC maintains competitiveness in sustainable development, net-zero transition, talent development, and smart production and marketing, supporting long-term growth.

CLC Key Regulations





Board Performance Evaluation

CLC establishes performance goals and conducts regular board evaluations in accordance with the Board Performance Evaluation Measures. Results serve as a reference for director selection and nomination.

Internal Evaluation (annually)

Since 2021, internal board performance evaluations have covered the board, individual directors, and functional committees (Audit Committee, Remuneration Committee, Sustainability Committee, and Risk Management Committee), with [results reported](#) to the board. The 2024 evaluation was submitted on March 11, 2025.

External Evaluation (every 3 years)

CLC will conduct an external board performance evaluation by the end of 2025 to strengthen governance and decision-making. In 2022, CLC commissioned the Taiwan Integrity Management and Anti-Corruption Forensic Association to evaluate the board of directors, Audit Committee, and Remuneration Committee. Results and improvement plans were reported at board meetings on December 22, 2022 and March 14, 2023, with related information disclosed on the [company website](#).

Board Diversity Enhances Decision-making Efficiency

The CLC Board of Directors consists of 9 members, including 3 independent directors, elected by shareholders for a 3-year term. The 18th board term is from June 10, 2022 to June 9, 2025. The board includes 1 female director (11%), 2 with finance and accounting expertise (22%), 6 with management experience in papermaking and circular economy (67%), and 3 independent directors (33%). Among independent directors, 1 has served 1~3 years, 1 for 7~9 years, and 1 for over 9 years. There are 1 director under age 49 and 8 directors aged 50 or above.

Enhancing Board Competence for Excellence in Governance

CLC advances board diversity by establishing policies based on operational and development needs, ensuring governance integrates experience and innovation to enhance competitiveness.

- **Basic Criteria and Values:** Gender, Age, Nationality, Culture.
- **Professional Knowledge and Skills:** Background in law, accounting, industry, finance, marketing, or technology; relevant expertise and industry experience.

The CLC Board of Directors possesses the expertise, knowledge, skills, and competencies necessary to achieve corporate governance goals.

Operational Judgment

Industry Knowledge

Accounting and Financial Analysis

International Market Insight

Business Management

Leadership

Crisis Management

Decision-making

CLC directors participate in internal and external training on risk management, corporate governance, sustainability, blockchain, anti-money laundering, counter-terrorism financing, and information security to align with international sustainability trends, identify risks and opportunities, and enhance governance effectiveness.

Job Title	Name	Gender	Age		Professional Competence							
			below 49	over 50	Operational Judgment	Accounting and Financial Analysis	Business Management	Crisis Management	Industry Knowledge	International Market Insight	Leadership	Decision-making
Chairperson	Jen-Ming Cheng	Male	●		✓	✓	✓	✓	✓	✓	✓	✓
Vice Chairman	Su-Yun Cheng	Female		●	✓	✓	✓	✓	✓	✓	✓	✓
Director	Yen-Hao Chen	Male		●	✓		✓	✓		✓		
Director	Mu-Hsiang Peng	Male		●	✓		✓	✓	✓	✓	✓	✓
Director	Ching-Huei Yu	Male		●	✓		✓	✓	✓	✓	✓	✓
Director	Ching-Biao Chang	Male		●	✓		✓	✓	✓	✓	✓	✓
Independent Director	Yung-Chi Wang	Male		●	✓		✓		✓	✓	✓	
Independent Director	Fu-Hsing Chang	Male		●	✓	✓	✓			✓		
Independent Director	Feng-Chih Huang	Male		●	✓	✓	✓			✓		

* Board Members' Experience and Professional Qualifications: Refer to the [2024 Annual Report](#), p. 9~12, or the [CLC website](#)

* For details on board diversity implementation in the 18th term, refer to the [CLC website – Board of Directors](#)

* In 2024, all directors completed the required training hours in accordance with the Guidelines for the Continuing Education of Directors and Supervisors of Listed and OTC Companies. Refer to the [2024 Annual Report](#), p. 28



Corporate Governance Operations

CLC appointed Kun-Ming Yang, Vice President of the Finance Department, as Corporate Governance Officer on June 24, 2022, to support directors and safeguard shareholder rights. In 2024, the Corporate Governance Officer completed the required 12-hour corporate governance training, further enhancing governance capabilities. For details on CLC's 2024 corporate governance practices, refer to the [CLC website](#).

Enhancing Corporate Governance and Disclosure Quality

CLC emphasizes corporate governance and information transparency. Annual cross-departmental reviews of evaluation results set optimization goals and track progress to enhance governance mechanisms. From 2020 to 2024, CLC ranked in the TOP 6%~20% in Corporate Governance Evaluation.

2023 10th Corporate Governance Evaluation Enhancements

- **Protection of Shareholder Rights:** The shareholders' meeting was held on May 31, 2024, achieving the target of convening by the end of May.
- **Enhancing Information Disclosure:** Announced and implemented the policy linking senior management compensation to ESG performance evaluation to increase transparency and strengthen sustainability commitment.

Enhancing Information Disclosure and Stakeholder Communication

To enhance information disclosure and stakeholder engagement, CLC held two online investor conferences in 2024 (March 28 and August 16), where the President, business unit heads, and spokesperson presented operations, investment plans, business outlook, ESG strategies, risk management, and Action Results to investors and media. CLC also participated in major domestic and international ESG evaluations to review and improve disclosure quality, ensuring transparent communication and stakeholder trust.

- ★ 2024 11th Corporate Governance Evaluation Ranked Top **6%~20%**
- ★ FTSE4Good Taiwan ESG Index score: **3.2** (out of 5)
- ★ National Taipei University SEED Taiwan Sustainability **Evaluation AA**
- ★ S&P Global Rating: **37** points
- ★ 2024 Sustainalytics ESG Risk Rating: **18.98**, best in industry

Protecting Shareholder's Rights

CLC's corporate governance system safeguards shareholder rights and ensures fair treatment for all shareholders. Shareholders are granted rights to information, participation, and decision-making on major corporate matters in accordance with legal requirements. These measures are defined in the Corporate Governance Best Practice Principles to encourage active shareholder engagement.

2024 Annual Shareholders' Meeting: Strengthening Resilience Amid Challenges

CLC held its 2024 Annual General Meeting of Shareholders on May 31, chaired by Chairman Jen-Ming Cheng, who presented 2023 operational results and future plans. In 2023, CLC responded to declining market demand and capacity caused by global inflation and geopolitical risks by advancing overseas capacity expansion and accelerating smart sustainable manufacturing to strengthen resilience and competitiveness.

With steady global economic recovery and continued e-commerce growth, demand for paper packaging will continue to expand. CLC is advancing production capacity and R&D to capture market trends, create long-term shareholder value, and fulfill commitments to governance and shareholder rights.





Corporate Sustainability Committee

To advance corporate social responsibility and sustainable development, the CLC Board of Directors established the Sustainability Committee at the end of 2023. The committee consists of 6 members, chaired by the President. President Ching-Piao Chang and members Mu-Hsiang Peng and Tseng-Fu Hou possess expertise in business management, financial analysis, risk management, and the circular economy, fulfilling the committee's professional requirements. The committee convenes at least once annually to perform its designated duties.

- 1 **Formulation of sustainability policies, goals, and implementation plans.**
- 2 **Promote and develop corporate sustainability.**
- 3 **Supervise other sustainability matters resolved by the Board of Directors.**

In 2024, 2 meetings achieved 100% attendance. Key topics included 2023 ESG performance, revision of medium- and long-term goals, and progress on sustainability initiatives and FSC climate-related actions.



Audit Committee

The Audit Committee supported the Board of Directors in fulfilling supervisory duties and exercising powers required by the Securities and Exchange Act, the Company Act, and related regulations. The Committee regularly communicated with certified public accountants and reviewed their appointment, independence, and performance. The head of internal audit submitted reports according to the annual audit plan. The Committee convened at least once per quarter, holding 6 meetings in 2024 with 100% attendance.

CLC's 4rd Audit Committee was formed following the 2025 Annual Shareholders' Meeting and is composed of three independent directors—Fu-Hsing Chang (convener), Feng-Chih Huang, and Chung-Lin Chou—elected at the 2022 shareholders' meeting. Fu-Hsing Chang held a Ph.D. in Accounting from National Chengchi University, passed the Senior Professional and Technical Examination for Accountants. Feng-Chih Huang held an MBA from the State University of New York and previously served as Senior Executive Vice President of International Banking at CTBC Bank and General Manager of Asia-Pacific International Business at HSBC Bank (China) Company Limited.



Compensation Committee

The Compensation Committee regularly reviews performance evaluation and compensation policies, systems, standards, and structure for directors and managers, holding at least 2 meetings per year. Following the re-election of the BoD in 2025, the Board resolved on July 22, 2025, to appoint 3 independent directors as members of the 6th Compensation Committee, with Fu-Hsing Chang serving as the convener. In 2024, the Committee held two meetings with a 100% attendance rate.

Board Remuneration Policy

Director remuneration is determined in accordance with the CLC Articles of Incorporation and Board of Directors Performance Evaluation Measures, based on industry conditions and individual director participation and contributions. The Remuneration Committee reviews proposals and submits them to the Board of Directors for resolution to ensure compliance with corporate governance principles and maintain industry competitiveness.

Linking Senior Management Compensation to Sustainability Performance

CLC conducts annual performance evaluations based on its salary structure and adjustment mechanism. Evaluation indicators and assessment systems are established in accordance with the Annual Performance Evaluation Regulations for senior managers to ensure alignment between compensation and company objectives. Compensation components and evaluation criteria are as follows:

- Salary structure includes fixed monthly salary, merit bonus, year-end bonus, and incentive bonus.
- Evaluation criteria include: 1. Company performance, 2. Individual performance and contribution, 3. Sustainability performance indicators (15% of total evaluation), covering governance, circular economy, energy and resource integration, sustainable supply chain, social responsibility, and workplace well-being.

The Human Resources Department drafts the compensation plan, which is reviewed by the Compensation Committee and approved by the Board of Directors. Industry benchmarks are referenced to ensure market competitiveness and alignment with corporate sustainability goals.

Note: For details, refer to the [CLC website – Functional Committees](#)



Risk Management Committee

To enhance risk assessment and management, the CLC Board of Directors established the Risk Management Committee at the end of 2023, comprising 6 members and chaired by the President. President Ching-Piao Chang and members Mu-Hsiang Peng and Tseng-Fu Hou possess expertise in business management, financial analysis, risk management, the circular economy, and corporate sustainability. The committee convenes at least once annually to perform its duties.

- 1 **Review risk management policies, procedures, and framework.**
- 2 **Strengthen risk management and monitor the implementation of all risk control measures.**
- 3 **Supervise other risk management tasks resolved by the Board of Directors.**

In 2024, 2 meetings achieved 100% member attendance, focusing on the 2024 risk assessment results and risk management implementation to ensure effective mechanism execution.



1.3 Risk Management

Material Issue

Risk Management

Strategy

Establish a risk management strategy and culture to enhance transparency and protect employee and shareholder rights.



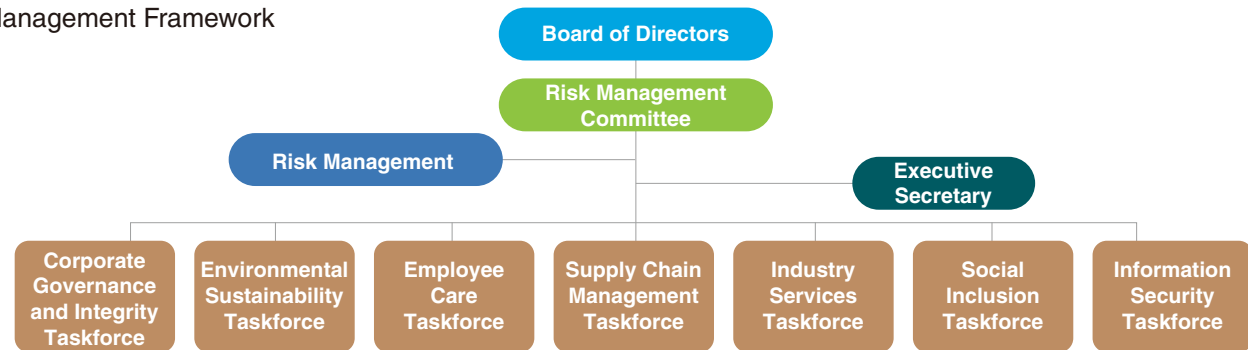
Risk Management

Risk management is led by the Risk Management Committee under the Board of Directors. 7 taskforces follow [the Risk Management Policies and Procedures](#) to identify, analyze, and assess internal and external risks in environment, society, and corporate governance. Risk levels are determined by severity and likelihood, with controls reviewed and additional measures implemented as needed. Effectiveness is tracked to ensure continuous improvement. The assessment covers consolidated entities in Taiwan, Mainland China, and Vietnam. **In 2024, 2 Risk Management Committee meetings were held and reported to the Board of Directors.**

CLC implemented the Task Force on Climate-related Financial Disclosures (TCFD) in 2021 and was the 1st paper company in Taiwan to pass the TCFD audit with the highest rating. In 2023, CLC signed to support the Taskforce on Nature-related Financial Disclosures (TNFD) as a TNFD Early Adopters and follows the TNFD framework to strengthen disclosure of nature-related risks and responses in governance, strategy, risk management, and metrics and targets.

Note: For full details, see [ch4.1 Climate Change Action TCFD Report](#) and [ch4.6 TNFD Biodiversity in this report](#)

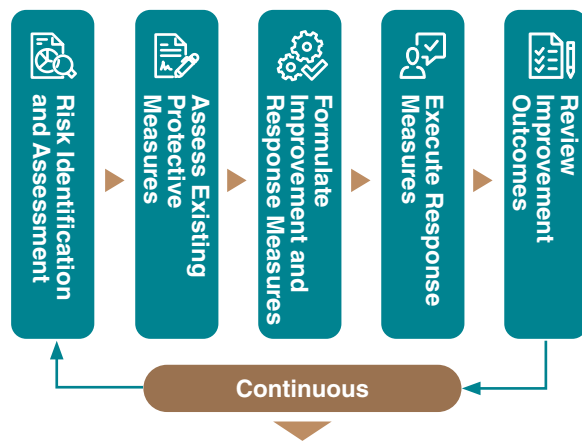
Risk Management Framework



Operating Mechanism

Board of Directors	Risk Management Committee	Executive Secretary	7 Key Taskforces
Risk Management Highest Authority - Approve risk management policies, procedures, and framework. - Ensure alignment between operational strategy and risk management policy. - Ensure the establishment of robust risk management mechanisms and a risk management culture. - Supervise and ensure the effective operation of the risk management system. - Allocate adequate resources to ensure effective risk management.	Under the Board of Directors - Review risk management policies, procedures, and framework, and regularly assess their effectiveness and operational performance. - Approve risk appetite to guide resource allocation. - Ensure the risk management mechanism effectively addresses company risks and is integrated into daily operations. - Approve risk control priorities and risk levels. - Review the implementation of risk management, propose necessary improvement measures, and report annually to the BoD. - Implement the risk management decisions made by the Board of Directors.	- Establish risk management policy, procedures, and framework. - Establish risk appetite and develop qualitative and quantitative measurement standards. - Analyze and identify company risk sources and categories, and regularly review their applicability. - Compile and submit an annual risk management implementation report. - Assist and supervise risk management activities across all departments. - Facilitate interdepartmental coordination and communication for risk management. - Execute risk management decisions of the Risk Management Committee. - Conduct risk management training to enhance overall risk awareness and culture.	- Responsible for risk identification, analysis, assessment, and response within each unit, and establishing crisis management mechanisms when necessary. - Regularly report risk management information to the risk management promotion and implementation units. - Ensure each unit effectively implements risk management and control procedures in compliance with the risk management policy.

Risk Management Procedures



The 7 taskforces under the Risk Management Committee implement the Risk Management Policy and Procedures to identify, analyze, and assess internal and external ESG risks. Risk levels are determined by severity and likelihood. Controls are reviewed for effectiveness, with additional measures developed and implemented as needed. Risk management outcomes are tracked to ensure sound company operations.

In 2024, 2 risk management implementation meetings and two risk management committee meetings were convened and reported to the Board of Directors.

- June 4, 2024 — Convened the 1st Corporate Sustainability and Risk Management Implementation Meeting.
- August 8, 2024 — The Risk Management Committee approved the risk assessment results and reported to the BoD.
- November 12, 2024 — Convened the 2nd Corporate Sustainability and Risk Management Implementation Meeting.
- December 24, 2024 — The Risk Management Committee approved the Risk Management Implementation Status and reported to the BoD.

Key Risks and Response Strategies

Key Risks	Risk Factors	Risk Management and Opportunity Development
Finance and Compliance	- Interest Rate - Exchange Rate - Financing Transactions - Fair Trade Act: Concerted Actions	1. Recognize gains from derivative hedging transactions to offset interest expenses. 2. Conduct timely foreign currency transactions to reduce exposure. 3. Reduce financing utilization to maintain sufficient credit lines. 4. Legal compliance training, internal control implementation, and risk mitigation
Talent	- Labor Shortage - Talent Gap	1. Adjust compensation and enhance a supportive environment. Expand recruitment channels to improve talent acquisition and retention. 2. Industry-academia collaboration to cultivate domestic and international talent.
Raw Materials	- Price Increase - Material Shortage - Transportation	1. Expand the supplier base to enhance bargaining power, conduct regular evaluations, establish contingency plans, and develop alternative material sources. 2. Establish partnerships with multiple logistics companies to enhance transportation capacity.
Operations	- Operations - Alternatives - Diverse Clients - Capacity Expansion	1. Implement mobile platforms for sales, procurement, and production to enable real-time operational monitoring and exception management. 2. Advance technology and product development to meet diverse customer needs and strengthen relationships through CRM. 3. Serving diverse industries with no single customer or sales concentration risk. 4. Control customer credit limits. 5. Conduct comprehensive evaluation of investments in production expansion equipment.
Environmental and Safety and Health	- Occupational Safety - Employee Health - Environmental Stewardship	1. Establish an environmental management system, conduct regular compliance audits, monitor environmental resource data and performance, adopt Best Available Techniques (BAT) to enhance air pollution control and water conservation, and implement circular economy practices. 2. Implement an occupational safety and health management system to strengthen risk culture and enhance risk awareness across the organization. 3. Implement preventive and comprehensive employee health management and promote health programs to reduce health risks. 4. Implement a food safety inspection system and standardized forms to ensure the safety of ingredients, cooking equipment, and utensils.
Information Security	- Cyberattacks - Data Protection	1. Implement strict risk controls, promote information security awareness, and strengthen anomaly monitoring to ensure normal operations. 2. Implemented CheckPoint internal firewall to establish multi-layered protection and enhance information security.
Climate Change and Energy	- GHG Emissions - Climate Disasters	1. The Energy Management Committee conducts monthly monitoring and audits of carbon inventory and energy management, enhances product energy efficiency, increases alternative fuel utilization, implements energy-saving and carbon reduction projects, and develops low-energy products. 2. Increase recycled water usage and implement a water resource monitoring system to manage process water consumption. 3. Establish emergency response procedures and enhance disaster management capabilities. 4. Implemented the TCFD framework to enhance climate governance. 5. Serve as an early adopter of the TNFD to enhance disclosure of nature-related risks and response measures.



Intellectual Property Management

CLC has established a dedicated unit for intellectual property management to protect R&D results, mitigate operational risks, and promote employee innovation, serving as the basis for decision-making and execution across all departments.

CLC Intellectual Property Risk Management and 2024 Implementation Results:



I. Patent Protection Measures

The company integrates resources to implement patent strategy planning and strengthen patent deployment to protect intellectual property rights. An inventor incentive program encourages innovation, enhances patent quality, and increases patent value and competitiveness.

In 2024, the company obtained 3 patents: Eco Non-wax Water-resistant Coating and its application to paper products (Patent No. I862907), Plastic-free Paper Coating and its preparation method and application (Patent No. I850081), and Plastic-free Paper Laminate Wrap and Container (Patent No. M651104).

As of 2024, CLC held 15 patents in Taiwan, 2 in China, and 3 pending in Vietnam.



II. Trademark Protection Measures

CLC applies for trademarks and conducts trademark monitoring during overseas brand expansion to safeguard trademark uniqueness and identification.

CLC developed low-basis-weight eco weed control paper using 100% locally recovered paper to reduce plastic pollution in farmland and minimize manual weeding. The product obtained Organic Farming Material Certification (No. 112016) from the Agriculture and Food Agency, Ministry of Agriculture, Taiwan, and secured the trademarks 'Wang Long', 'Long Sheng', and 'Long Mei Cao' to support future commercialization.

As of 2024, CLC held 131 trademarks in Taiwan, 27 in China, and 9 in Vietnam. One additional trademark application in Vietnam received official approval and was pending announcement upon payment notification.



III. Trade Secret Protection Measures

1. Confidential Information Management: The Information Security Center is established to classify and grade confidential information, implement protection measures, strengthen information security controls, and set appropriate employee access rights.

2. Employee Management: Establish employment contracts and confidentiality declarations for departing employees.

3. Education and Training: Conducted courses and seminars on the Trade Secrets Act.





1.4 Information Security Management

Material Issue

Information Security Management

Strategy

Enhance employee information security awareness, optimize risk early warning, and ensure business continuity.



2030

2025

2024

Goals

- Implement ongoing information security training and corporate security measures to reduce the risk of human-related data breaches
- Implement cybersecurity AI tools to enhance attack detection and incident investigation
- Establish Zero Trust Security Architecture
- Pursue zero major information security incidents

Goals

- Implement passwordless authentication to reduce cybersecurity risks
- Expand Information Security Monitoring Center coverage, strengthen deployment across all mills/plants, and enhance real-time monitoring and threat response capabilities
- Enhance external asset exposure management
- Prevent major information security incidents and protect information assets

Goals and Results

- Establish two-factor authentication to enhance security
 - ➔ Enhanced access security for IT personnel and critical system management to reduce information security risks
- Establish the Security Operation Center (SOC)
 - ➔ Completed; real-time monitoring and response capacity enhanced
- Enhance information security awareness in AI tool utilization
 - ➔ Delivered AI information security training, including an introduction to generative AI and the Executive Yuan's Reference Guidelines for the Use of Generative AI
- Conduct social engineering simulations and cybersecurity training
 - ➔ 2 social engineering drills were conducted, and information security training courses were held to enhance employee awareness
- Implement an intranet firewall to enhance information security
 - ➔ The internal network firewall was implemented to strengthen internal network security management
- No major information security incidents were reported
 - ➔ 0 cases

Enhancing Information Security to Ensure Operational Resilience

Accelerated digital transformation has increased enterprise reliance on information systems, intensifying information security risks and malicious attacks that threaten system operations, production schedules, sensitive data security, and corporate reputation.

CLC has established a dedicated information security unit and Chief Information Security Officer, implementing management mechanisms in accordance with the Information and Communication Security Operational Standard Management Measures. Cross-department and plant-wide firewalls enable real-time risk monitoring and vulnerability management to prevent attacks and ensure operational security.

CLC invests annually in upgrading information security hardware and software, conducts training programs, and establishes comprehensive network and computer protection. Management plans cover access control, data backup, system development, and outsourced vendor management to ensure the confidentiality, availability, integrity, and continuity of information assets, reducing operational information security risks.

In 2024, CLC reported no major information security incidents, demonstrating effective information security management.

CLC 2024 Information Security Priorities

Strengthening Information Security Management

- CLC established the ISO 27001 Information Security Management System (ISMS) in 2023 and completed ISO 27001:2022 transition certification in June 2024. CLC continues to allocate resources, adhere to ISO 27001 standards, and drive innovation and management upgrades to enhance information security.
- Digital asset inventory and risk assessment follow the PDCA model to review information and communication security goals and measures, with ongoing improvements. The President chairs the ISO Implementation Committee quarterly to review information security performance.

Digital Transformation and Cybersecurity Upgrade: CLC ISO 27001 Advancement

ISO 27001:2022 Upgrade Highlights:

- Strengthening Data and Privacy Protection — Implemented more rigorous data protection and privacy control mechanisms.
- Enhancing Security Monitoring — Reinforced threat intelligence management to safeguard critical corporate information assets.
- Expanding Cloud Security Standards — Dedicated cloud security controls to deal with risks from increased enterprise cloud adoption.



[CLC ISO 27001:2022 certificate](#)



CLC achieved BSI ISO 27001:2022 (ISMS) Transition Certification



Enhancing Information Security Capabilities

- Strengthen protection for network connections, data centers, firewalls, email, and servers; regularly review information security policies and procedures; convene information security project meetings for review and revision.
- Enhancing OT security with USB malware scanning tools. Apply access control for critical infrastructure, recording personnel entry and exit to ensure physical equipment security.



Fostering a Corporate Information Security Culture

- An information security section is available on the internal EIP website, with a dedicated security knowledge area on the Information Security Insights Network for regular updates. In 2024, over 60 information security notices were published to ensure employees remain informed of current threats and protection measures. Online courses strengthen information and AI security training, covering email fraud prevention, personal data protection, and sensitive data handling, thereby enhancing employee awareness and reducing cyberattack risks.
- In 2024, 2 social engineering drills were conducted using AI-generated phishing emails simulating credit card fraud, department store coupons, and government notifications to test employee awareness. Following information security training and drills, open rates at Headquarters were 8% and 6% for the 1st and 2nd exercises, both below the standard threshold, indicating enhanced information security awareness.
- CLC partnered with the Ministry of Economic Affairs to launch the iPAS Supply Chain Training Program, providing training on smart manufacturing, industrial control system cybersecurity, and the IEC62443 standard to strengthen supply chain cybersecurity and ensure security compliance with equipment suppliers. Group discussions and cross-department, cross-plant participation deepened collaboration between internal teams and supply chain partners, establishing a foundation for future cooperation.



Director Tzu-Hsien Hsieh, CLC Information Security Center

The CLC iPAS program established a unified communication framework with supply chain partners and enhanced industrial control cybersecurity awareness. The curriculum covered IT and OT security differences and IoT applications. Group discussions and project presentations promoted cross-department and equipment manufacturer collaboration, strengthening the cybersecurity foundation across the supply chain.



1.5. Integrity Management

Material Issue

Ethical Business Practices

Strategy

Upholding integrity and legal compliance, we enforce clear regulations, provide training and reporting channels, and foster a culture of professional ethics.



2030

2025

2024

Goals

Goals

Goals and Results

- Strengthen compliance management and establish a robust compliance culture

- 100% of key suppliers to complete anti-corruption education and training

- Pursuing Zero Violations

- Continue to notify all directors and senior management of blackout periods and ensure compliance with trading restrictions to prevent regulatory violations

- Publish 3 legal column

- Continue to provide anti-corruption training and awareness programs for suppliers

- 0 major violations

- Continue to notify all directors and senior management of blackout periods and ensuring compliance with trading restrictions to prevent regulatory violations
 - Enforced [the Regulations for the Prevention of Insider Trading](#) by notifying all directors and senior executives 30 or 15 days prior to the announcement of the annual report or financial statements
- Integrity and Anti-Corruption Training: Online and In-Person Courses
 - Completed with 483 participants
- Publish 3 legal column
 - 3 regulatory column have been published
- Conduct anti-corruption training and awareness programs for suppliers
 - 100% of CLC suppliers signed the Supplier Code of Conduct
- No major violations (no single incident with cumulative fines reaching NTD 1 million)
 - Yenchao Old Plant was fined NTD 1.49 million for Building Act violations. The company conducted a comprehensive review and implemented corrective measures to ensure compliance and prevent recurrence



“CLC emphasizes sound management, legal compliance, and anti-corruption. The "Procedures and Guidelines for Ethical Business Conduct" are in place, with the sustainability committee overseeing the Corporate Governance and Ethical Business Conduct Taskforce (refer to the Organization Structure on p.14) to promote ethical business practices.”

Sincerity and trustworthiness are core values at CLC, guiding employee conduct. All employees comply with relevant regulations. CLC provides training for new hires and conducts regular courses on integrity, fairness, and anti-corruption, promoting conflict of interest avoidance, protection of company assets, client confidentiality, and offering channels for reporting illegal or unethical conduct to ensure integrity in daily operations.

CLC follows the [Procedures and Guidelines for Ethical Business Conduct](#) and the [Code of Ethical Conduct](#). The Corporate Governance and Ethical Business Conduct Taskforce submits annual reports to the Board of Directors on ethical business implementation.

Supplier Ethics Standards

CLC requires all suppliers to sign the Supplier Code of Conduct in project and purchase contracts and promotes these standards through the annual Sustainable Supply Chain Conference and on-site supplier audits to ensure alignment with CLC's business ethics and legal compliance.

CLC Personnel
Misconduct Handling

[Reporting Channels](#)



Nationwide Anti-fraud Initiative, CLC Participation

Solemn Statement: Joint Security Initiative with Police

Sincerity and trustworthiness are central to CLC's operations. On January 15, 2024, CLC issued an [Anti-Fraud Statement](#) to alert the public to fraudulent recruitment messages impersonating the company and warned that legal action would be taken against any unauthorized use of its name.

In 2024, CLC collaborated with the Anti-fraud Office of the New Taipei City Police Office to conduct anti-fraud campaigns, inviting experts to explain the latest fraud methods and enhance public awareness.

For more information, visit the CLC website – [Press Release](#)

CLC 2024 Integrity Management Progress

1. Implemented the [Regulations for the Prevention of Insider Trading](#) by prohibiting directors from trading company stock before financial report announcements and notifying all directors and senior management of the blackout period to prevent violations.
2. No corruption cases were reported through the employee dishonesty reporting channel in 2024.
3. A total of 483 participants attended online and in-person integrity management and anti-corruption training sessions.

Strict Regulatory Compliance and Comprehensive Employee Training

CLC has consistently complied with regulations, with no material violation incidents in the past. In 2024, the Yenchao Old Plant was fined NTD 1.49 million for violating the Building Act. CLC immediately conducted a thorough review and implemented corrective actions, including enhanced staff training, legal compliance education, and strengthened internal management and monitoring to ensure full regulatory compliance and prevent recurrence.

Details of other regulatory violations, fines, and corrective actions are provide [in the 2024 Annual Report, p. 73~74](#)

Compliance with laws and ethical standards is fundamental to CLC's operations. CLC maintains clear work regulations and delivers legal training through online and in-person courses, the company website, internal publications, and meetings to strengthen legal awareness. The Legal Department monitors compliance across all units to ensure effective implementation.

CLC emphasizes employees' legal literacy. In 2024, the Legal Department published legal columns in internal publications, using practical cases to explain legal knowledge and strengthen legal education for employees.

Additionally, CLC issued anti-fraud statements and collaborated with police on awareness campaigns to protect employees and the community.



Deputy Director Xin-Huang Lin of the New Taipei City Police Office conducted an anti-fraud seminar at CLC with 80 participants (2024.12.12).

02

Sustainable Low-carbon Transition

Promoting the circular economy by implementing paper-based Nature Sustainability solutions, applying digitalization to enhance low-carbon green energy production and sales, and establishing a new model for circular sustainability.

2.1 Sustainable Products and Development

2.2 Product Responsibility and Customer Service

2.3 Digital Transformation

- ▲ Tayuan Box Plant obtained **FSSC 22000 certification**
Safe and Reliable Paper Packaging Solutions
- ▲ NTD **128 million** invested in R&D
Green warehousing solutions using sustainable paper materials adopted by international e-commerce brands
- ▲ **Eco weed control paper** received organic agricultural material certification for 2 consecutive years
Plastic-reducing packaging bags obtained national utility model and invention patents
- ▲ Resource Recycling, Largest Scale in Taiwan
1.66 million tonnes of recovered paper (2.35 million tonnes Group total)
Waste food paper container certified processing volume: **176k** tonnes, **+6%** YoY
- ▲ Andante **30th** Anniversary: **No.1** Market Share in Innovation Pull-out Kitchen Paper
The only company in the industry with **6** household paper products certified with carbon footprint labels; 2025 Goals: **12** items
- ▲ Established the **Milestone Year for AI** applications, completing **29** smart transformation projects
ESG Excellent Proposals generated nearly NTD **1.2** billion in profit over the past 4 years



2.1. Sustainable Products and Development

Material Issue

Sustainable Products and Development

Strategy

Adhering to the 3R principles—Reduce, Reuse, Recycling—to achieve full resource recycling, advance R&D of diverse low-carbon products and services, and generate sustainable value from each sheet of paper.



2030

2025

2024

Goals

- Recovered paper utilization rate for industrial paper: > 97% in Taiwan; > 94% in Vietnam
- Invest continuously in innovation and R&D to advance sustainable solutions
- Innovate diverse low-carbon household paper products to expand sustainable consumption value

Goals

- Recovered paper utilization rate for industrial paper: > 97% in Taiwan; > 94% in Vietnam
- Invest continuously in innovation and R&D to advance sustainable solutions
 - Expanding the application scope of sustainable agricultural materials—CLC eco weed control paper
 - Launching Paper Studio all-paper products, advancing green packaging design, reducing printing area and processing steps to lower product carbon footprint
- Innovate diverse low-carbon household products to expand sustainable consumption value
 - Plan Andante 30th Anniversary events
 - Develop plastic-reduced packaging for toilet tissue
 - Expand carbon footprint inventory to 12 items
 - Dandelion laundry capsules to apply for Green Mark
 - Vietnam small roll toilet paper packaging to use two-color printing
 - Boxed facial tissues to use all-paper materials without lamination to increase recovering rate
 - Develop hanging toilet tissue with 450 sheets and 5-ply large packaging to reduce packaging materials
- Continue to expand innovation in the circular economy
 - Cross-industry collaboration is increasing the accurate sorting and recycling volume of food paper containers

Goals and Results

- Recovered paper utilization rate for industrial paper exceeded 97% in Taiwan
 - Industrial paper 97.7%, all paper types 95.1% (Taiwan); industrial paper 95.1% (Vietnam)
- Invest NTD 128 million in innovation and R&D for sustainable solutions
 - Developed low-carbon paper warehousing solutions adopted by international e-commerce
 - Eco weed control paper received organic agricultural material certification from the Ministry of Agriculture for 2 consecutive years
 - Obtained multiple invention and utility patents
 - Developed 3 All-paper creative products: eco desk calendar, dollhouse, and MINI paper library
- The household paper product line is expanding its carbon footprint inventory application
 - Held 6 items with carbon footprint labels, the only one in the industry
- Household cleaning products are prioritizing local agricultural extracts to advance Green Lifestyle
 - The Andante personal care series was relaunched, featuring extracts from local agricultural products
- Innovation in the circular economy
 - The certified processing volume of food paper containers at ChuPei Paper Mill reached 3,000 tonnes per month (+50% YoY); the Group's certified processing volume totaled 176k tonnes per month
 - 48 ESG Excellent Proposals were selected, generating nearly NTD 170 million in profit, with a cumulative total of NTD 1.2 billion over 4 years

Sustainable Products and Development

In 2024, the Group reused 2.35 million tonnes of recovered paper, preserving 47 million trees

Paper products are primarily made from recovered paper and sustainable forest fibers. After use, paper can be recycled or naturally decomposed, minimizing environmental impact. Circular properties enable broad application across industries. As demand for sustainability increases, paper is the preferred material for packaging and transport.

As a leading paper manufacturer, CLC is committed to developing a circular economy sustainable business model focused on environmentally friendly products and services. CLC continues to enhance processes, adopt advanced environmental equipment, and implement intelligent production and sales systems to increase the use of recovered paper, improve product quality, and achieve carbon reduction. In 2024, CLC's Taiwan Parent Company utilized 1.66 million tonnes of recovered paper (+1.9% YoY, 32,000 tonnes). The recovered paper utilization rate rose by 0.2% to 95.1%. For industrial paper, the utilization rate also increased by 0.2% to 97.7%. All paper types and industrial paper met established goals. In 2024, Vietnam Binh Duong Paper Mill utilized 690,000 tonnes of recovered paper (+16% YoY, 100,000 tonnes), raising the recovered paper utilization rate for industrial paper to 95.1%. Groupwide, CLC utilized 2.35 million tonnes of recovered paper in 2024, generating resource circulation benefits and indirectly preserving 47 million trees, contributing to secondary forest creation.

Note: Using 1 tonne of recovered paper pulp reduces the need to cut down 20 trees.

Less is More!

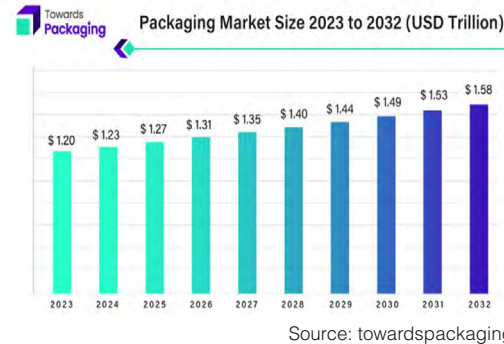
CLC Diverse Low-carbon Products: Maximizing Value with Minimal Resources

Global demand for paper packaging has grown steadily due to the plastic-reduced trend and the development of emerging economies. Increased consumer focus on sustainability has raised the penetration rate of eco household paper made from 100% recovered paper. During the pandemic, demand for household cleaning products increased due to greater attention to hygiene.

CLC applies the "Less is More" principle to maximize product value with minimal resources, continuously developing diverse low-carbon products to meet global demand for sustainable packaging and daily necessities, contributing to a net-zero future.

Seizing the Low-carbon Packaging Revolution, Creating Green Warehousing Solutions

Driven by the global e-commerce market, the packaging market is projected to grow from USD 1.20 trillion in 2023 to USD 1.58 trillion in 2032, with a compound annual growth rate of 3.1%. In 2021, the Ministry of Environment (Taiwan) reported annual consumption of 220 million sets of single-use e-commerce packaging in Taiwan, with demand expected to double by 2030. Over the past decade, the packaging industry has shifted toward digitalization and green innovation. Companies must implement sustainable packaging strategies to reduce environmental impact and meet market demand.



Adhering to the 3R principles—Reduce, Reuse, Recycling—CLC develops low-carbon, plastic-free, and lightweight multifunctional packaging products based on the product lifecycle to promote green consumption and waste reduction. Through technologies, CLC reduces product carbon footprint, ensures packaging protection, and improves logistics efficiency to maximize carbon reduction. In 2023, CLC completed the 1st product carbon footprint inventory for industrial paper, establishing CLC low-carbon industrial paper as the preferred choice for global leading brands under international carbon reduction trends.

To reduce e-commerce packaging waste at the source, the company collaborates with e-commerce clients to increase recovered paper utilization, optimize structural and package structure design for lightweight and single-material packaging, adopt water-based inks, reduce printing colors and areas, and develop tape-free packaging. CLC implements the Design-in 3D platform and AI sales forecasting system to use data for precise market and customer demand analysis, further reducing product carbon footprint.

In addition, CLC has developed 100% paper-based shelf dividers and picking boxes for large e-commerce warehouses, enabling rapid assembly and flexible size adjustment. These products have been adopted by international e-commerce brands, reducing resource consumption and plastic use in warehouse management, supporting supply chain carbon reduction, and advancing green warehousing.

CLC Sustainable Packaging Solutions

Key Features	Benefits
Reducing resource use without compromising packaging protection	Achieve the 3 major goals of plastic reduction, carbon reduction, and waste reduction
Multipurpose packaging to extend product lifecycle	
Fully recyclable materials allow direct recycling after use	

CLC Innovative Products Lead E-commerce Carbon Reduction



Plastic-Free Pick-to-box

- 100% recovered paper, fully recyclable
- No adhesive required, easy assembly
- Replace plastic picking boxes



PaperFlex Partition

- 100% recovered paper, fully recyclable
- No adhesive required, easy assembly
- Multi-groove design allows width and size adjustment for different applications
- Replace traditional plastic and metal dividers

Nature-based Solutions: Eco Weed Control Paper Recertified for Organic Agricultural Material Certification

CLC aligned with the 65th anniversary goals of "Nature Sustainability, Paper towards Net Zero" and supported the United Nations Global Plastics Treaty draft by launching eco weed control paper made from 100% locally recovered paper in 2023, and obtained the Ministry of Agriculture's organic agricultural material certification for 2 consecutive years (2023~2024).

CLC eco weed control paper replaces plastic mulch films, reduces pesticide residue in soil, and improves farmland permeability and moisture retention. Field tests showed a 23-fold reduction in weed growth, significantly decreasing manual weeding in organic rice cultivation. This enhanced agricultural resilience to climate change and ensured sustainability and food security.

CLC will continue R&D Innovation to deliver Nature Sustainability solutions with each sheet of paper and expand application of these products to fruit trees, vegetables, flowers, and specialty crops to drive sustainable agricultural transformation.

7 Advantages

- 1 Weed control
- 2 Regulate farmland surface temperature
- 3 Maintain soil moisture
- 4 Accelerate seedling growth
- 5 Promote seed germination
- 6 Lightweight and easy to use
- 7 Reducing golden apple snail damage

R&D Innovation: Diversified Sustainable Products and Services

CLC invests over NTD 100 million annually in R&D, focusing on green and niche product development, process improvement, and digitalization to enhance production efficiency and reduce carbon emissions, addressing global trends and demand for sustainable paper materials.

In 2024, CLC's R&D expenses, excluding capital expenditures and equipment costs, totaled NTD 128 million, with the following outcomes:

- 1 Driving domestic and overseas expansion, process upgrades, introduction of low-carbon energy-saving equipment, and technology R&D, including optimization of the recovered bleached pulp line at Tayuan Paper Mill, implementation of the high-efficiency Turbo Blower project, optimization of biomass cogeneration system operation at ChuPei Paper Mill, planning of the biogas power generation system and biomass energy system at Houli Paper Mill, and planning for construction of the Phase 3 industrial paper machine and corrugated container production line in Vietnam.
- 2 Introduction of new material enhanced process capability, generating annual cost savings exceeding NTD 10 million.
- 3 Process optimization and quality improvement reduced annual costs by over NTD 27.9 million.
- 4 New product development :
 - (1) Household paper products: Ongoing development of highly absorbent kitchen paper towels, plastic-reduced packaging for household paper, paper sleeves for instant noodle cups, pet anti-mite products, deodorizing products, and eco Cinnamomum camphora anti-mite laundry detergent.
 - (2) Industrial packaging: e-commerce warehouse shelf dividers, Picking Box, eco weed control paper, low-temperature preservation cartons.
 - (3) Lifestyle Paper Creations: RE: Flex Paper Shelf, Paper House and Paper Bed; Paper Studio Dollhouse, Rolling Wall teaching aids.
- 5 Collaboration with the Academy of Circular Economy, National Chung Hsing University: development of bioactive materials and preservative antibacterial coatings.
- 6 Patent and certification achievements:

Eco weed control paper received organic material certification from the Ministry of Agriculture (No. 112016). The preparation method for eco non-wax water-resistant coating and its application to paper products was granted invention patent No. I862907. The method for producing fresh-keeping cartons with a preservation coating was granted invention patent No. I795242, with a patent application pending in Vietnam. Household paper plastic-reducing packaging bags obtained utility model patent No. M651104 and invention patent No. I850081.

Natural Sustainability Series Products

CASE 1

RE: Flex Shelf Brings Sustainability into Everyday Life



- 100% recovered paper, dual-triangle structure innovation
- Easily converts into a bookshelf, reading stand, tablet stand, and more



CASE 2

Disaster Relief Innovation—Paper House Integrates Rescue and Commercial Value

- R&D developed multiple paper shelters and emergency equipment using 100% recovered paper, prioritizing structural safety, easy assembly, privacy, wind protection, and cold resistance.
- Modular and flat-packed design for efficient storage and transportation
- Support disaster relief units in reducing shelter costs, improving placement efficiency, and accelerating post-disaster reconstruction



CLC Household Products: Pamper Your Loved Ones with Love and Tenderness

CLC entered the Taiwan household paper market in 1993 and launched the Andante brand in 1995. Following the 2004 acquisition of Baolong paper mill, CLC introduced the Lover, Dandelion, and Snow Soft brands, establishing a comprehensive product line covering toilet tissue, facial tissue, kitchen towels, and hand towels. ChuPei Paper Mill implemented Taiwan's first automated household paper warehouse, Asia's first million-tonne wind power system, and Taiwan's largest high-efficiency biomass cogeneration system. By integrating R&D center resources and academic collaboration, CLC developed high-value extraction and low-carbon diversified products to meet various needs.

In 2024, CLC launched the Dandelion Eco Convenient Pack Toilet Tissue and the Locally Extractor Personal Care Series by Andante to advance low-carbon, plastic-reduced, and nature-based solutions. In 2025, for the 30th anniversary of the Andante brand, CLC will introduce box facial tissues made entirely of paper without lamination. These initiatives promote daily sustainable practices and reinforce CLC's long-term commitment to sustainability.

Andante 30th Anniversary: Value in Meaningful Companionship

For 30 years, Andante has developed high-quality products for families and loved ones, with a soft and refined texture to support daily care.



Andante Brand Growth Milestones

1995~2005 Incubation

Building a Solid Base in Quality and Technology
Establishing the Iconic Yellow Brand Identity

- The Andante brand was officially launched in 1995
- In 2004, introduced calendering technology for slim box facial tissues and honeycomb-patterned kitchen paper towels
- In 2005, Andante launched ultra-soft butterfly-embossed toilet tissue, establishing its yellow brand identity



2006~2015 Growth

Focus on Multifunctional Household Product Development
Digital Marketing Integration

- In 2006, initiated an IP partnership with Sanrio and launched the first Hello Kitty household paper
- Launched the 1st household cleaning product, natural antibacterial foaming hand wash, in 2011
- 2014
 - » Released the 1st Andante microfilm "Grandma's Toilet Tissue" which was selected as a TOP3 YouTube Taiwan advertisement in Q1
 - » Pioneered the launch of household kitchen paper towels with HACCP certification for food safety
- Andante 1-second Easy-pull Kitchen Paper Towels were launched in 2015



2016~2023 Maturity

Expanding High-value Product Lines
Deepening Community and IP Cross-industry Collaboration

- In 2016, obtained carbon footprint labels for pure wood pulp toilet tissue
- Received 2 Red Dot Design Awards in 2018
- In 2018, Andante launched SILLACE toilet tissue, Andante wet toilet tissue, and co-branded household paper with Fumeancats
- In 2020, R&D developed Andante alcohol wipes for epidemic prevention and launched Andante Cat LINE stickers
- In 2021, Andante launched bath and shampoo products with locally sourced plant extracts
- In 2022, Andante SILLACE premium thick 3-ply toilet tissue was launched, and household paper products featuring the Andante Cat IP were released



Andante 30th Anniversary: 3 Strategies for a New Growth Curve (2024~)

Goals: Strengthen brand resonance and attract younger audiences

Andante will continue to advance future development through 3 Core Strategies: **deepening brand resonance**, **IP innovation**, and **product innovation**, to establish a new growth curve and expand brand influence.

Strategy 1 Deepening Brand Resonance: Reinforcing Andante's Gentle Companionship Image

Andante launched the "Companionship with Heart is Valuable" short video series for its 30th Anniversary, featuring scenes such as baseball games, concerts, and birthdays to connect with consumers.

- 20-second videos align with new generation media consumption habits
- Enhance brand affinity through storytelling marketing to increase consumer resonance



Strategy 2 Original IP Management: Andante Cat Engages Youth

Andante launched the Original IP "Andante Cat" in 2020. For its 30th Anniversary, Andante introduced physical merchandise for the first time and implemented digitalization marketing and social media engagement to attract younger audiences.

- Andante Cat IP enhanced brand affinity and recognition
- Andante and Andante Cat social media are continuously updated through current event posts, giveaways, and reels to expand user reach
- Planning community stickers, merchandise, and limited-edition collaborations



Strategy 3 Product Innovation: Niche Market and Peripheral Marketing Expansion

Andante 1-second Easy-pull Kitchen Paper Towels and Andante bath and shower products were best-selling items in recent years. Andante will continue to focus on the niche market through innovation and cross-brand collaboration to enhance product quality.

• Market Leader: 1-second Easy-pull Kitchen Paper Towels

Since 2014, Andante launched kitchen paper towels with HACCP certification for food safety, including the innovative "1-second Easy-pull Kitchen Paper Towels", suitable for contact with raw and cooked foods and tableware. Recognized by the Kantar Consumer Index, it ranked as 1-second the top-selling pull-out kitchen paper towel from 2020 to 2023. Andante also launched the "3-ply Paper Towel series". In conjunction with the 30th Anniversary, Andante strengthened multi-channel marketing, cross-industry collaboration, and media promotion to maintain market leadership.



• Andante Local Engagement and Expanded Influence

The Andante personal care series was updated in 2024 to feature extracts from Taiwanese agricultural products. Brand credibility and market share have been strengthened through product trials, physician endorsements, KOL collaborations, and social media marketing.



• Cross-Industry Collaboration Innovation—Andante EasyCard and Cotton Candy

To celebrate its 30th Anniversary, Andante partnered with EasyCard Corporation to launch 5,000 limited "Andante Toilet Tissue 3D EasyCards", which sold out in less than one week. Andante also collaborated with 21st Century (7-11) affiliates to introduce "Andante Cotton Candy". These initiatives brought innovation to daily products and generated significant online engagement.



Andante Toilet Tissue EasyCard



Andante Cotton Candy

Sustainable Regeneration, Enabling the Virtuous Cycle Dandelion Eco Household Products—Comprehensive Implementation of Green Principles from Materials to Manufacturing

Toilet tissue is the most widely used single-use product in Taiwan, with high resource consumption and no recyclability. To advance the circular economy and responsible consumption, CLC uses FSC™-certified pulp for household paper and has invested in producing eco toilet tissue from recovered paper, a process more complex than using virgin pulp. In 2009, CLC launched the Dandelion series made from 100% recovered paper with quality comparable to virgin pulp, and uniquely adopted wind power in production. This achieved environmental sustainability across material sourcing, manufacturing, and finished products, integrating toilet tissue into the circular economy.

Dandelion Eco Multipurpose Bag achieved cumulative sales of 1,200,000 bundles, reducing plastic by 42,000 kg

Dandelion household paper was the first in Taiwan to receive Green Mark, carbon footprint, and FSCTM Recycled certifications. CLC expanded its eco product line by launching the sub-brand Pure Generation. In 2024, total sales of eco series products exceeded 70 million packs. CLC introduced the Dandelion Eco Multipurpose Bag, integrating packaging and garbage bags. Since launch, 1,200,000 bundles were sold, reducing plastic by 42,000 kg and achieving carbon reduction of over 89,000 kg ^(Note).

Note: According to the New Taipei City Environmental Protection Bureau, reducing the use of one New Taipei designated garbage bag achieves a Carbon Reduction of 0.075 kgCO₂e.

Dandelion advanced green principles through products and digital channels. In 2024, Dandelion achieved top SEO rankings for "eco-friendly toilet tissue," "carbon footprint label," "green products," "green procurement," and "eco-friendly lifestyle," expanding its influence.

CLC expanded its environmental initiatives beyond household paper by launching Dandelion eco household detergents in 2022 and upgrading to 100%

recycled plastic bottles in 2023. In 2025, CLC plans to apply for the Green Mark for Dandelion laundry capsules to increase sustainable product options.

[Dandelion Eco Household Products Website](#)



[Dandelion FB](#)

Exclusive Eco Household Paper Products Launched in Key Channels to Promote Recovered Toilet Tissue

To expand the eco household paper market and support the Green Lifestyle policy, Dandelion launched convenient pack eco toilet tissue exclusively at PX Mart in 2023 and developed a 3-ply large pack with 20% more sheets for Carrefour to increase green product accessibility. In 2024, updated carbon footprint packaging was introduced to strengthen communication on CLC's sustainability initiatives. That year, Dandelion series sales exceeded 38 million packs, with annual growth of 10.83% and steadily increasing market penetration.



Dandelion Eco Convenient Pack Pull-out Toilet Tissue Hot Product at Taiwan's Largest Supermarket, with Wide Discussion on Social Media

Compact Size, High Utility! The "Dandelion Eco 3-Ply Toilet Tissue Convenience Pack" was launched in 2023, exclusively at the largest supermarket chain. Made from 100% recovered wood pulp, it obtained both Green Mark and FSCTM Recycled certifications. The 3-ply design addressed common issues of thinness and tearing in small-pack toilet tissue, providing optimal size and versatility for daily use.

In 2024, the sample box campaign allowed consumers to experience product flexibility, while seasonal marketing and collaboration with environmental groups and family KOCs expanded social media influence.



National-level Recognition: Dandelion Carbon Reduction Results Achieve Global Visibility

Dandelion was designated for multiple government events, such as 2010 Taipei International Flora Exposition, the 2012 Double Tenth National Day Fireworks Festival, and multiple Taiwan Lantern Festivals. In 2025, Dandelion was once again selected for the Taiwan Lantern Festival, sponsoring all venue sanitary facilities. These actions promote responsible consumption and showcase Taiwan's environmental achievements.

Diversified Brand Marketing Raises Circular Resource Utilization Awareness

Dandelion advanced green consumption and sustainability awareness through integrated online and offline marketing. For Earth Day 2024, the brand launched a campaign utilizing press releases, KOC collaborations, and social media to increase exposure of keywords such as 'eco toilet tissue' and 'recovered paper pulp,' achieving 7 million impressions and reaching 2 million people.

To strengthen face-to-face engagement with consumers, the company partnered with Carrefour stores to hold the Dandelion Environmental Agent Academy, providing interactive experiences to promote green consumption and sustainability among children. In addition, Dandelion and Michelin-selected restaurants launched the "Let's Reduce Carbon for a Better Tomorrow" initiative to promote sustainable dining, supported by an invoice registration campaign to advance the Green Lifestyle—Green Dining approach.



Furthermore, the brand supported the SIMBALION Art Studio, Huisun Wood Culture Festival, and Fayaque 24-Hour Photography Marathon to promote carbon reduction, recycling, and environmental protection, and strengthened consumer recognition of Dandelion's carbon reduction and sustainability through brand engagement.

Protecting Forests: CLC Sponsored Huisun Wood Culture Festival

CLC has sponsored the Huisun Wood Culture Festival, organized by the Experimental Forest Management Office of the College of Agriculture and Natural Resources at National Chung Hsing University, for 14 consecutive years to support the Forestry and Nature Conservation Agency's forest sustainability and localization goals. The 2024 event facilitated collaboration among industry, government, and academia through the wood culture market, net-zero carbon and ESG advocacy, interactive games, and tree climbing, promoting forest culture and forest conservation awareness.



CLC President Ching-Piao Chang attended the opening of the Huisun Wood Culture Festival.

The Winning Leader of Low-carbon Products from MoENV: Chupei Mill

National-Level Recognition :

- 2019: National Enterprise Environmental Protection Award Silver Award, Low-carbon Product Excellent Award
- 2020 : Low-carbon Product Excellence Award, Carbon Footprint Coefficient Contribution Award
- 2021~2024: Outstanding Unit for green procurement for 4 consecutive years
- 2022 : Resource Circulation Prospective Certification



Industry's Only! 6 Household Paper Items with Carbon Footprint Labels 2025 Goals: Expand to 12 items; achieve 7 items in the 100% recycled eco series

CLC leads the industry in product carbon footprint management. Among its 8 household paper brands, Andante and Dandelion have obtained carbon footprint certification, and Pure Generation is scheduled to receive carbon footprint labels in 2025, reaching 38% coverage. CLC will expand product carbon footprint verification, increasing certified items from 6 to 12 (+100% YoY), including 7 items in the 100% recycled eco series. In 2025, CLC will participate in the Shin Kong Mitsukoshi RE: ACTION Exhibition to promote environmentally friendly product choices.

Circular Economy Innovation – Recycling in Practice

"Advancing the Virtuous Cycle, CLC leverages industry innovation to drive company-led green transformation, connecting government, the papermaking industry, business partners, and consumers through initiatives such as document destruction services and food paper container recycling."

CLC's Document Destruction Technologies Enabled Recycling, Accumulating a Cumulative Carbon Reduction of 82,250 tCO₂e and Preserving 284,000 Trees

Since 2013, CLC has utilized existing pulp dispersion equipment to provide free confidential document destruction services. Over 12 years, CLC assisted nearly 400 partners—including government agencies, listed companies, financial and insurance firms, and defense units—by converting 14,181 tonnes of confidential documents into over 61.26 million packs of eco toilet tissue, demonstrating both environmental and economic benefits.

3 Key Features

- ▶ Maximizing Resource Utilization for a Circular Economy
- ▶ End-to-end Confidentiality and Security
- ▶ Complimentary Service Provision

Environmental Benefits

- ▶ converting 14,181 tonnes



Cumulative carbon reduction reached **82,250 tCO₂e**



Preserved **284,000** trees

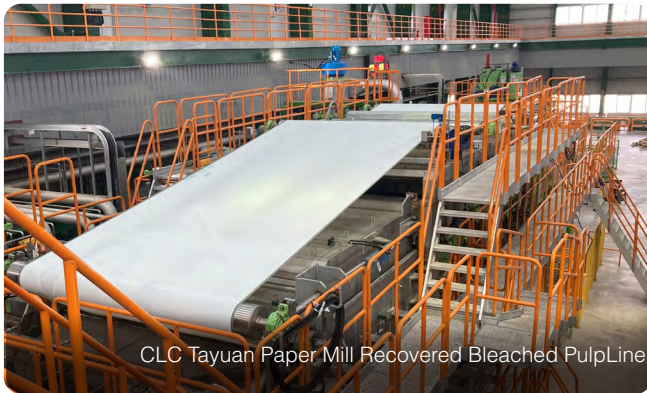


Equivalent to the annual carbon absorption of **211** Daan Forest Parks

Note: Recycling 1 tonne of recovered paper reduces 5.8 tCO₂e and preserves 20 trees. Daan Forest Park's annual carbon absorption is 389 tCO₂e.

Total Recycling Food Paper Containers: Dual Circulation Drives Low-carbon, Plastic Reduction, and Green Business Development

Annual food delivery and takeout in Taiwan generated over 8 billion waste food paper containers. The Ministry of Environment (Taiwan) designated food paper containers as mandatory recycling items, requiring processing plants to separate plastic lining from paper pulp for recycling and reuse. Due to limited public awareness, many consumers disposed of these containers as general waste or mixed them with regular waste paper, resulting in low recovery rate and increased processing costs for paper mills.

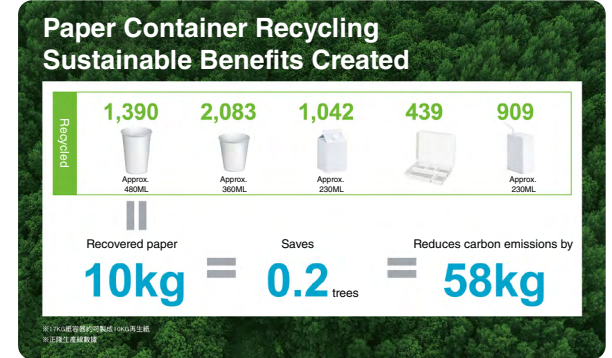


CLC Tayuan Paper Mill Recovered Bleached PulpLine

CLC Leads Global Waste Food Paper Container Processing Volume

Since 2018, CLC established the 1st food paper containers total recycling line at the ChuPei Paper Mill. In the same year, CLC launched the Recycling Supply Chain Transformation and Upgrade project, supporting 167 recycled paper suppliers in upgrading operations, achieving source separation, and reducing recovered paper residual waste by nearly 40% compared to 2017. CLC also established a dedicated recycling system for paper lunch boxes. By 2025, the number of waste food paper container recyclers reached 56, a 56-fold increase from 2018. Separated impurities and plastic lining are converted into green energy fuel and eco building materials, supporting a sustainable business model.

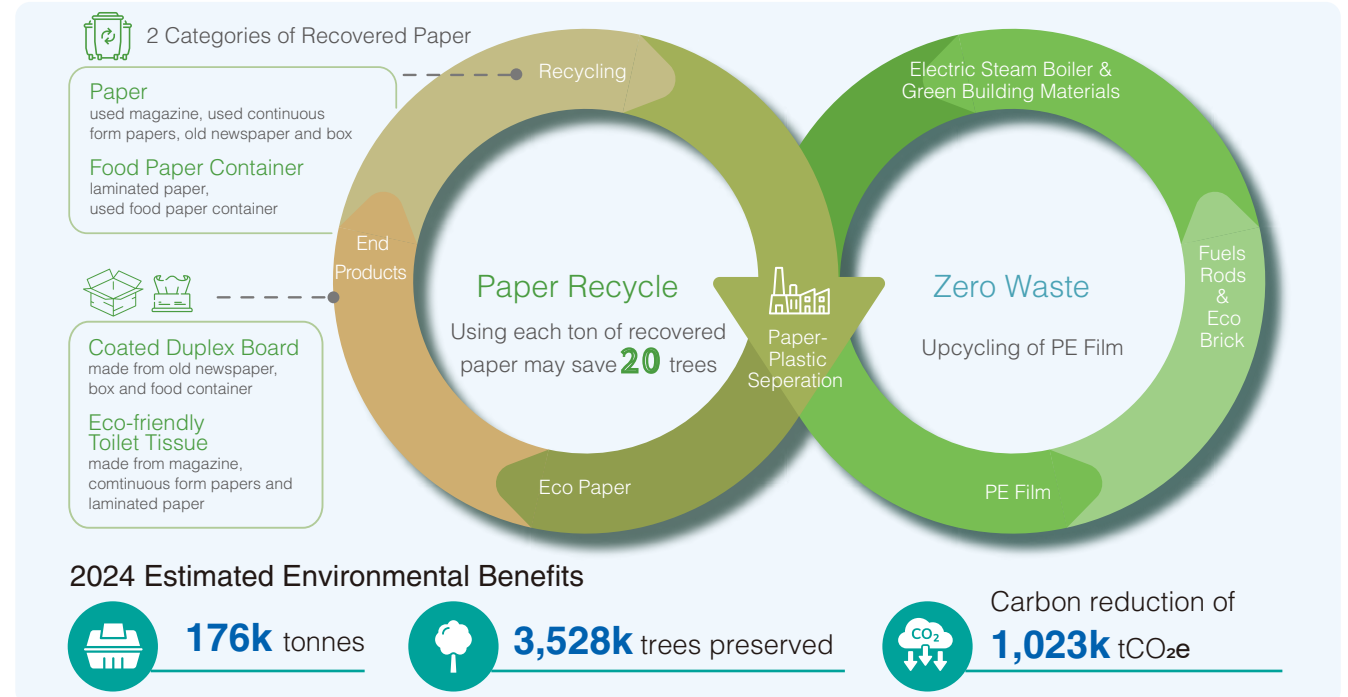
CLC advanced waste food Paper container recovery by installing a 66,000 tonnes recovered bleached pulp line at Tayuan Paper Mill in 2023. By the end of 2024, ChuPei Paper Mill's certified processing volume for food paper containers was approved by the government, increasing by 50% to 3,000 tonnes per month. The group's total certified annual processing volume for waste food paper containers reached 176,000 tonnes, enabling the recovery of over 50% of Taiwan's waste food paper container resources and achieving a carbon reduction of 1.02 million tonnes. CLC engaged associations, schools, government agencies, and enterprises through diverse collaborations to expand carbon reduction impact and opened its factories for public visits to raise awareness of sustainability responsibilities.



CLC Tayuan Paper Mill Waste Food Paper Container Recovery Exhibition Room

Secondary Forests Drive Circular Economy: Waste Food Paper Containers Transformed into Low-carbon Products

Through the product lifecycle—material use, product design, green production, logistics, and end-user consumption—the process of recycled resources, papermaking, and packaging generates circular economy value.



Note: Recovering 1 tonne of paper tableware yields 0.6 tonnes of recovered paper, preserves 20 trees, and reduces 5.8 tCO₂e of carbon emissions

Cultural Creativity Goes Green: From Playful Design to Sustainable Living

Paper Studio, Play the eco way

Since 2013, CLC has launched the Paper Studio brand, developing children's furniture and cat toys made from 100% recovered paper. In 2024, Paper Studio introduced fully paper-based chairs, the Paper Studio Dollhouse, and the Paper Studio Rolling Wall as low-carbon innovation products. The Dollhouse serves as both toy storage and bookshelf, and its all-paper design enables complete recycling and reuse when no longer needed. The Rolling Wall provides cognitive learning functions, allowing children to recognize images and text by flipping panels.

Paper Studio collaborated with the Uni-President Good Neighbor Cultural and Educational Foundation to launch the Good Neighbor Christmas Book House, featuring a paper library and MINI Paper Studio products, including Little Desk, Paper Tree Chair, Display Bookshelf, Little Elephant, and Dandelion Little Pu and LittleYing dolls, to promote awareness of recovered paper's potential among children through interactive play.



Paper-based Educational Tools
Rolling Wall



Paper Storage Rack
Paper Studio Dollhouse



Cross-industry Collaboration
MINI Paper Library – Good
Neighbor Christmas Book
House

Unlimited Creativity, CLC's Design Power Unleashed!

2025 CLC Green Action, Eco Desk Calendar

- ★ 100% paper materials, no mixed-material binding
- ★ Calendar illustrations feature the theme of Earth-Friendly Actions, with monthly eco-actions encouraging daily carbon reduction from each new page
- ★ Eco binding for desk calendars reduced carbon emissions by 0.0039 kgCO₂e per unit compared to plastic coil calendars. In 2025, CLC sold over 27,000 Eco Calendars, achieving a total carbon reduction of 107.4 kgCO₂e^(Note)

Note: According to the MoENV product carbon footprint database, reducing 1 kg of polypropylene coil results in approximately 1.95 kgCO₂e carbon reduction. Each coil calendar uses about 2 g of plastic.



Versatile Paper Exhibition Modules, 100% Recyclable

- ★ Maximize the advantages of recovered corrugated paper for lightweight, durability, and versatility
- ★ Material usage is optimized through professional structural design and digitalization to reduce paper waste and error rates
- ★ Successfully developed recovered paper exhibition venues and exhibits for the CLC Paper Libraries and corporate exhibition spaces
- ★ Maximize value with minimal resources to advance the circular economy



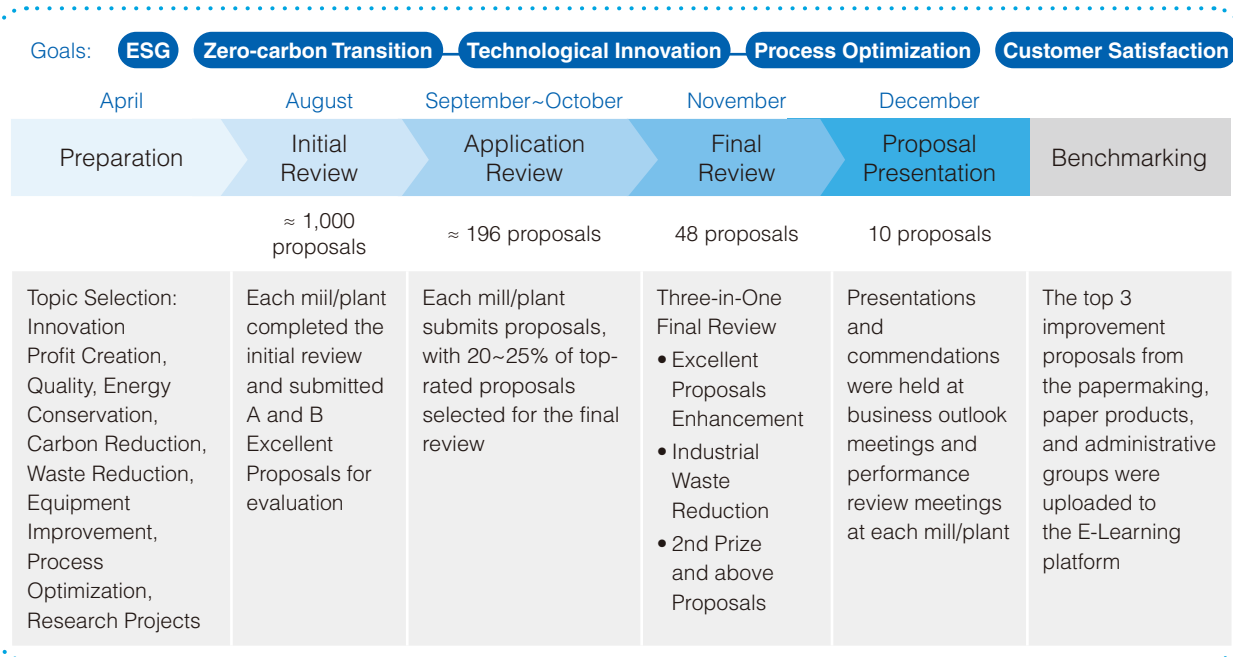
Driving ESG Innovation and Value Creation

Innovation and R&D drive CLC's growth. CLC focuses on advanced industry technologies, strengthens R&D capabilities, and implements proposal-based improvements and Excellent Proposals to promote benchmarking, supporting ESG development.

Excellent Proposals Mechanism, Employees are encouraged to identify issues and collaboratively develop ESG innovation initiatives

Since 1980, CLC has implemented proposal-based improvements, QCC and TPM. In 2008, CLC launched Excellent Proposals Improvement and Management Mechanisms, integrating evaluation and reward systems to advance process optimization, technology development, green energy innovation, and customer service, enabling carbon reduction suggestions to reach top management. In response to ESG transformation, CLC adopted competition-based incentives to drive employee problem identification and innovation. Since 2021, CLC has extended ESG Excellent Proposals Mechanism to overseas sites, promoting ongoing innovation and optimization across the group.

ESG Excellent Proposals Selection Process



Over 1,000 proposals generated nearly NTD 170 million in profit in 2024, Generated NTD 1.2 billion profit over the past 4 years

In 2024, over 1,000 proposals were submitted, with 48 Excellent Proposals shortlisted for the finals: 10 from Administration, 18 from Papermaking, and 20 from Paper Products. The expected profit was nearly NTD 170 million, with measurable improvements in production efficiency, sales quality, carbon reduction, service innovation, and work efficiency.

Public Presentation of Outstanding Proposal to Foster Benchmarking and Knowledge Sharing

Outstanding cases selected annually were presented, recognized, and awarded bonuses at mill/plant's business outlook meetings and company-wide performance review meetings. Case content was published on the CLC E-Learning platform and in internal publications to promote knowledge sharing and establish a benchmarking culture.

Feature Case

Installed RO Raw Water Treatment System for Sustainability and Cost Savings

Purpose and Approach

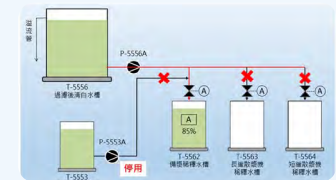
The papermaking process requires significant water consumption. To reduce carbon emissions and lower costs, the cogeneration section of the paper mill installed an RO Raw Water Treatment System to maximize water use efficiency.

Benefits

- **Water Conservation:** The RO system fully replaced tap water. Concentrated water was reused in the primary water supply system, saving NTD **2.8 million** annually.
- **Chemical costs decreased** as conductivity was reduced from 250 μ s/cm to 10 μ s/cm, the regeneration cycle was extended from 5 days to 15 days, and annual regeneration chemical expenses dropped from NTD 2.42 million to below NTD 1 million, a reduction of **58.7%**.
- **Annual savings of NTD 4.2 million;** investment payback period of **5.7** years.

Additional Advantages

Reduce acid and alkali corrosion in water treatment equipment and minimize operational risk.





2.2 Product Responsibility and Customer Service

Material Issue

Product Responsibility and Customer Service

Strategy

Leverage the recyclability of paper products by integrating green design and green production at all life cycle stages to reduce environmental impact, and ensure customer privacy and product responsibility.



2030

2025

2024

Goals

Goals

Goals and Results

- All products comply with international environmental standards
- Expand hazardous substance risk management to overseas operations
- Expand digitalization of recurrence prevention to overseas companies
- Customer satisfaction score: 90 (Taiwan Parent Company, Consolidated Company)
- Maintain strong customer partnerships for mutual growth
- Optimize prepress and plate mounting processes to reduce material waste
- Promote Waste Reduction Across the Supply Chain

- Product testing results comply with regulatory requirements
- Execute annual chain of custody management
- Implementation of Electronic Customer Complaint Recurrence Prevention Form Overseas
- Customer Complaint System Optimization for Vietnam Binh Duong Paper Mill and Mainland China box plants
- Customer satisfaction score: 89 (Taiwan Parent Company, Consolidated Company)
- Optimize prepress and plate mounting processes to reduce material waste
- Plan to add film inkjet printers
- Continue to streamline registration mark processes in prepress and plate-making
- Promote Waste Reduction Across the Supply Chain

- Product testing results comply with regulatory requirements
 - ➔ Obtained hazardous substance test reports in compliance with regulatory requirements
 - ➔ Suppliers are required to submit hazardous substance test reports; 28 submitted
- Annual chain of custody management is being implemented
 - ➔ Tayuan Box Plant obtained FSC 22000 certification
 - ➔ Completed ISO 9001 quality management system and FSC™ third-party verification
- The industrial paper, household products, and paperboard business units are implementing an electronic recurrence prevention form for customer complaints
 - ➔ Completed implementation and added additional functions to the quality abnormality form
- The Vietnam subsidiary is implementing an electronic recurrence prevention form for customer complaints
 - ➔ The recurrence prevention system at the Vietnam box plant was officially launched
- Advance the standardization project for box plants
 - ➔ Completed in Taiwan and overseas
- Customer satisfaction score: 87 (Taiwan Parent Company, Consolidated Company)
 - ➔ 88.5 (Taiwan Parent Company), 89.1 (Consolidated Company)
- Adjust prepress and plate mounting processes to improve material utilization
 - ➔ Adjusted mark-to-plate spacing to reduce material waste, enhance resource efficiency, and minimize environmental impact during production
- Streamlining prepress and plate-making processes to reduce energy and labor consumption
 - ➔ Optimized registration mark design and processes to enhance production efficiency, reduce unnecessary energy and labor, and lower carbon footprint and operating costs
- Collaborating with supply chain partners to drive waste reduction
 - ➔ The supply chain is continuing to support recycling and reuse of plastic containers

Quality Policy:

Total Participation, Quality Management, Customer Satisfaction

Quality is essential to sustainable operations. CLC has implemented the ISO 9001 quality management system at all domestic and overseas plants. Through employee participation and the PDCA cycle, we maintain and improve product quality and customer satisfaction. At the Sustainable Supply Chain Conference, we communicated the company's Quality Policy on hazardous substance management and raw material quality management.



CLC is accelerating product development and upgrading production management, integrating industry partners to recycle used products into the production process for circular reuse and achieving product circularity. CLC operates 4 paper mills and 7 box plants in Taiwan. The paper mills primarily use recovered paper and virgin pulp, while the box plants use base paper from the mills to produce corrugated container products. Materials used are listed in the table below



4 Mills


Paper Mills **174.6**

Virgin Wood Pulp **8.6**

Domestic recovered paper **115.5**

Overseas recovered paper **50.5**


7 Plants


Box Plants **50.5**

Corrugating base paper **50.5**

Note: Taiwan area, Unit: 10,000 tonnes

In response to sustainability trends, CLC has long used recovered paper as its primary material, reducing carbon emissions and preserving forest resources. The company also actively procures sustainably managed pulp to support forest conservation. In 2024, FSCTM Pulp Ratio for 97.6% of total virgin pulp procurement in the Taiwan area, achieving other significant results

- Recovered paper utilization rate **95.1%**

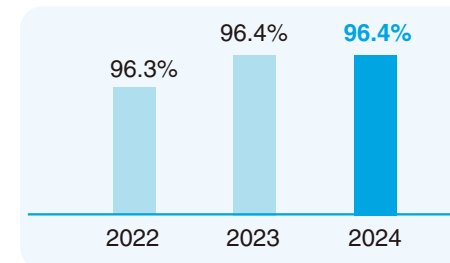
Used 1.66 million tonnes of recovered paper, with over two-thirds sourced domestically, strengthening the domestic recovered paper ecosystem.

- Recycled raw material utilization rate **96.4%**

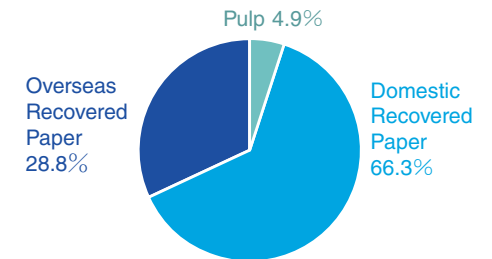
1.155 million tonnes of domestic recovered paper, 0.505 million tonnes of imported recovered paper, nearly 86,000 tonnes of virgin pulp, and other plant-based materials such as starch and tapioca starch were used, totaling 1.746 million tonnes of recycled raw material. Non-renewable raw materials, including papermaking chemical additives, totaled 66,000 tonnes.

Note: Taiwan area

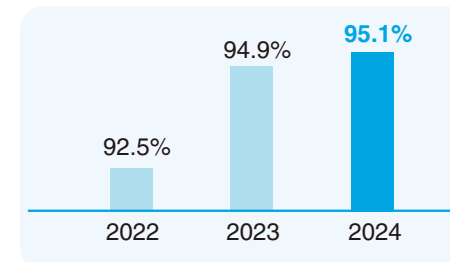
Proportion of Recycled Materials Consumption in 2022~2024



Proportion of Materials Consumption in 2024



Recovered Paper Utilization Rate in 2022~2024

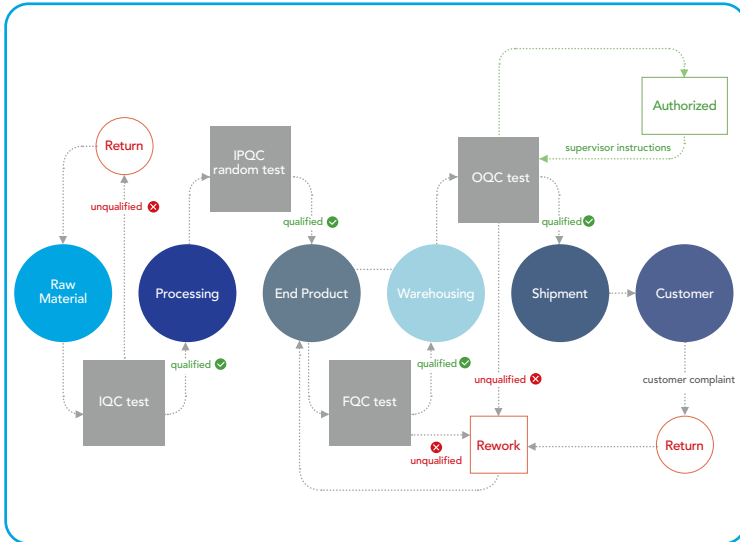


Mills / Plants hosted customer visits, presented production line processes and technologies, and shared industry trends (2024.8.30)

Product Health and Safety

CLC focuses on industrial paper and enforces strict product safety controls. Comprehensive management standards cover raw material procurement, production, and shipment. Dedicated IQC personnel conduct quantitative sampling and adjust frequency based on pass rates. The process is transitioning to supplier management, requiring hazardous substance test reports to replace incoming inspections. If nonconformities are detected, batch-by-batch sampling is implemented to ensure material safety. During production and shipment, production and shipping staff manage quality autonomously, while quality control personnel inspect finished products and warehouse entries and exits at set intervals. Dual control by on-site and quality control staff ensures product compliance and quality.

Product Processing Quality Control Workflow



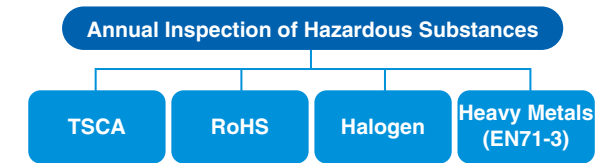
Household Paper Inspection Specifications

ChuPei Paper Mill obtained ISO 22000/HACCP food safety management system certification. All products were tested by accredited institutions for total bacterial count, Escherichia coli count, and migration of fluorescent agents as required by customers, with results meeting standards. Eco-friendly toilet tissue and hand towels produced by ChuPei Paper Mill underwent annual bisphenol A (BPA) testing, with zero detected in 2024.

Industrial Paper Inspection Specifications

Industrial paper products underwent annual hazardous substance testing by certified inspection agencies, with test items aligned to international standards including EU REACH, SVHC, RoHS, halogen content limits, and EU EN71-3 heavy metal restrictions. In 2024, all product testing results met regulatory requirements. Tayuan Box Plant obtained FSSC 22000 certification, providing higher quality and safe Paper Packaging Solutions.

To address the increase in REACH (SVHC) testing items from 16 to 242 (added 7 items in 2024), the company implemented the Full Material Declaration (FMD) source management system in 2021, replacing finished product inspection reports. This enhanced hazardous substance control and reduced resource waste. Suppliers are required to regularly submit hazardous substance test reports for raw materials to ensure materials are free of hazardous substances before production. In 2024, 28 suppliers submitted reports.



Note: Please refer to the [CLC website](#) for the testing report

CLC Tayuan Box Plant received FSSC 22000 certification

CLC, as a leader in Taiwan's paper industry and the largest supplier of Corrugated Container packaging, has continually enhanced its product quality and management. Upholding a commitment to customer confidence, CLC Tayuan Box Plant passed the strictest FSSC 22000 food safety management system certification, setting an industry benchmark.

Tayuan Box Plant completed comprehensive upgrades during the certification process:

- **Facility upgrades included installation of insect-proof and dust-proof systems to enhance facility environment standards.**
- **Management processes were optimized by redesigning personnel, operational, and goods flows to ensure efficiency and compliance with international food safety standards.**
- **Enhance education and training to increase employee food safety awareness and establish a unified food safety management culture.**

Corrugated containers for food packaging require strict safety management due to direct food contact. CLC obtained FSSC 22000 certification, establishing a competitive advantage in the food packaging market. This achievement enables CLC to expand food packaging orders and provide safer, more reliable paper-based solutions globally. CLC will continue to upgrade product quality and strengthen its position as a trusted long-term partner in the food packaging industry.

Note: For certificates, please refer to the CLC website – [Download Center](#)

Packaging Design and Certification

To ensure transport safety, packaging structure design incorporates compression resistance and drop tests. All package structure design files are reviewed by SGS to ensure compliance with the Commodity Labeling Act. The FSC™ certification mark is labeled on packaging according to specified position and size requirements for product traceability.

Printing and Plate Making: Waste Reduction and Energy Saving

In recent years, box plant printing plate production has focused on environmental protection and waste reduction. The prepress center has fully implemented digitized drafts to significantly reduce paper and ink consumption, and is optimizing processes such as simplifying registration marks and adjusting plate spacing to further decrease material loss, energy use, and labor costs.

In 2024, certain plants installed film inkjet printers to reduce reliance on traditional chemical developing films, improving production efficiency and environmental performance. The company also held "Water-based Ink Printing Suitability Courses", inviting professional suppliers to share expertise and enhance printing quality.

Driving Plastic Containers Reduction across the Supply Chain toward Zero Waste

CLC Paper Products Division and the Technology Center collaborated with resin suppliers to implement a recycling and reuse mechanism for 200 kg plastic barrels. Barrels were labeled and sorted by material type, then refilled with the same material for repeated use. This reduced plastic waste and advanced circular resource utilization.



Product and Service Labeling

All household products manufactured and sold by CLC obtained the CNS Mark and passed annual certification by the Bureau of Standards, Metrology and Inspection, meeting CNS requirements for product quality and labeling. Some products provided QR codes for consumers to access SGS test reports. In 2024, no cases of non-compliance with product specifications or labeling occurred.

Paper Studio's children's board games, including Amusement Park Paper Pinball, Animal Adventure Memory Game, and Paper Studio DIY, were certified by the Bureau of Standards, Metrology and Inspection and met toy safety standards.



**Safer with SGS
Inspection**
Industry 1st
Scan QR Code for
Instant Access to SGS
inspection reports

Customer Privacy Protection

CLC established mechanisms to protect and manage customer data, including enhanced employee training on "customer data" and "information security", and required confidentiality in business operations. In 2024, there were no complaints regarding customer privacy infringement or data loss.

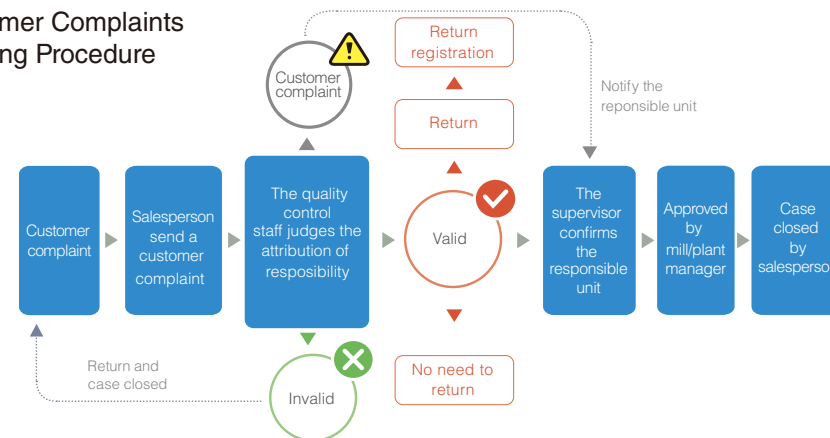
Customer Relationship

CLC prioritizes product quality and sustainability. All domestic and overseas mills/plants regularly complete ISO 9001 quality management system and FSC™ sustainable forestry certification. Annual customer satisfaction surveys are conducted for continuous improvement. Digitalization management is being accelerated to enhance customer service. The Household Products Division has established a nationwide customer service network. Consumers may submit inquiries via the official website, fan page, [AeSHOP](#), or the toll-free number for consumers to ensure prompt response to consumer needs.

CLC implemented a digital customer complaint management system. Quality control and relevant personnel communicate with customers, analyze complaint issues, and identify root causes. Production and responsible units analyze causes and implement preventive actions to avoid recurrence. Digitalization improves complaint handling efficiency and enables digital data management to enhance service quality.

CLC implemented the electronic quality abnormality reporting system at all operational sites in the Taiwan area. The Household Products Division launched the Salesforce CRM platform in 2021 for real-time customer needs tracking and relationship management. The Vietnam paper mill introduced the electronic quality abnormality reporting system at the end of 2022, expanding implementation to other Vietnam sites in 2023. In 2024, the electronic recurrence prevention form for customer complaints was launched. The Paper Products Division, covering Taiwan, Mainland China, and Vietnam, introduced the standardization project in 2022 to strengthen Corrugated Container product quality. All domestic and overseas plants completed the plant standardization project to ensure product quality, production efficiency, and operational safety.

Customer Complaints Handling Procedure



Customer First: CLC Expanded Customer Satisfaction Management and Replicated the Taiwan Model Overseas

CLC established a customer management system and conducts annual customer satisfaction surveys, implementing improvement measures for low-scoring areas. The survey system was extended to overseas sites, including Vietnam. Starting in 2024, customer satisfaction score goals for the consolidated company were set at 89 by 2025 and 90 by 2030 for both the Taiwan parent company and the consolidated company. In 2024, the Taiwan parent company achieved a customer satisfaction score of 88.5 (goal: 87), the Vietnam Region reached 90, Mainland China reached 88.9, and the consolidated company overall reached 89.1 (goal: 87). CLC will continue to enhance customer service, improve production performance, and advance digitalization management to achieve these customer satisfaction goals.

Customer Satisfaction Score

Region\Year	2022	2023	2024		2025 Goals	2030 Goals
			Achievements	Goals		
Taiwan Parent Company	86.6	86.9	88.5	87	89	90
Vietnam Region	-	-	90.0	-	-	-
Mainland China	-	-	88.9	-	-	-
Consolidated Company	-	-	89.1	87	89	90

Note 1: Taiwan parent company customer satisfaction score = industrial paper score × industrial paper sales coefficient + paperboard score × paperboard sales coefficient + household products score × household products sales coefficient + corrugated container score × corrugated container sales coefficient

Note 2: The sales coefficient represents the proportion of sales revenue from industrial paper, paperboard, household products, and corrugated container to total sales revenue (industrial paper: 0.892; paperboard: 0.028; household products: 0.04; corrugated container: 0.04)

Note 3: The consolidated company satisfaction score is calculated as the average of Taiwan, Vietnam, and Mainland China

Customer Complaints per Unit by Region

Region	Explanation	2022	2023	2024
Taiwan Parent Company	Complaints (items)	368	432	522
	YoY (items)	-9	64	90
	YoY (%)	-2.4%	17.4%	20.8%
	Customer Complaints per Unit(items/total sales volume)	0.51	0.75	1.01
Vietnam Region	Customer Complaints per Unit(items/total sales volume)	-	-	7.18
Mainland China	Customer Complaints per Unit(items/total sales volume)	-	-	20.03

Note: Customer Complaints per Unit is calculated as complaints divided by total sales volume (all products)

Product-specific Customer Complaints per Unit, Taiwan Parent Company

Category/Year	2022	2023	2024			2025 Goals
			Achievements	Goals	Achievement Rate	
Industrial Paper	0.33	0.34	0.37	<0.30	81%	<0.33
Household Products	0.58	0.63	0.86	<0.60	70%	<0.58
Corrugated Container	0.61	1.27	1.79	<0.94	53%	<0.61
Average	0.51	0.75	1.01	-	60%	-

Note 1: Customer complaints per unit are calculated as complaints divided by sales volume (million tonnes or million m2)

Note 2: Annual goals are set based on the best performance from the past 3 years

Customer Complaint Management and Digital Optimization

CLC's Taiwan parent company set 2024 complaint management goals by product: industrial paper < 0.30 cases per million tonnes, household products < 0.60 cases per million tonnes, and corrugated container < 0.94 cases per million m². Achievement rates were 81% for industrial paper (average 0.37 cases), 70% for household products (average 0.86 cases), and 53% for corrugated container (average 1.79 cases), with an overall achievement rate of 60%. In 2024, there were 522 complaints, an increase of 90 from the previous year. The main reasons for increased complaints and unmet targets were paperboard delamination, packaging shortages in household paper, and adhesion issues in corrugated containers. In Vietnam, industrial paper complaints per unit were 0.14 cases per million tonnes, mainly due to base paper creasing; corrugated container complaints per unit were 14.21 cases per million m², mainly due to warping. In Mainland China, corrugated container complaints per unit were 20.03 cases per million m², mainly due to poor printing quality.

CLC established a Quality Improvement Team to address items that did not meet goals, ensuring corrective actions and protection of customer rights. The company continues to enhance training and implement digitalization management to improve production and service quality, aiming to minimize complaints and achieve 2025 goals. By 2025, CLC will upgrade the Customer Complaint System at Vietnam and China plants to identify recurring issues and potential risks, supporting quality improvement and product innovation to increase overall customer satisfaction.

The company's products were not prohibited from sale in any market, and there were no incidents involving the sale of questionable or controversial products. All marketing activities complied with national laws and regulations to protect consumer rights and ensure fair competition. The company did not use exaggerated, false, or unfair marketing practices. In 2024, there were no violations of relevant regulations or voluntary standards in product promotion and marketing.

2024 Major Quality Issues – Taiwan Parent Company

Product Category	Customer Complaint Cause Analysis	Improvement Measures
Industrial Paper (including paperboard)	Paperboard Delamination	Ensure optimal operation of the coating machine, coating quality, and vibrating screen, and continuously strengthen cleaning management of the drying cylinder.
Household Product	Packaging Shortages	Set upper and lower limits on the scale to remove underweight packages and conduct traceability inspections.
Corrugated Container	Adhesion Issues	Adjusted adhesive formulation, reduced machine speed, and increased hot plate temperature to ensure complete gelatinization and improved adhesion.



2.3 Digital Transformation

Material Issue

Digital Transformation

Strategy

Accelerate digital transformation by applying AI to enhance production and sales efficiency, optimize customer service, and strengthen energy management to increase competitive advantage.



2030

2025

2024

Goals

- Enhance production and sales efficiency through smart manufacturing technologies
- Strengthen intelligent management and promote green production
- Leverage digital tools to enhance decision-making accuracy and agility

Goals

- Smart Papermaking 4.0 applications are being continuously expanded
 - (1) PI system implementation at Vietnam paper mill
 - (2) Accelerate full-scale adoption of AI smart manufacturing in cogeneration systems to enhance energy efficiency and carbon reduction
- Promote integrated AI application tools and planning the implementation of 3 AI projects
 - (1) Ongoing planning for the implementation and application of the GPT platform
 - (2) Assess the implementation of a monitoring system for power, temperature, and humidity
 - (3) Evaluate and plan the implementation of an AutoML platform to enhance decision-making effectiveness
- Continue planning of medium- and long-term AI projects includes the data platform, automated report design, and data visualization tools to support real-time decision-making

Goals and Results

- Expand Smart Papermaking 4.0 applications, implementing 4 AI projects
 - ➔ Completed implementation of 4 AI projects
 - (1) RFID Pallet Management System for Box Plant
 - (2) Digital management of printing and box-making equipment has been fully implemented in Taiwan, with the next phase extending to all plants in Vietnam.
 - (3) Binh Duong Paper Mill is planning to implement the PI system
 - (4) In-house Enterprise GPT Model
- Expand digital inspection system applications
 - ➔ Vietnam Binh Duong Plant completed implementation
- The CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program was launched in the second half of the year to enhance smart manufacturing supply chain competitiveness

AI Pioneer in the Paper Industry Pioneering Digitalization and Intelligent Management to Accelerate Low-carbon Transition

Amid global market shifts, CLC advanced digital and intelligent transformation to enhance competitiveness. In 2004, CLC completed group-wide ERP implementation. From 2012 to 2017, CLC developed the cogeneration energy digital system at Houli Paper Mill, a digital procurement platform, and a household paper CRM system. In 2019, CLC launched the "smart papermaking 4.0" project, integrating equipment, implementing energy-saving and carbon reduction monitoring, and automating management to improve production efficiency and reduce labor dependence. CLC became the 1st in the papermaking industry in Taiwan to implement intelligent production and sales, accelerating the transition to low-carbon operations.

2024 Milestone Year for AI Applications: Launch of Intelligent Upgrades

In response to rapid AI development, CLC designated 2024 as the Milestone Year of AI applications, building on a foundation of automation, digitalization, and intelligent data. In 2024, CLC implemented 4 AI projects: an in-house GPT system to enhance administrative and HR efficiency, RFID pallet management at box plants, digital management of printing and box-making equipment at Taiwan box plants, and PI system planning at Binh Duong Paper Mill in Vietnam. Since 2019, CLC has completed 29 AI projects under smart papermaking 4.0, advancing process digitalization and intelligent optimization. CLC continues to expand smart papermaking 4.0 to include AI smart manufacturing for the Vietnam Binh Duong paper machine and cogeneration system to improve energy efficiency and carbon reduction. We keep integrating digital inspection systems across all mills/plants to achieve seamless online smart manufacturing and offline digital inspection. Real-time data collection and analysis are optimizing production processes, increasing equipment efficiency, strengthening quality management, and reducing energy consumption. CLC continues to upgrade the ISO 27001 information security management system (ISMS) to enhance information security for industrial control systems.



CLC Smart Papermaking 4.0: Smart Manufacturing Drives Low-carbon Transformation

CLC Smart Papermaking 4.0 centers on Smart Manufacturing to enhance production efficiency and energy management, achieving low-carbon and green production. By applying AI, big data, cloud computing, IoT, and 5G, CLC strengthens knowledge transfer and early warning management, optimizes processes, and increases operational efficiency, delivering both service upgrades and carbon reduction.

CLC is advancing Smart Manufacturing to improve equipment performance and enable energy-saving and carbon reduction monitoring, integrating manufacturing, management, and sales systems. To address labor structure challenges, CLC is implementing digital inspection and automated management technologies to reduce labor dependence and strengthen "intelligent manufacturing".

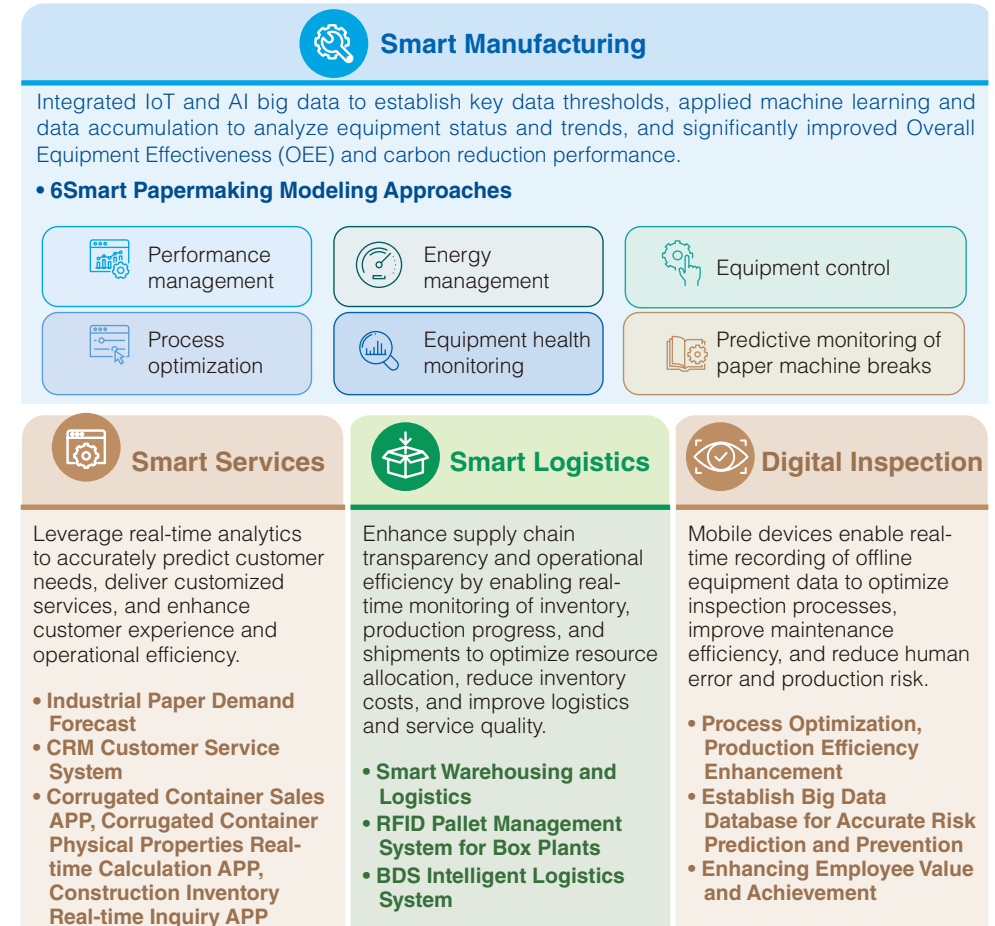
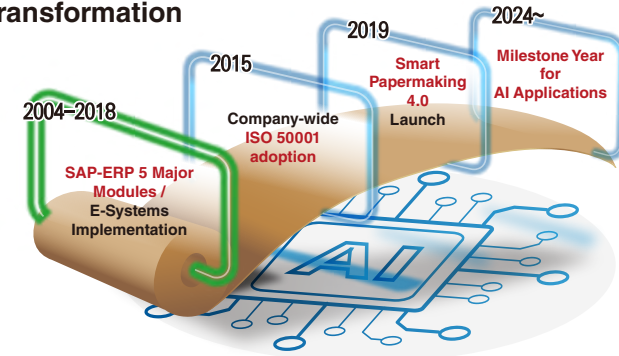
CLC implemented the Power BI interactive business intelligence visualization system to enhance decision-making efficiency and accuracy. In 2024, CLC partnered with the Industrial Development Administration, Ministry of Economic Affairs, to launch the "CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program". This program integrated the Information Department, Information Security Center, papermaking, Cogeneration, and environmental units, and collaborated with 10 suppliers to train industrial cybersecurity and smart manufacturing professionals, strengthening industry-wide smart manufacturing and industrial control cybersecurity capabilities to support industry transformation.

"CLC iPAS Supply Chain Program" launched, training 69 green-collar smart industrial control professionals

CLC partnered with the Industrial Development Administration, Ministry of Economic Affairs, to launch the "CLC iPAS Smart Manufacturing and Cybersecurity Professional Talent Training Program". The program adopted a three-track approach of lectures, hands-on practice, and certification, focusing on smart machinery and cybersecurity, and aligned with international standards. 10 companies from material, chemical, equipment, and information sectors participated across multiple supply chain stages. The program trained 69 green-collar smart industrial control professionals with practical skills.



CLC Digital Transformation Progress



2024 Key Initiatives

1 RFID Pallet Management System for Box Plant

Project Approach Implemented advanced RFID (Radio Frequency Identification) systems in box plant production lines, embedding RFID tags on pallets to automate pallet movement tracking and enhance logistics accuracy and efficiency.

Benefits

- RFID readers automatically capture data during warehouse entry, exit, loading, unloading, and transshipment without manual scanning
- Real-time pallet monitoring ensures logistics efficiency and reduces loss risk
- Optimize warehousing and inventory management to reduce idle pallets and manual errors
- Record and analyze historical data to enable demand forecasting and decision-making

Future Goals

- Ongoing integration with ERP and related systems to enhance supply chain data transparency
- Continue R&D investment to expand the scope of RFID applications

2 Vietnam Binh Duong Paper Mill—Industry 4.0 PI System Implementation

Project Approach

- Implemented PI system monitoring for the Vietnam paper machine; Phase 1 mainframe, storage, hardware, and network were completed
- Real-time data on temperature, pressure, flow rate, energy consumption, and pollutant emissions is monitored using sensors and automated equipment
- Monitor equipment status to enable preventive maintenance and reduce downtime

Benefits

- Real-time monitoring of optimal equipment power factor indicators and key influencing factors
- Early detection of equipment abnormalities, targeted improvement through root cause analysis, and timely scheduling of planned maintenance shutdowns
- A continuous automated monitoring system issues immediate alerts and provides guidance on relevant monitoring points when data is abnormal or exceeds limits
- AI data analysis and real-time dashboards visualize key indicators

Future Goals

- System functions are continuously enhanced, with operational optimization driven by system data

3 Digital Management of Printing and Box-making Equipment in Box Plants

Project Approach

- IoT-connected machines replace manual input of production settings, store production parameters for future use, and automatically transmit production data to the SAP system
- A web-based system provides real-time production status and production reports

Benefits

- Machine data flow established to reduce manual input time and errors
- Automatically recorded batch preparation time, number of stops, successful test runs, and ink color changes to improve test run efficiency
- The real-time monitoring system enables remote viewing of machine production status via mobile phones or office display screens
- Information is promptly transmitted to the Paper Products Division for comprehensive statistical analysis
- Prevent manual modifications or data entry errors
- Record defect root causes to reduce future occurrence

Future Goals

- System optimization is ongoing, with continuous collection and targeted resolution of system issues from each box plant in Taiwan
- Enhance operational synergy by expanding to leveling plants and related equipment units
- Extend connectivity to enable automatic total working hours reporting
- Expand to printing and die-cutting equipment at each plant in Vietnam

4 Enterprise GPT Project Implementation—"AI Assistant – Mu Yu"

Project Approach Implemented an open-source generative AI Q&A system on the internal EIP, reducing employee inquiry time and labor costs. The initial rollout covered personal information inquiries and HR Q&A services, accelerating Digital Transformation.

Benefits

- Enhance SOP inquiry efficiency across all departments
- Reduce manual errors
- Drive business innovation and development

Future Goals

- Enhance hardware performance to support increased user capacity
- Developed AI applications for maintenance manual search, household products inventory inquiry, industry trend analysis, and extensions query
- Automate routine operations to enhance efficiency and reduce errors
- Ensure sensitive data security



03

Responsible Supply Partnerships

3.1 Supply Chain Management

3.2 Green Procurement

Accelerate supply chain transformation to enhance value chain competitiveness and co-create a sustainable net-zero ecosystem.

- ▲ Launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program to enhance low-carbon smart manufacturing competitiveness
- ▲ The 5th Sustainable Supply Chain Conference focused on **Low-carbon, Digitalization, Incentives, and Empowerment**
- ▲ Launched Taiwan's first recovered paper supply chain upgrading program, supporting the transformation of **14** companies
- ▲ **81%** of on-site supplier audits completed (total 251)
- ▲ CLC conducted a climate questionnaire survey for **44** key Tier 1 suppliers to strengthen supply chain carbon data management
- ▲ Sustainable procurement recognized with National Green Procurement Award
- ▲ Recognized on the **A List** of the CDP Supply Chain Engagement Assessment



3.1 Supply Chain Management

Material Issue

Supply Chain Management

Strategy

Focus on supplier sustainability and risk management by setting short- and medium-term targets and implementing action plans to advance value chain sustainability.



2030

Goals

- Implement ESG risk assessment and management, obtaining valid carbon data from over 70% of key suppliers
- Expansion of Overseas Supply Chain Audits
- Supply chain sources are diversified, with no single supplier exceeding 50% of total supply
- Local procurement exceeds 75%
- Local procurement volume surpassed industry average
- Organize Sustainable Supply Chain Conferences and supplier EHS training to enhance supply chain resilience
- Strengthen green talent development across the supply chain and establish a collaborative smart talent pool
- 100% completion of on-site supplier audits

2025

Goals

- Implement supplier ESG risk assessment and management, and promote supply chain carbon reduction initiatives and guidance
- Expansion of Overseas Supply Chain Audits and Evaluations
- Local procurement exceeds 73%
- Organize Sustainable Supply Chain Conferences and provide EHS training for suppliers
- 87% completion of on-site supplier audits

2024

Goals and Results

- Supplier ESG Risk Assessment and Management
 - ➔ In the 1st phase, a climate questionnaire was conducted with 44 key Tier 1 suppliers, achieving a 97.7% response rate, and obtaining valid carbon data from over 30%
- 在 Local procurement exceeds 70%
 - ➔ 68.0% (-1.7% YoY) due to increased procurement of high-end overseas equipment under the upgrade strategy, causing a temporary decrease in proportion
- Hold the Sustainable Supply Chain Conference and provide EHS training for suppliers
 - ➔ Collaborated with 300 key supply chain partners over 5 consecutive years to develop low-carbon transition strategies for the value chain
 - ➔ Launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program to implement collaborative training across the supply chain
 - ➔ Conducted 6 environmental, safety, and health training sessions attended by 115 suppliers
- 80% completion of on-site supplier audits
 - ➔ 81% completed; 40 newly added, total 251

Responsible Supply Chain: Co-creation of Sustainable Value

Supplier partners are integral to CLC's operations. Through responsible supply chain management, CLC reduces risks and ensures product quality. CLC has established supply chain management policies, evaluation mechanisms, and guidance programs to drive continuous improvement. The online procurement platform connects domestic and global suppliers, supporting employment and economic growth. CLC holds sustainable supply chain conferences and conducts supplier evaluations to strengthen collaboration and advance supply chain sustainability. CLC was recognized on the A List of the CDP Supply Chain Engagement Assessment.

Since 2020, CLC has held the Sustainable Supply Chain Conference five times, collaborating with 300 key suppliers on low-carbon transition strategies. In 2023, CLC established the first Carbon Neutrality Alliance in the paper industry to accelerate supply chain decarbonization. In 2024, CLC launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program to strengthen digitalization and risk management. CLC expanded audits and evaluations of major overseas suppliers and, in 2024, conducted a climate questionnaire for key Tier 1 suppliers to assess low-carbon transition status and build a carbon data database to support net-zero targets.

Procurement Policy and Supplier Risk Management

CLC adheres to strict, fair, and transparent trading principles, complies with regulations, and develops qualified suppliers, contractors, and secondary sources to ensure supply chain stability and competitiveness. Supplier surveys and evaluations are conducted according to established procedures. The Supplier Tiered Management System ensures supply sources meet requirements for quality, delivery, price, and after-sales service. In the event of major supplier changes, CLC immediately conducts reassessment to mitigate risk. All major suppliers and new partners are required to sign the Supplier Code of Conduct, which covers health and safety, labor conditions, environmental protection, energy conservation and carbon reduction, energy efficiency, and restricted substances, ensuring supply chain compliance and sustainability.

In 2024, CLC maintained partnerships with 280 major suppliers with annual transactions exceeding NTD 10 million, covering raw materials, processes, energy, chemicals, and equipment engineering.

Raw Materials	Process	Others
- Wood Pulp: 8 - Imported recovered Paper: 25 - Domestic recovered Paper: 116 - Chemical Reagents: 27	- Energy and Fuel: 15 - Equipment Accessories: 11 - Contracted Engineering: 26	- Materials: 15 - Transportation: 17 - Others: 20
Total 176	Total 52	Total 52

CLC Established 1+N Net Zero Supply Chain and Announced 4 Major Sustainability Actions at Supply Chain Conference



CLC held the 5th Sustainable Supply Chain Conference on October 17, 2024, at Houli Paper Mill with 300 key supply chain partners, focusing on low-carbon transformation strategies. External experts included Dr. Huang Chin-Feng from the Industrial Technology Research Institute (ITRI) presenting "Finding the Right Talent with iPAS," and Project Manager Liao Hsuan-Ting from Quan Sing CO., LTD. sharing a case study on sustainable supply chain transformation in the paper industry. The conference assessed supply chain transformation, provided upgrade guidance, enhanced local supplier resilience, and supported Taiwan's 2050 net-zero target.

In 2023, CLC established an industrial carbon data database and formed the first Carbon Neutrality Alliance in the paper industry with 20 supply chain partners. In 2024, CLC launched the CLC iPAS Industrial Control Cybersecurity and Smart Manufacturing Supply Chain Program to build a talent pool for industrial control cybersecurity. CLC initiated a supply chain climate questionnaire to expand the carbon database and develop digital low-carbon talent.

The 5th CLC Sustainable Supplier Conference focused on net zero transition and smart manufacturing, setting over 15 action targets across four areas: low-carbon, digitalization, incentive, and empowerment. CLC will systematically track supply chain low-carbon progress, share carbon reduction practices, and provide training and guidance resources to supply chain partners to drive co-creation of sustainable competitiveness and expand international market opportunities.

1. Low-carbon Transition

Optimize local recycling supply chains to maximize resource circulation.

2. Digital Management

Enhance collaboration and audit in key supply chains to drive sustainable production and sales models.

3. Co-creation Incentives

Lead the 1+N Carbon Management Alliance to support SMEs in building a carbon-neutral supply chain.

4. Talent Empowerment

Strengthen green talent development across the supply chain and establish a collaborative smart talent pool.

Note: For supply chain engagement results, see page 11, Highlight 3 of this report and the CLC website [Press Release](#)



Supply Chain Management Policy

Corporate Social Responsibility, Workplace Inclusion, Environmental Health and Safety Management

- ✓ Pursuing ESG leadership by enhancing the work environment and advancing sustainable supply chain collaboration.
- ✓ Sustainable development is the company's core principle, focusing on caring for life, utilizing resources wisely, and contributing to society.
- ✓ Encourage suppliers to implement sustainable practices, promote sustainability, and prepare sustainability reports.
- ✓ Enhance supplier EHS standards and enforce occupational safety compliance.

Develop green circular economy, enforce waste sorting and recycling, seize circular business opportunities

- ✓ Collaborate with quality and chemical research teams to develop and procure alternative environmentally friendly raw materials.
- ✓ Procure high-quality recovered paper to reduce waste and decrease supply chain operating and environmental costs.
- ✓ Recovered paper classification management has been implemented to optimize resource utilization.

Optimize green procurement, reduce environmental impact, fulfill global citizenship responsibilities

- ✓ We provide guidance and economic incentives to recyclers to enhance recycled resource distribution channels.
- ✓ Collaborate with industry associations, government, non-profits, and the recycling supply chain to promote accurate recycling and sorting, reducing processing costs for society and businesses.
- ✓ Prioritize procurement of eco-labeled products to minimize environmental impact.

Market Trends, Supply Chain Management, Flexible Procurement Strategies

- ✓ Track international trends and respond to geopolitical changes, tariff adjustments, wars, natural disasters, and pandemics.
- ✓ Regularly exchange information to support global deployment and track key raw material market trends.
- ✓ Openly source all available materials to secure stable and low-cost supply.
- ✓ Integrate key raw material procurement across global operations to enhance group competitiveness.

9 Dimensions for Major Supplier On-site Audit



CLC Supply Chain Evaluation Mechanism



Supplier Development and Assessment

CLC implemented the Supplier Evaluation Procedures to ensure timely raw material supply and maintain supply chain competitiveness. In 2024, 100% of new suppliers completed environmental and social responsibility assessments, fulfilling sustainable procurement requirements.

Key On-site Supplier Audit Target: 100% by 2030

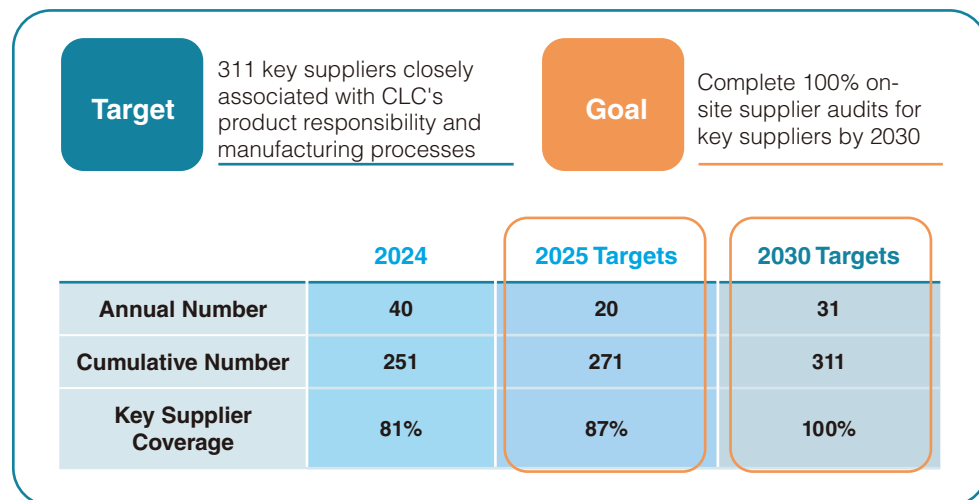
CLC conducts annual supplier evaluations under ISO procurement procedures. Cross-department teams assess key suppliers and classify results into four grades: Excellent, A, B, and C. Management strategies are implemented according to these results.

Since 2020, CLC has implemented an on-site audit system for key suppliers and established an annual target to expand evaluation coverage by 10%, with a goal of **achieving 100% coverage by 2030**.

Grade	Evaluation Criteria	Management Approach
Excellent	Total score ≥ 85	Priority procurement
A	84–75	Encourage and guide to achieve Excellent
B	74–65	Strengthen supervision and evaluation criteria
C	Below 64	Eligibility revoked; procurement permitted upon requalification



As of 2024, CLC completed on-site audits for 251 suppliers, achieving 81% of the 2030 target, with 40 new suppliers evaluated in 2024. The audit result shows that 29 suppliers were rated Excellent and 11 rated A; no suppliers were rated B or C. CLC conducts annual on-site audits, continuously refines assessment criteria, and assigns staff or experts to support lower-rated suppliers in improving sustainability management.



CLC Key On-site Supplier Audit Annual Evaluation Results

	Number of suppliers evaluated	Excellent	A	B	C
2022	68	59	9	0	0
2023	55	45	10	0	0
2024	40	29	11	0	0

CLC Initiated Tier 1 Supplier Climate Questionnaire to Enhance Supply Chain Carbon Data Management

Establish a supply chain carbon database to accelerate low-carbon transition

CLC established the Carbon Neutrality Alliance in 2023, targeting valid carbon data collection from over 70% of key Tier 1 suppliers by 2030. CLC developed an industry carbon database, trained digital low-carbon professionals, and launched a supply chain climate questionnaire survey in 2024.

The survey was conducted from November 15, 2024 to January 15, 2025, targeting 44 key Tier 1 suppliers in the raw materials and processing categories. The assessment covered organizational greenhouse gas emissions and product carbon footprint.

The 2024 survey obtained over 30% valid carbon data

The survey achieved a 97.7% response rate (43 suppliers), with 14 suppliers (32%) having completed organizational carbon inventories. In the 1st year, **CLC obtained valid carbon data from over 30% of suppliers.**



Survey Response Rate

97.7%



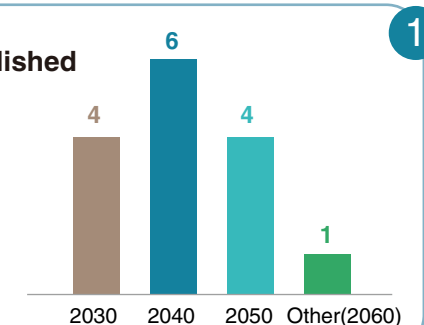
Valid Carbon Data Completion Rate

32%

5 Key Findings

Nearly 35% of suppliers have established net zero or carbon neutrality targets

4 set targets for 2030, 6 for 2040, 4 for 2050, 1 for 2060



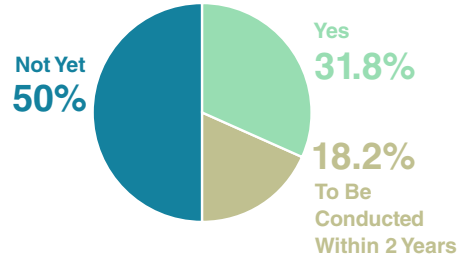
3.1 Supply Chain Management

3.2 Green Procurement

50% of suppliers have completed or are planning organizational greenhouse gas inventories

31.8% of suppliers completed organizational greenhouse gas inventories, 18.2% planned inventories within two years, and 50% had neither inventories nor plans

14 suppliers (32%) completed organizational carbon inventories under ISO 14064-1 or the GHG Protocol; all these suppliers covered Scope 1 and Scope 2, and 50% included Scope 3

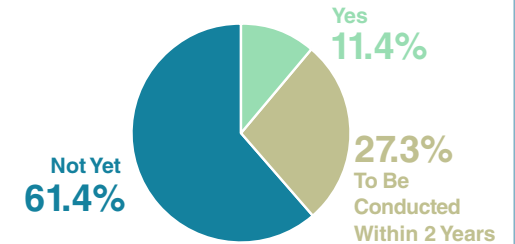


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Nearly 40% of suppliers have conducted or planned product carbon footprint assessments

11.4% of suppliers completed product carbon footprint assessments; 27.3% planned assessments within 2 years; over 60% had neither conducted nor planned assessments

5 suppliers (11%) adopted ISO 14067 for product carbon footprint assessment

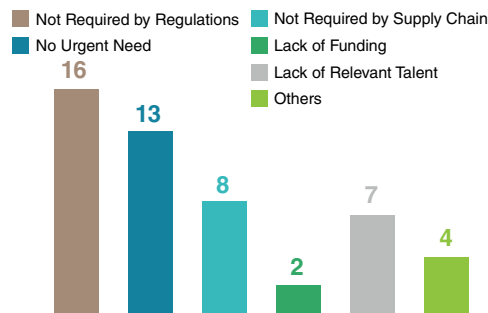


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3 Major Barriers to Supplier Organizational Carbon Inventory

16 reported **no government regulatory requirements**, 13 reported **no urgent need**, and 8 reported **no supply chain requirements**

Others: insufficient funding (2), lack of talent (7)

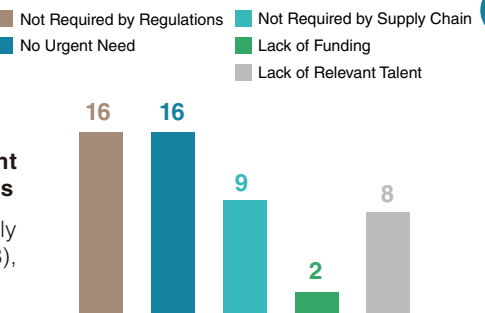


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2 Major Barriers to Supply Chain Product Carbon Footprint Assessment

16 companies indicated **no government regulatory requirements** or **urgent needs**

Other factors included absence of supply chain requirements (9), lack of talent (8), and insufficient funding (2)



5

Survey Findings and Next Steps

The 2024 CLC Tier-1 Supply Chain Climate Survey found that suppliers had not initiated greenhouse gas or **product carbon inventories due to lack of regulatory requirements, urgent need, or supply chain requests**. These findings highlight the critical role of government policy and supply chain expectations in driving supplier engagement in carbon management.

CLC will accelerate low-carbon supply chain transformation through five action guidelines, working with supply chain partners to build a resilient low-carbon industrial ecosystem and advance sustainable value co-creation.



Encouraging Carbon-managed Suppliers

Prioritizing suppliers with carbon management to increase supply chain participation and advance industry carbon management maturity through market



Supply Chain Carbon Reduction Support

Sharing carbon reduction practices, providing technical support, and connecting advisory resources to lower transformation barriers



Strengthen Carbon Data Collection and Tracking

Establishing a systematic mechanism to increase supplier carbon data transparency



Expanding Climate Survey Coverage

Including logistics and transportation suppliers in Scope 3 value chain inventory



Advancing Carbon Management Demonstration Project

Expanding collaboration with government and supply chain partners to accelerate supplier carbon management and develop low-carbon business opportunities

Enhancing Supply Chain Sustainability Through Supplier Training

In 2024, CLC held 6 supplier training sessions with 115 suppliers, focusing on low-carbon transition and environmental management. CLC delivered a keynote speech at Da Fon Environmental Technology, sharing ESG implementation experience with senior management and addressing strategies for low-carbon transition and green production under global carbon neutrality trends. CLC will continue to strengthen supply chain collaboration to advance environmental sustainability and occupational safety management.

CLC Supplier Environmental, Health and Safety Management Policy



Safety First

Suppliers are required to comply with contractor safety meeting records, the Occupational Safety, Health and Environmental Management Commitment Letter, and safety work permits. Prior to facility entry, suppliers must complete environmental, safety, and health hazard training and receive entry instructions. Suppliers must obtain accident insurance coverage of NT\$5 million.



Product Compliance

Raw material suppliers must provide test reports confirming products are free of prohibited or restricted substances in accordance with customer and international regulations. Random audits are conducted, and any non-compliance must be addressed immediately.



Energy Efficiency Priority

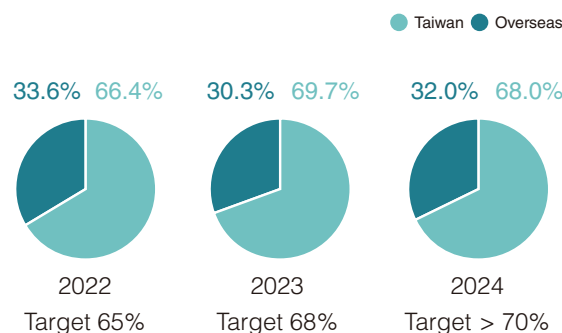
When purchasing energy services, products, and designs that may impact energy uses, we explicitly inform suppliers of our major energy-using equipment and prioritize energy efficiency as one of our major considerations.



Enhancing supply chain resilience through local sourcing, with local suppliers accounting for 85.7%

CLC prioritized Taiwanese suppliers and set a 2030 target for local procurement to exceed 75% of total value. In 2024, local suppliers accounted for 85.7%, up 2.8% YoY; local procurement value was 68.0%, down 1.7% YoY due to increased overseas purchases of high-end equipment supporting the equipment upgrade transformation strategy. CLC annually adjusted its local procurement strategy and will continue to strengthen supply chain resilience and pursue its targets.

Local Procurement Ratio



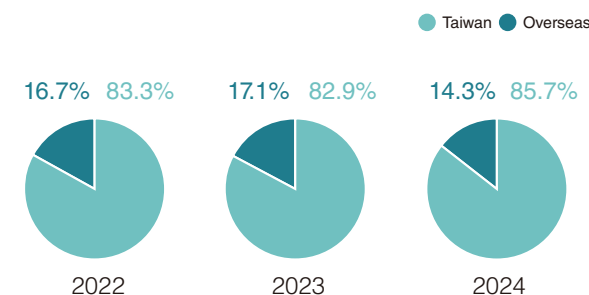
2025 Goal >73%



2030 Goal >75%

Note: Taiwan area

Domestic and Overseas Supplier Proportion



Note 1: Taiwan area

Note 2: The proportion of domestic and overseas suppliers is calculated as (number of purchasing suppliers ÷ number of major suppliers) × 100%



3.2 Green Procurement

Material Issue

Green Procurement

Strategy

Advance low-carbon and green procurement, integrate smart technologies to enhance energy and resource efficiency, and optimize supply chain management and service quality.



2030

2025

2024

Goals

Goals

Goals and Results

- Green procurement prioritizes products and equipment with energy-saving and environmental labels; green procurement ratio reached 50%
- All mills/plants receive Green Procurement Excellence Certification from local governments

- Recovered paper utilization rate for industrial paper: > 97% in Taiwan; > 94% in Vietnam
- Establish an industrial ecosystem to achieve zero waste throughout the recycling value chain
- Facilitate recyclers' transformation and diversify recovered materials

- 100% FSC™-certified pulp for sustainable forest management and ecological conservation

- Green procurement ratio reach 50%

- Recovered paper utilization rate for industrial paper: > 97% in Taiwan; > 94% in Vietnam
- Enhance recovered paper classification and quality, reduce residual waste rate
- Facilitate transformation and upgrading of 2 recyclers/suppliers

- FSC™ pulp ratio > 98%

- Green procurement ratio to reach 50%
 - ➔ The ratio reached 49.6%, below target, due to reduced pulp procurement in response to market trends, resulting in lower total green procurement
 - ➔ 10 mills/plants received National Green Procurement Award from the Ministry of Environment (Taiwan) and local governments

- Recovered paper utilization rate for industrial paper: > 97% in Taiwan; > 94% in Vietnam
 - ➔ Taiwan and Vietnam recycled 1,660,000 tonnes and 690,000 tonnes of recovered paper, achieving recovered paper utilization rates of 97.7% and 95.1% for industrial paper
- Enhancing recovered paper sorting and quality
 - ➔ ChuPei Paper Mill increased certified food paper container processing capacity by 1,000 tonnes, reaching a total of 3,000 tonnes per month
- Facilitate transformation and upgrading of 2 recyclers/suppliers
 - ➔ 2 added, total 16 completed transformation and upgrading
 - ➔ Waste Food Paper Container 2.0 Project:
 - ➔ 1. Added 2 new suppliers, totaling 56 waste food paper container suppliers
 - ➔ 2. Supported smaller suppliers and delivery volume increased 26 times
 - ➔ Established the HowRecycle Taiwan Association with Da Fon Environmental Technology to implement the Sustainable Recycling Partner Program, enhance recycler livelihoods, and expand food paper container recycling, reaching 14 recycling stations nationwide

- FSC™ pulp ratio > 98%
 - ➔ 97.6% (-0.5% YoY), primarily impacted by reduced global FSC™ pulp supply and price volatility. Local alternative materials were used to ensure production stability, resulting in a slight decrease

Advance Sustainable Procurement to Achieve 50% Green Procurement by 2030

CLC has implemented green procurement to support SDG 12, prioritizing materials, facilities, and office supplies with environmental, energy-saving, and FSC™ certifications to reduce environmental impact and enhance resource efficiency, thereby strengthening supply chain sustainability and resilience.

In recent years, the international community has placed increasing emphasis on the loss of natural capital and promoted the "Nature Positive" approach to reverse biodiversity loss and foster harmony between economic development and sustainability. CLC set a 2030 target for 100% FSC™ pulp procurement in line with SDG 15. In 2024, FSC™ pulp comprised 97.6% of total virgin pulp procurement, a 0.5% YoY decrease caused by global supply constraints and price fluctuations. CLC responded by sourcing local alternative materials to reduce supply risk and maintain environmental commitments.

In 2024, CLC recycled 1,660,000 tonnes of recovered paper in Taiwan, achieving a recovered paper utilization rate of 95.1% for all paper types (+0.2% YoY) and 97.7% for industrial paper (+0.2% YoY). The Vietnam Binh Duong Paper Mill recycled 690,000 tonnes of recovered paper (+16% YoY), with an industrial paper recovered paper utilization rate of 95.1%. Group-wide, CLC recycled 2,350,000 tonnes of recovered paper.

CLC set a long-term goal for green procurement to reach 50% of total procurement by 2030. In 2024, green procurement totaled NT\$8.5 billion, accounting for 49.6% of total procurement (-6.8% YoY). The decline was primarily due to market-driven reductions in virgin pulp procurement. Despite this, CLC remains a leading performer in green procurement, and will continue to advance low-carbon procurement and strengthen the sustainable supply chain.

CLC Recognized with National Green Procurement Award



In 2023, CLC achieved NT\$9 billion in sustainable procurement across 10 mills/plants, accounting for 14% of the national total. On August 28, 2024, CLC received the National Green Procurement Award from the Ministry of Environment (Taiwan).

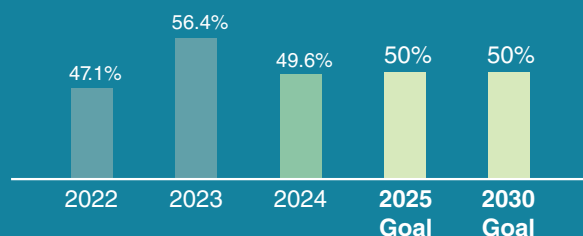
Conflict Minerals Prohibition

To uphold human rights, CLC avoids the use of conflict minerals sourced from illegal or unethical operations and remains committed to responsible mineral sourcing throughout its supply chain. We prohibit the use of tin, tantalum, tungsten, and gold from the Democratic Republic of the Congo and neighboring regions in the production of industrial paper and corrugated containers. CLC requires suppliers to conduct due diligence on mineral sourcing and address risks of human rights violations and environmental harm. CLC maintains conflict-free sourcing, monitors international mineral management requirements, and communicates with its supply chain.

Prohibited Substances

CLC established the Hazardous Substance Inspection Management Measures to ensure compliance with international regulations. Since 2021, CLC has implemented full material declaration (FMD) management, requiring suppliers to regularly submit hazardous substance verification reports and declarations. All raw materials, finished products, and new materials must comply with prohibited substance controls.

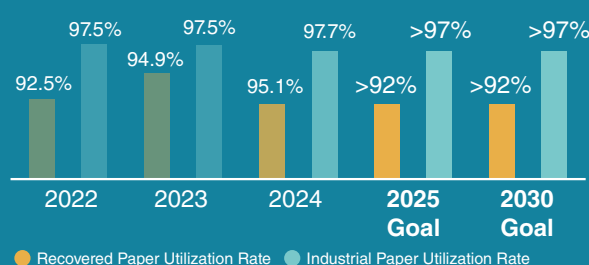
Green Procurement Ratio



Note 1: Taiwan area

Note 2: After 2020, calculated as (Ministry of Environment (Taiwan) declared green procurement amount / total procurement amount * 100%)

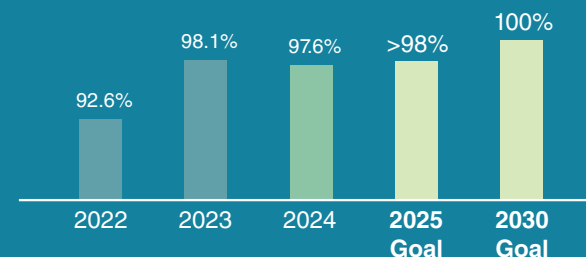
Recovered Paper and Industrial Paper Utilization Rate



Note 1: Taiwan area

Note 2: Calculated as recovered pulp consumption / (recovered pulp consumption + virgin pulp consumption)

FSC™ Pulp Ratio



Note 1: Taiwan area

Note 2: Calculated as FSC™ pulp procurement volume divided by total virgin pulp procurement volume



Advancing Recycling Supply Chain Transformation: Cross-sector collaboration to enhance sorting quality, ensure source integrity of recycled materials, and optimize integrated recycling performance



Enhancing Source Separation for Increased Corporate Recycling Efficiency

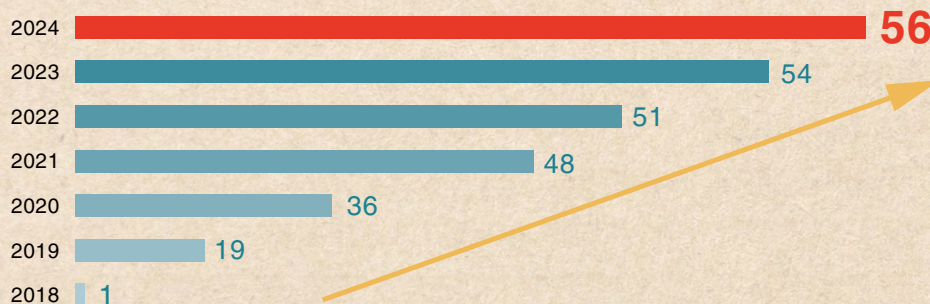
As the largest recovered paper processor in Taiwan, CLC has made circular economy a core strategy. In response to the long-standing issue of 10–13% domestic waste contamination in locally collected recovered paper which compromises recycling efficiency and increases energy consumption during processing, CLC has, since 2018, assisted 167 recycling partners to improve recovered paper quality and meet international standards. In 2024, CLC launched the Food Paper Container 2.0 Project, training key regional partners and supporting 56 suppliers to optimize food paper container sorting and processing, enhancing the local recovered paper supply chain.



Recycling Supply Chain Upgrade: Paper Sludge Reduced by 40%

Since 2018, CLC has set an annual target to support the transformation of at least 2 recovered paper merchants and revised its recovered paper procurement policy. We have also introduced Taiwan's first Recovered Paper Moisture Analyzer and established an e-platform. For 167 recovered paper merchants, CLC implemented a three-stage process—guidance, observation, and replacement—emphasizing source classification and technical support. By 2024, CLC assisted 14 key merchants in transformation, achieving a nearly 40% reduction in paper sludge compared to 2017 through process innovation, and enhanced recycling and energy efficiency.

CLC's waste food paper container partners grew **56**-fold over 6 years



Note: Taiwan area

Food Paper Container Recycling Benchmark

Annual group processing volume reached 176,000 tonnes, enhancing industrial circularity

CLC expanded food paper container recycling capacity through innovation and R&D, utilizing paper-plastic separation technology. In 2018, CLC installed a high-efficiency paper-plastic separation line at ChuPei Paper Mill. In 2023, CLC invested over NT\$1.5 billion to add a recovered bleached pulp line at Tayuan Paper Mill, increasing approved monthly processing capacity to 14,700 tonnes.

By the end of 2024, ChuPei Paper Mill's certified food paper container processing capacity passed government review and increased by 1,000 tonnes to 3,000 tonnes per month, representing 50% YoY growth. This expanded CLC's food paper container recycling and regeneration capacity. In addition, Tayuan and ChuPei Paper Mill hosted 914 participants from the Ministry of Environment (Taiwan), Department of Economic Development, New Taipei City Government, Paper Carton Food Promotion Association, R.O.C., and National Yang Ming Chiao Tung University (NYCU) EMBA faculty and students, demonstrating on-site food paper container regeneration processes and promoting source separation and recycling.



Industry-Academia Collaboration on Waste Food Paper Container Recycling Research

Verification of Positive Impact from Cleaning and Sorting Used Food Paper Containers

CLC partnered with National Chung Hsing University and the Paper Carton Food Promotion Association, R.O.C. to complete the research report "Environmental Impact Assessment of Cleaning Treatment for Recycled Food Paper Containers." The study confirmed that proper cleaning, including food waste separation, washing, and drying, reduced odor and environmental pollution from food paper containers. In 2024, the results were published in VOL.28 No.1 of Pulp and Paper Technology,



with the aim of achieving four key benefits:

1



Promoting government legislation to enhance recycling regulations

2



Encouraging the cleaning of food paper containers before recycling

3



Enhancing recycling operators' willingness to recycle waste food paper containers

4



Reduceing resource waste and improving food paper container recycling efficiency



Collaboration with recovered paper supplier Da Fon Environmental Technology

Sustainable Recycling Partner Engagement Program

CLC has supported individual recyclers and advanced care initiatives through industry collaboration. By the end of 2024, Da Fon Environmental Technology established the HowRecycle Taiwan Association and launched the Sustainable Recycling Partner Program with business partners. The program integrated Recycler Love Redemption and World Recycling Sharing Day, utilizing 16 recycling stations to provide economic and social support for individual recyclers and promote correct resource sorting and recycling.

CLC sponsored the Dandelion eco-friendly product series with the aim of increasing the food paper container recycling rate by 20% and boosting the estimated recycling volume by 426,000 kg, channeling waste food paper containers into the formal recycling system to generate environmental and social value.



Waste Picker Support Program



Photo provided by How Recycle Taiwan Association.

04

Climate Resilience Management

Smart low-carbon operations, resource circulation, and environmental stewardship drive a clean, sustainable circular business model to maximize energy and resource efficiency and reduce environmental impact.

- 4.1 Climate Change Actions
- 4.2 Climate Change Actions
- 4.3 Water Resource Management
- 4.4 Air Quality Management
- 4.5 Waste Resource Utilization
- 4.6 TNFD Biodiversity

- ▲ Reused **1.66** million tonne of paper
- ▲ GHG emissions have decreased by **9.38%** (compared to 2018 baseline)
Product carbon emissions intensity continues to decline **Industrial Paper -3.38% YoY**
Household Products and Paperboard -31.17% YoY
- ▲ **97.8%** waste-to-resources ratio (**+1.9% YoY**)
- ▲ Alternative fuel ratio **19.58%, +3.86% YoY**, replacing **112k** tonnes of coal
- ▲ Implemented **537** energy-saving projects, reducing electricity consumption by **12,797** million kWh (2013~2024)
- ▲ 1st batch of **TNFD Early Adopters**, promote **Nature Carbon Sink Restoration Programs**

Note: Taiwan Parent Company

Coexist with Nature: CLC Develops 3R PLUS Circular Resource Model

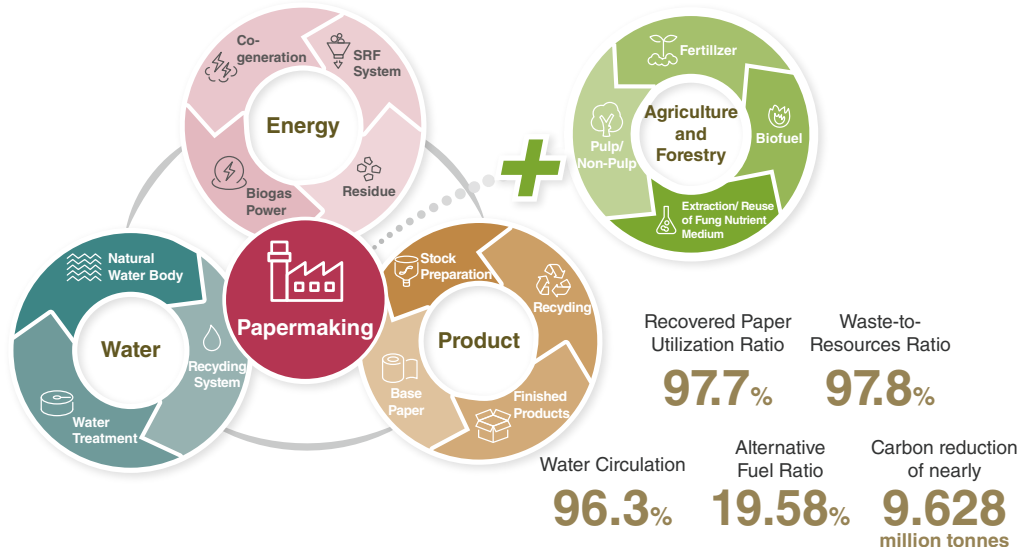
Focusing on High-value Biomass Applications and Natural Carbon Sinks

To ensure sustainable operations and compliance with environmental and climate change regulations, CLC continues to invest in process improvements and full resource circulation to transform traditional manufacturing plants into energy-efficient, environmentally compliant smart regeneration facilities.

Prioritizing the sustainable recovery of agricultural and forestry materials, CLC has in recent years integrated product, energy, and water resource cycles with agricultural and forestry cycles to advance the regeneration of plant fibers, bioactive materials, and biofuels. It also promotes academic collaboration, combining R&D and cross-industry expertise to develop natural carbon sinks and negative carbon emissions technologies, including carbon sequestration, carbon capture, and carbon storage, to address long-term climate change challenges.

In 2024, the Taiwan Parent Company achieved a 95.1% Recovered Paper Utilization Rate, including 97.7% for industrial paper, a 97.8% Waste-to-Resources Ratio, and a 96.3% Water Recycling Rate. Annual recovered paper regeneration contributed nearly 9.628 million tonnes of carbon reduction, ranking 1st in Taiwan for resource circulation scale. The company further expanded its sustainable circular model to overseas sites to increase global resource efficiency.

In addition, CLC continues to launch green products with low-carbon design, providing functional paper packaging to support customer carbon reduction and drive supply chain sustainability.



Note: Recycling 1 tonne of recovered paper reduces carbon emissions by 5.8 tonnes..

product circularity

2030 Goal

Industrial Paper Recovered Paper Utilization Rate > 97%

The pulp and paper industry operates a green supply chain. CLC paper mills use recovered paper to produce industrial paper, which (box) plants convert into corrugated containers for packaging and transport. Used containers are collected through recycling and returned to the paper mill, forming a cradle-to-cradle green cycle that enables resource regeneration and carbon reduction.

Water Circulation

2030 Goal

10% Reduction in Unit Product Water Consumption (containerboard division)

Through the PDCA management mechanism and cross-plant experience sharing, Water Conservation and tiered water management are implemented to enhance production water reuse efficiency. Compliant effluent is supplied to streams and wetlands to support biodiversity, carbon sequestration, and greenhouse gas mitigation.

Note: The goal setting scope is the Taiwan Parent Company.

Energy Circulation

2030 Goal

Waste-to-Resources Ratio > 97%

CLC invests in cogeneration systems and develops wind, solar, biogas, and biomass green energy facilities to enhance energy efficiency. CLC promotes resource utilization of process residues and increases alternative fuel use. Through cross-industry collaboration, fly ash and bottom ash are sent to qualified vendors for removal and reuse as admixtures in CLSM and cement material, strengthening resource recycling.

Agricultural and Forestry Cycles

2030 Goal

Alternative Fuel Ratio 25%

CLC advances circular reuse of agricultural and forestry residual materials, develops plant fiber regeneration, enhances bioactive materials, and expands bio-based fuel use. CLC collaborates with industry, government, and academia to promote natural carbon sinks, strengthening climate adaptation and Carbon Reduction.



CLC Environmental Sustainability Strategy

CLC's sustainability policy centers on smart low-carbon operations, resource circulation, and environmental stewardship, fully integrating sustainability into business operations and management decisions. CLC implements life cycle management from product design and process optimization to resource recovery and reuse, advancing carbon reduction and environmental protection. This policy guides all employees and underpins CLC's net zero transition and climate resilience, strengthening its competitiveness in the global sustainable supply chain.

★ Environmental Policy: Smart Low-carbon, Resource Circulation, Environmental Stewardship

★ Task Implementation

	Promoting Circular Economy	Strengthen recycling and reuse, reduce waste, improve manufacturing processes, and maximize product and resource circulation.
	Compliance with Environmental Regulations	Ensure all facilities comply with environmental regulations, regularly monitor environmental data, and meet treatment and discharge standards.
	Nature-based Solutions	Support afforestation, ecosystem restoration, green infrastructure, and enhancement of carbon sinks and biodiversity.
	Stakeholder Engagement	Promote environmental education and training, engage employees, communities, and supply chain partners in capacity building, and share environmental information and progress.
	Net Zero Emissions Commitment	Develop a carbon reduction roadmap, increase renewable energy usage, invest in self-initiated reduction projects, and progressively achieve net zero emissions goals.
	Support for Climate Policy	Publicly commit to climate policy, prohibit funding for climate change denial, and establish the Corporate Sustainability Committee and Risk Management Committee for oversight.

Policy Promotion and Management Mechanism

CLC's sustainability policy is overseen by the taskforce under the Sustainability Committee and the Risk Management Committee, and is integrated into the ISO management systems of the parent company (including all mills/plants) and its domestic and overseas subsidiaries to ensure comprehensive implementation.

In parallel, stakeholder engagement mechanisms have been established, collaborating with customers, suppliers, communities, and academic institutions to implement projects on environmental education, nature-based solutions, and green innovation, building a sustainable governance network to advance a clean and resilient future through Governance Co-creation.

CLC Management Verification

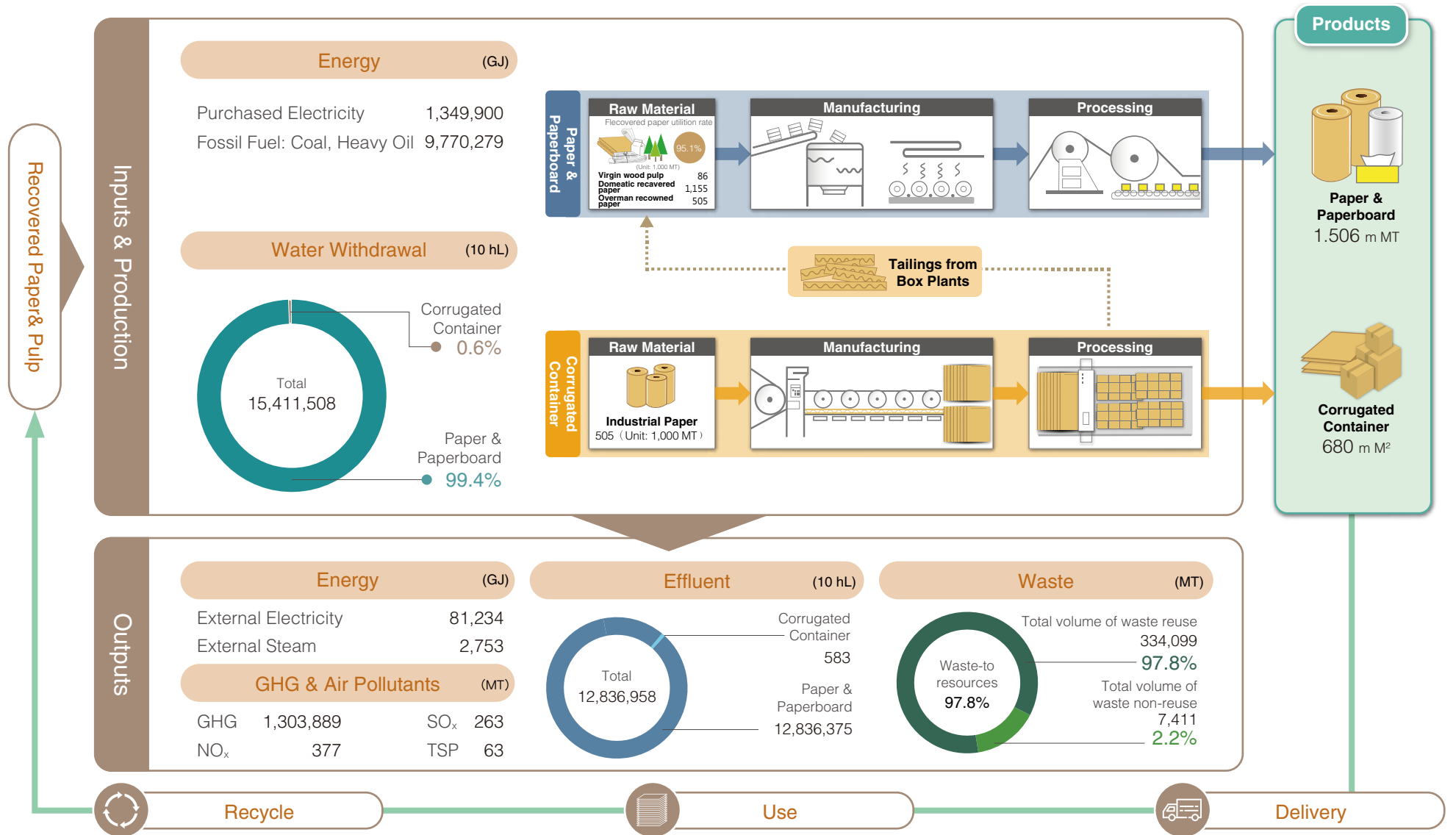
CLC manufactures recycled paper using clean production technologies to achieve environmental benefits and sustainable resource utilization. The company implements FSC™ international forest management standards and has adopted ISO 9001 quality management system, ISO 14001 environmental management system, and ISO 50001 energy management system certifications at all mills/plants in Taiwan.

Adhering to the principle of sustainability, CLC extended its successful experience to overseas operations by implementing ISO 9001 and ISO 14001 management systems at all sites in Mainland China and Vietnam. In 2022, CLC launched ISO 50001 energy management and ISO 45001 occupational health and safety management systems. As overseas production capacity continues to expand, CLC is introducing additional international standards management systems at new plants to strengthen sustainability and energy efficiency, ensuring global operations comply with the highest environmental and safety standards.

Verification Standards	Certified Mills/Plants		
	Taiwan	Mainland China	Vietnam
ISO 14001 environmental management system	All Mills/Plants	All Mills/Plants	All Mills/Plants
ISO 50001 energy management system		5 Box Plants	1 Paper Mill, 3 Box Plants
ISO 9001 Quality Management Certification		All Mills/Plants	All Mills/Plants
ISO 45001 Occupational Health and Safety Management System		4 Box Plants	1 Paper Mill, 4 Box Plants
FSC™ Sustainable Forestry		All Mills/Plants	All Mills/Plants

Note: For system verification certificates of each plant, please refer to the relevant documentation [CLC Website](#)

CLC Raw Material Flow Chart 2024



Note: Data scope covers the Taiwan Parent Company.



4.1 Climate Change Actions

Material Issue

Climate Change Actions

Strategy

Centered on circular economy, low-carbon green energy, and innovation, we maximize carbon neutrality through the 5 S.M.A.R.T. Low-carbon Smart Paper strategies, leveraging recyclability as a core advantage.



2030

Goals

- Taiwan Parent Company GHG emissions Target: -20% (Base Year: 2018)
- Establish short-, medium-, and long-term carbon-reduction pathways to achieve the vision of carbon neutrality by 2050

2025

Goals

- Taiwan Parent Company GHG emissions Target: -5% (Base Year: 2018)
- Expand third-party assurance of ISO 14064-1 greenhouse gas inventories to additional consolidated subsidiaries
- Establish a standardized internal carbon pricing mechanism
- Continuously improve CDP climate change questionnaire results to enhance information transparency
- Enhance Carbon Asset Management Mechanisms

2024

Goals and Results

- Decrease GHG emission by 4% at the Taiwan Parent Company (base year: 2018)
 - ➔ Decreased by 9.38% compared to the base year
 - ➔ Product carbon emissions intensity is continuously decreasing
 - Industrial paper: 0.836 tCO₂e/tonne of paper (-3.38% YoY)
 - Household products and paperboard: 0.919 tCO₂e/tonne of paper (-31.17% YoY)
 - ➔ Revenue carbon emissions intensity -10.03% YoY
- Expand implementation of ISO 14064-1 GHG inventory management systems in consolidated subsidiaries
 - ➔ All 37 consolidated subsidiaries completed greenhouse gas inventories
 - ➔ GHG inventory assurance was completed for major consolidated subsidiaries
- Implement the ICP internal carbon pricing mechanism
 - ➔ Tayuan Paper Mill served as the 1st demonstration mill to establish the Group's standardized ICP assessment framework
- Continuously improving CDP climate change questionnaire results
 - ➔ Achieved Management Level in the climate change questionnaire; only paper supplier included in the SEA A List
- Obtain certification for GHG offset projects from the Ministry of Environment (Taiwan)
 - ➔ Tayuan Paper Mill was registered in 2020 and obtained approximately 64,000 tonnes of carbon credits in 2025

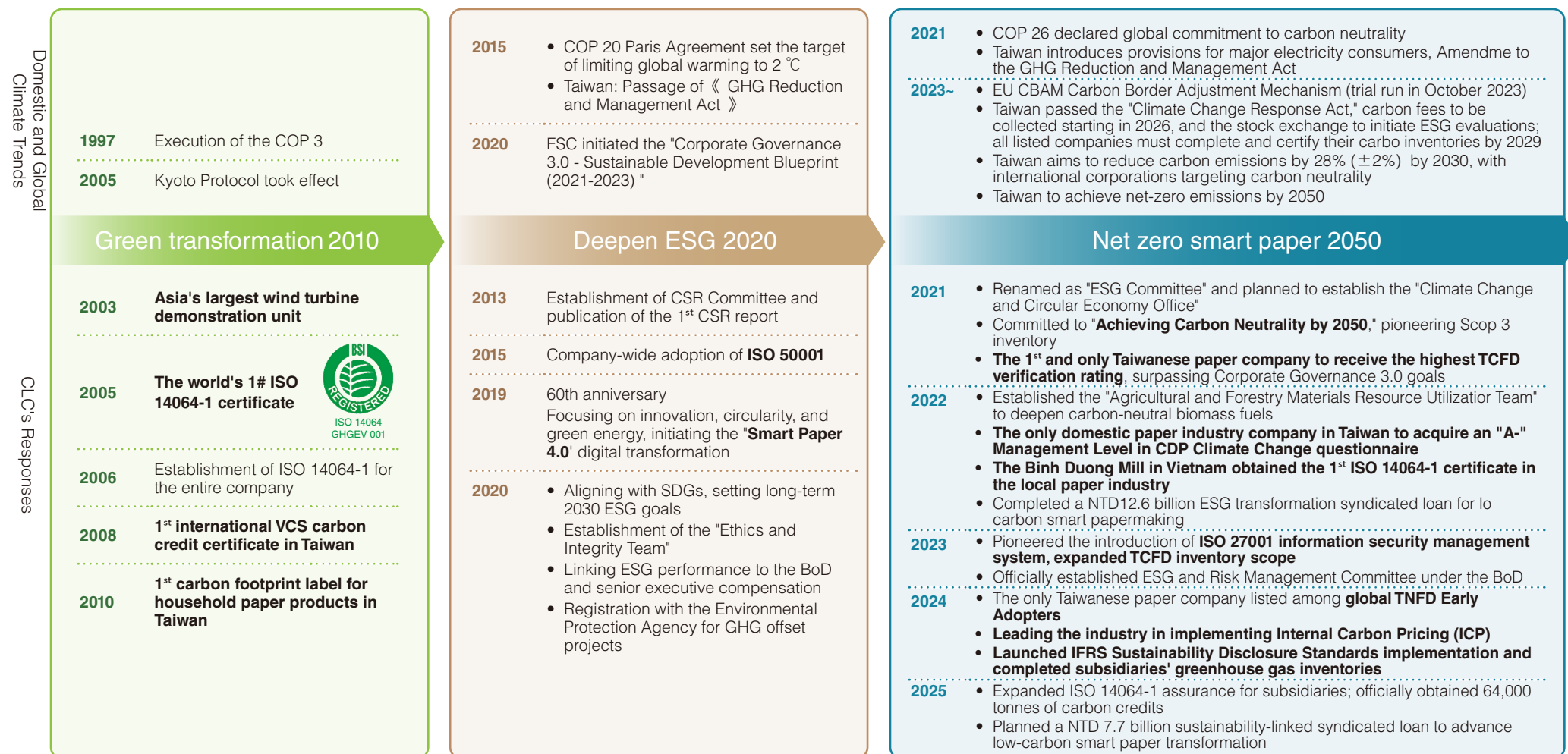
Enhancing Climate Risk Governance and Advancing Low-carbon Smart Paper Transformation

CLC aligned with international frameworks to mitigate climate change impacts on operations and finances and strengthen organizational climate resilience. In 2021, CLC became the first paper company in Taiwan to pass the TCFD audit and receive the highest rating, establishing a comprehensive climate risk and opportunity identification process and conducting ongoing TCFD reassessments based on major climate policy developments.

In 2024, CLC became one of the first global Early Adopters of the Taskforce on Nature-related Financial Disclosures (TNFD), strengthening its focus on nature-related issues. CLC also implemented Internal Carbon Pricing (ICP), launched the IFRS Sustainability Disclosure Standards implementation plan, and completed the greenhouse gas inventory for consolidated subsidiaries.

By 2025, CLC will expand ISO 14064-1 GHG inventory assurance to all consolidated subsidiaries and initiate an NTD 7.7 billion sustainability-linked syndicated loan to accelerate Low-carbon Smart Paper transformation, advancing toward the 2050 carbon neutrality vision.

CLC Important Milestones on Climate Governance



Advancing International Standards for Climate Resilience and Information Transparency

The circular economy is a practical approach to achieving low-carbon net zero. CLC treats climate change risks as opportunities, focusing on S.M.A.R.T. Low-carbon Intelligent Paper and establishing circular economy sites domestically and internationally. CLC invests in recovered paper recycling, prioritizes Paper-based Solutions (PBS) as Nature-Based Solutions, and advances climate governance to enhance operational resilience.

Since 2005, CLC has implemented emission reduction management on production lines after obtaining the world's 1st ISO 14064-1 GHG inventory certificate. In 2008, CLC obtained Taiwan's 1st international VCS carbon credit certificate, and in 2010, Taiwan's 1st carbon footprint label for household paper products. In 2023, CLC formed a Carbon Reduction team with the industry chain and completed Taiwan's 1st product carbon footprint inventory for industrial paper. In 2024, CLC launched a climate questionnaire survey for key Tier 1 domestic and international suppliers to enhance supply chain carbon data management and accelerate zero-carbon transition opportunities.

CLC adopted international frameworks to reduce climate-related operational and financial impacts and achieved the Corporate Governance 3.0 goals ahead of schedule. In 2021, CLC became the 1st pulp and paper company in Taiwan to pass the TCFD audit and receive the highest rating. In 2022, CLC initiated greenhouse gas inventories for subsidiaries. Vietnam Binh Duong Paper Mill obtained the 1st ISO 14064-1 GHG inventory certificate in the local pulp and paper industry, with subsequent expansion to other overseas plants. By 2024, all 37 consolidated subsidiaries completed ISO 14064-1 GHG inventories, with key plants completing third-party assurance. CLC will continue to expand third-party assurance for consolidated subsidiaries' greenhouse gas inventories, targeting full completion by 2026.

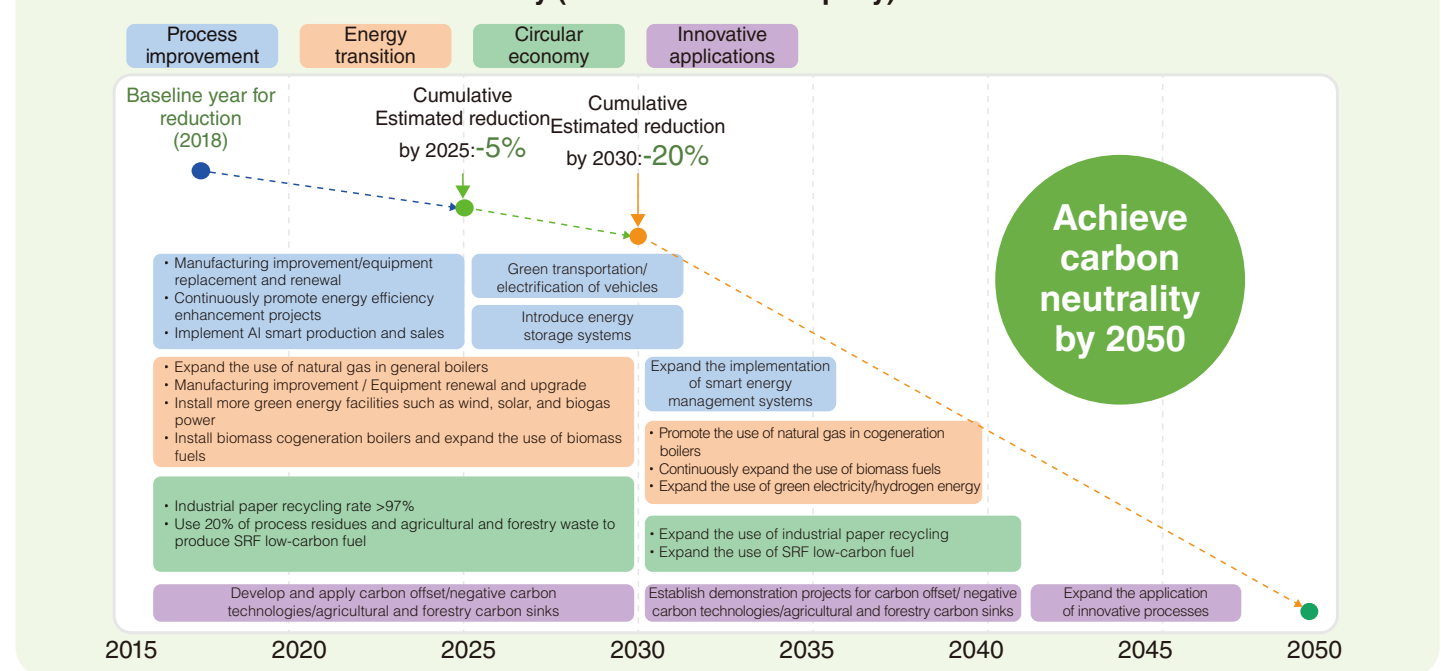
From Climate to Nature: Shaping Forward-looking Sustainable Low-carbon Strategies

By completing the CDP Climate Change Questionnaire since 2022, CLC has disclosed climate information and enhanced sustainability resilience. In the 2023~2024 Year evaluation, it reached Management Level and, in 2024, was included in the Supplier Engagement Assessment (SEA) A List. The company continues to strengthen carbon management, promote low-carbon development, and implement climate adaptation strategies to accelerate the global sustainability transition. In the same year, CLC became the first TNFD Early Adopters in Taiwan's paper industry. Under the TNFD frameworks, the company assessed the dependence and impact of its business activities on natural resources and, together with industry, government, and academia, launched research projects on nature and biodiversity at its sites, establishing a foundation for localized natural science research.

Advancing the Low-carbon Smart Paper transformation, CLC leverages digitalization to expand green production and sales, while integrating product, energy, and water circularity with agricultural and forestry cycles to enhance the regeneration of plant fibers, bioactive materials, and biofuels, thereby establishing the 3R PLUS circular economy blueprint. Digital carbon management has been implemented, with four scientific carbon-reduction pathways defined: improving energy efficiency, developing renewable energy, advancing circular low-carbon fuels, and innovating carbon-negative technologies. CLC participates in national carbon reduction programs, including the Tayuan Paper Mill's involvement in the Industrial Development Administration's Industrial Low-carbon Transition Program. Through academic collaboration, it integrates R&D and cross-industry expertise to research negative emission technologies such as carbon fixation and carbon sequestration, and promotes natural carbon sink development to address climate change.

To ensure the implementation of carbon reduction actions, CLC has adopted a top-down strategy, integrating GHG emission reduction and energy resource efficiency into operational performance indicators. An annual carbon reduction competition encourages innovation proposals and recognizes achievements. In 2024, the Taiwan Parent Company's GHG emissions decreased by 9.38% compared to the base year, achieving short-term goals ahead of schedule.

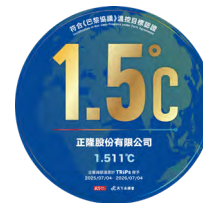
CLC 2050 Net Zero Transition Pathway (Taiwan Parent Company)



Climate Risk and Opportunity Governance

Climate governance at CLC is led by the BoD, with the sustainability committee and risk management committee responsible for managing climate-related risks and opportunities. The Climate Change and Circular Economy Office, under the sustainability committee and led by the President, coordinates climate risk mitigation, adaptation, and Low-carbon Transition actions. This office operates within the company's risk management and business unit management systems, executes risk management decisions, and coordinates cross-departmental risk management. Climate-related risks and opportunities are regularly reported to the BoD to ensure a top-down supervisory mechanism.

Aligned with the Paris Agreement target of limiting global temperature rise to 1.5°C by 2100, CLC has, for three consecutive years, been recognized as a top performer in the Commonwealth Magazine Corporate Carbon Reduction Thermometer. In 2022, Commonwealth Magazine launched the Corporate Carbon Reduction Thermometer Platform (TRIPs), applying international standards and model verification to systematically collect and assess the carbon reduction commitments and results of Taiwanese companies against the 1.5°C target. In 2024, data from 1,200 companies were collected. The June 2025 report determined CLC's carbon reduction temperature at 1.511°C, ranking the company among 405 companies with high performance.



Climate Risk and Opportunity Strategy

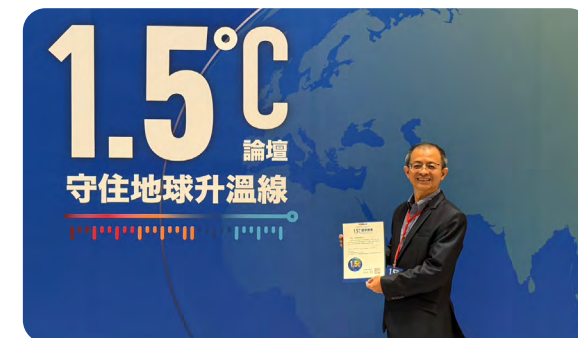
Through annual third-party verified GHG inventories, CLC assesses Carbon Reduction performance and implements climate change mitigation and adaptation in line with international initiatives.

Focusing on energy management, CLC addresses Scope 1 direct emissions and Scope 2 indirect emissions from electricity use. The company has obtained both wind power and solar photovoltaic renewable energy certificates, implemented AI management, and integrated a digital inspection system to enhance green production efficiency. Notably, CLC was the first paper company in Taiwan to adopt intelligent production and sales.

To accelerate net-zero transformation, CLC has established strategies and response plans for major climate risks and opportunities, defining 4 scientific carbon-reduction pathways: improving energy efficiency, expanding renewable energy, advancing circular low-carbon fuel, and innovating carbon-negative technologies. Through the S.M.A.R.T. Low-carbon Paper Strategy, CLC is building 3R PLUS resource circulation, developing a circular low-carbon biomass material ecosystem, focusing on paper-based Nature Sustainability solutions, and expanding low-carbon product opportunities.

To advance low-carbon transition and conduct financial risk assessments and stress tests, CLC used historical costs from energy-saving and carbon reduction projects as the reference for internal carbon pricing. In 2024, Tayuan Paper Mill was designated as the first demonstration site, referencing international carbon pricing trends, global reports, national carbon fee rates, and industry benchmarks to review carbon reduction strategies and systematically assess the overall benefits of its carbon reduction investment portfolio. CLC established a standardized internal carbon pricing assessment framework, extending it to all domestic and overseas sites to evaluate the effectiveness of energy-saving and carbon reduction projects. Each mill or business unit calculates carbon costs in management reports to inform capital investment strategies and major decisions.

In addition, CLC partnered with National Chung Hsing University to establish Asia's 1st Circular Economy Research Institute, advancing circular reuse of agricultural and forestry surplus materials, the 3R PLUS Total-cycle carbon reduction manufacturing chain, and a circular low-carbon biomass resource ecosystem. In 2023, CLC and National Central University conducted a potential assessment and business model study for the Tayuan carbon sequestration pilot site, establishing the nation's 1st Carbon Capture, Utilization, and Storage (CCUS) model for carbon dioxide capture, reuse, and geological storage, supporting progress toward 2050 carbon neutrality goals.



CLC Tayuan Paper Mill completed ICP internal carbon pricing assessment and extended implementation across the Group

Since 2015, CLC has implemented the ISO 50001 energy management system and promoted process, equipment, and energy improvement projects. To advance Low-carbon Transition and conduct financial risk assessments and stress tests, CLC used historical cost data from reduce carbon emissions projects as a reference for Internal Carbon Pricing (ICP). In January 2024, CLC launched the ICP implementation program, designating Tayuan Paper Mill as the 1st demonstration site. Following the 4 ICP steps, CLC evaluated price ranges, incentive mechanisms, and internal management systems to accurately quantify carbon reduction costs.

- Step 1** Carbon Reduction Goals and Internal Alignment
- Step 2** Pricing and Mechanism Design
- Step 3** Testing and Promotion
- Step 4** Ongoing Review and Adjustment



Climate Risk and Opportunity Management

To manage climate change risks, CLC follows the TCFD framework, conducts cross-department identification of climate-related risks and opportunities, quantifies financial impacts, and develops response strategies. A total of 27 climate change risk and opportunity items have been identified, covering all operational sites in Taiwan, including all mills/plants.

Climate Risk and Opportunity Management Procedures



Climate Risk and Opportunity Scenarios

CLC assessed transition risks and opportunities using the national net-zero emissions pathway. Physical risks and opportunities were evaluated with TCCIP data and the IPCC Sixth Assessment Report's SSP5-8.5 scenario. The TCFD risk classification framework was applied to identify transition and physical risks and opportunities, considering current and emerging climate-related regulations. Scenario risk factors were quantified for financial impact and likelihood based on established mitigation and adaptation capacities. Analysis showed that extreme climate events and long-term changes resulted in financial impacts of less than 0.1% of revenue.

Note: For climate-related disclosures of listed and OTC companies, including climate change risks, opportunities, and response measures, please refer to [Annual Report 2024 P40~P42](#)

Major Climate Change Risks and Opportunities Assessment Results

CLC assessed short-term (1~3 years), medium-term (3~5 years), and long-term (5~10 years) risk exposures based on likelihood and financial impact, **identifying 6 major transition risks, 2 physical risks, and 4 climate-related opportunities with corresponding financial impacts**. Targeted strategies were developed to strengthen risk management and operational resilience. TCFD assessments continue to cover domestic and overseas operations to quantify climate-related risks, opportunities, and financial impacts, supporting carbon-reduction pathways, setting short-, medium-, and long-term goals, and accelerating low-carbon development and climate adaptation strategies.

Major Climate Change Risks and Opportunities Matrix



Note: short term (1~3 years), medium term (3~5 years), and long-term (5~10 years)

Transition Risks

6

- T1 Domestic and International GHG Emission Pricing
- T2 Regulations and requirements for the development of renewable energy
- T3 Energy efficiency and energy structure transformation response
- T4 Tightened and total quantity control of air pollution and quality
- T5 Waste-related regulations and requirements
- T6 Water resource-related regulations and requirements

Physical Risks

2

- P1 Increased severity of flooding due to extreme weather
- P2 Increased frequency of extreme heat due to climate change

Opportunities

4

- O1 Promote low-carbon production and low-carbon energy transition
- O2 Layout circular economy green operations
- O3 Enter new and emerging markets to increase revenue
- O4 Obtain relevant environmental labels for products to drive green business opportunities

Major Climate Risk and Opportunity Strategies and Key Performance Indicators

CLC is advancing the Low-carbon Smart Paper transformation by leveraging digitalization to expand green production and sales, enhance energy efficiency, and reduce carbon emissions. The company implements four scientific carbon-reduction pathways: improving energy efficiency, developing renewable energy, advancing circular low-carbon fuels, and innovating carbon-negative technologies. CLC promotes circular reuse of agricultural and forestry residues and pursues the 3R PLUS Total Resource blueprint for carbon reduction. Under its risk management framework, CLC manages climate risks and monitors environmental performance through indicators such as greenhouse gas reduction, unit product energy efficiency, waste-to-resources ratio, alternative fuel ratio, recovered paper utilization rate for industrial paper, unit product water consumption, and air quality management, with regular progress tracking and review.

Note: Identification result—Taiwan Parent Company.

Major Climate Risks

Financial Impacts, Indicators, and Goals

+ indicates increase; - indicates decrease

Category	Risk Issues	Key Strategies	Financial Impacts (+ indicates increase; - indicates decrease)	Corresponding Indicator	2024 Results	2025 Goals	2030 Goals
Transition Risk	Domestic and International GHG Emissions Pricing	- Short-term: Pursue preferential carbon fees for autonomous carbon reduction - Mid-term : Strengthen Carbon Reduction management and disclose group-wide data - Long-term: Strengthen low-carbon technologies and energy transition to achieve science-based reduction goals	+ Operating Costs - Revenue / Output Value	Greenhouse Gas Reduction (Base Year:2018)	-9.38%	-5%	-20%
	Renewable Energy Development Regulations and Requirements	- Short-term: Assess installation of renewable energy equipment and apply for renewable energy certificates for existing generation facilities - Mid-term : Install renewable energy equipment and apply for renewable energy certificates - Long-term: Certificates are used for carbon neutrality or trading in line with group strategy	+ Capital Expenditures	Unit Product Energy Consumption (Base Year:2019) Renewable Energy Capacity	-1.91%	-5%	-10%
	Energy Efficiency and Energy Structure Transition	- Short-term: Increase the proportion of circular low-carbon fuel substitution - Mid-to-long term: Invest in low-carbon biomass fuel boilers	- Operating Costs + Capital Expenditures	Alternative Fuel Ratio	19.58%	20%	25%
	Stricter Air Quality Standards and Total Emissions Control	- Short-term: Implement stricter requirements for pollution control facilities - Mid-to-long term: Assess transition to clean fuels	+ Operating Costs - Revenue / Output Value	Air Quality Management (Base Year:2019) NO _x	-48%	-18%	-33%
	Waste Management Regulations and Requirements	- Short-term: Guide recyclers in source improvement and implement Waste Food Paper Container sorting and reuse - Mid-term : Introduce technological testing to improve recovered paper quality	+ Operating Costs	Industrial Paper Recovered Paper Utilization Rate	97.7%	> 97%	> 97%
	Water Resource Regulations and Requirements	- Short-term: Apply for recycled water use - Mid-term: Enhance effluent recycling and increase reclaimed water use	+ Operating Costs	Industrial Paper Unit Product Water Consumption (Base Year:2019)	-20.7%	-5%	-10%
Physical Risk	Increased severity of flooding from extreme weather	- Short-term: Strengthen flood disaster response measures - Mid-term : Utilize digitalization tools to manage raw material demand and procurement efficiently - Long-term: Diversify material procurement by sourcing alternative slurry during the rainy season	+ Operating Costs + Capital Expenditures	Industrial Paper Recovered Paper Utilization Rate	97.7%	> 97%	> 97%
	Increased Frequency of Extreme Heat Events	- Short-term: Enhance equipment efficiency, reduce high-temperature losses, and utilize Digitalization platforms for simulation and precise procurement management - Mid-term : Diversify Material sources during the snow season to mitigate procurement risk	+ Operating Costs - Revenue / Output Value	Industrial Paper Recovered Paper Utilization Rate	97.7%	> 97%	> 97%

Note 1: Taiwan Parent Company.

Note 2: The higher alternative fuel usage in 2024 was primarily due to stable boiler operation at ChuPei Paper Mill.

Major Climate Opportunities

Financial Impacts, Indicators, and Goals

+ indicates increase; - indicates decrease

Opportunity	Key Strategies	Financial Impacts	Corresponding Indicator	2024 Results	2025 goals	2030 goals
Advancing Low-carbon Production and Energy Transition	- Short-term: Invest in low-carbon technologies and equipment to reduce operating costs and carbon fees - Med-term: Expand the use of low-carbon fuels	- Operating Costs + Asset Value	Greenhouse Gas Reduction (Base Year:2018)	-9.38%	-5%	-20%
Advancing Circular Economy Operations	Short-term: Expand domestic and international circular economy sites, increase recovered paper utilization capacity, and capture circular economy opportunities	+ Operating Costs + Revenue	Waste-to-Resources Ratio	97.8%	> 97%	> 97%
Expand into new and emerging markets to increase revenue	Short-term: Enhancing Waste Food Paper Container Recovery Capacity for Low-carbon Transition	+ Revenue	Recovered Paper Utilization Rate Industrial Paper Recovered Paper Utilization Rate	95.1% 97.7%	> 92% > 97%	> 92% > 97%
Green Mark Certification Drives Green Business Development	Short-term: Provide low-carbon products and services, expand the eco household paper product line, and increase the number of green product certifications	+ Revenue	Recovered Paper Utilization Rate Industrial Paper Recovered Paper Utilization Rate	95.1% 97.7%	> 92% > 97%	> 92% > 97%

Note: Taiwan Parent Company.

GHG Management

2050 Goal	Carbon Neutrality
2030 Goal	GHG Emissions -20% (Base Year 2018)

GHG Emissions Decreased by 9.38% from the base year, Achieving Short-term Goals Ahead of Schedule

To align with national GHG reduction goals, CLC's Tayuan Paper Mill participated in the Industrial Development Bureau's pilot project in 2004. In 2005, CLC obtained the world's 1st ISO 14064-1 GHG inventory certificate. From 2006, CLC expanded the inventory mechanism to all mills in Taiwan and implemented company-wide emission reduction management. In 2008, CLC joined the Industrial Development Bureau's Voluntary Carbon Reduction Standard program and obtained Taiwan's 1st international VCS carbon credit certification. In 2016, CLC developed the TMS-II.013 Steam System Optimization methodology for the pulp and paper industry. In 2020, CLC registered the No. 1 Paper Machine Steam System Optimization Offset Project (Project Number: B00196) under the Ministry of Environment (Taiwan) Greenhouse Gas Offset Project, and will obtain a carbon credit of 64,708 tCO₂e in July 2025. In 2022, Vietnam Binh Duong Paper Mill passed BSI verification and received the 1st ISO 14064-1 greenhouse gas inventory certificate in the Vietnamese pulp and paper industry, with the inventory management system extended to all domestic and overseas mills.

CLC Parent Company GHG Emissions Summary Table (Scope 1)

GHG Types	2022	2023	2024
CO ₂	1,071,331	1,108,693	1,067,281
Methane (CH ₄)	12,123	10,800	10,396
Nitrous oxide (N ₂ O)	4,812	4,744	4,566
Hydrofluorocarbons (HFCs)	309	306	295
Perfluorocarbons (PFCs)	0	0	0
Sulfur hexafluoride (SF ₆)	0	0	0
Nitrogen trifluoride (NF ₃)	0	0	0
Total	1,088,575	1,124,543	1,082,539

Note: Taiwan Parent Company.

CLC set Scope 1 and Scope 2 GHG reduction goals for the parent company, using 2018 as the base year: 5% reduction by 2025, 20% reduction by 2030, and carbon neutrality by 2050. The Sustainability Committee and BoD oversee progress and planning quarterly, with annual evaluation of results.

Low-carbon transition is integrated into operational strategy, centered on circular economy, low-carbon green energy, and smart innovation. The S.M.A.R.T. low-carbon paper strategy includes Subtraction is Addition, Waste to Material, AI leads in Digital Transformation, Recycling drivers Circulation, and Technologies innovate Manufacture. Four scientific carbon-reduction pathways are implemented: improving energy efficiency, developing renewable energy, advancing circular low-carbon fuels, and innovating carbon-negative technologies. Tayuan Paper Mill participated in the Industrial Development Administration, Ministry of Economic Affairs' Industrial Low-carbon Transition Program.

Continuously reducing product carbon emissions intensity

With the full-scale operation of the ChuPei Paper Mill's biomass cogeneration system, product carbon emissions intensity was significantly reduced, and the company-wide alternative fuel ratio reached 19.58%. In 2024, CLC's Taiwan Parent Company reported GHG Emission (Scope 1 and 2) of 1,303,889.8472 tCO₂e, a decrease of 70,056.3050 tCO₂e (5.10% YoY) and a 9.38% reduction from the 2018 baseline, achieving the 2025 goals ahead of schedule. Carbon emissions intensity per revenue declined from 47.1727 tCO₂e per NTD 1,000,000 in 2023 to 42.4388 tCO₂e per NTD 1,000,000 in 2024, a 10.03% reduction.

Note: 2023 revenue was calculated based on NTD 29,126 million; 2024 revenue was calculated based on NTD 30,724 million.

In 2024, greenhouse gas emission intensity decreased across business units: industrial paper was 0.836 tCO₂e/tonne of paper (-3.38% YoY), household products and paperboard were 0.919 tCO₂e/tonne of paper (-31.17% YoY), and Corrugated Container was 0.052 tCO₂e/thousand m² (+0.93% YoY).

CLC's 2024 greenhouse gas inventory is conducted in accordance with ISO 14064-1:2018 and verified by a third party under ISO 14064-3:2019. Category 1 and Category 2 receive reasonable assurance, while Category 3 to Category 6 receive limited assurance. All categories have unqualified conclusions. Completion is scheduled for August 2025, with full assurance information to be disclosed by [CLC Website - Download](#) December 2025.

In accordance with the Sustainable Development Roadmap for Listed Companies, all 37 subsidiaries included in CLC's consolidated financial statements completed GHG Emission inventories in 2024. Subsidiaries' GHG Emission (Scope 1 and 2) totaled 690,659.2733 tonnes CO₂e in 2024, with third-party assurance. CLC will continue to expand third-party assurance of GHG Emission inventories for overseas subsidiaries and targets completion for all subsidiaries by 2026.

CLC received multiple low-carbon sustainable transformation awards for its domestic and overseas plants. CLC participated in over 10 low-carbon sustainability forums with industry, government, and academia, and opened its plants for visits to facilitate stakeholder engagement and positive impact.

CLC Tayuan Paper Mill optimized carbon reduction technologies in the pressurized water section, achieving an annual reduction of 10,000 tCO₂e

CLC participated in the Industrial Low-carbon Transition Program of the Industrial Development Administration, Ministry of Economic Affairs. Operational simulation and equipment upgrades in the press section dewatering process increased dewatering efficiency by 50%, enabling annual Carbon Reduction of nearly 10,000 tonnes. On October 22, 2024, CLC presented the Tayuan Paper Mill case at the results sharing conference, sharing Low-carbon Transition practices with 9 companies.



For more details, please refer to the CLC website [Corporate News](#)

CLC Parent Company and Consolidated Subsidiaries GHG Inventory

Parent Company

Unit: tCO₂e

	2022	Share	2023	Share	2024	Share
Scope 1	1,088,574.8375	78.8%	1,133,705.3688	82.5%	1,082,538.8406	83.0%
Scope 2 – Tayuan Cogeneration	159,103.3622	11.5%	127,433.0816	9.3%	122,388.8856	9.4%
Scope 2 – Taipower	133,535.6470	9.7%	112,807.7017	8.2%	98,962.1209	7.6%
Total (Scope 1~2)	1,381,213.8467	100%	1,373,946.1521	100%	1,303,889.8472	100%
Carbon Reduction Amount	-103,929.6092	-	-7,267.6946	-	-70,056.3050	-
Carbon Reduction (%)	-7.0%	-	-0.5%	-	-5.1%	-
Scope 3	402,944.1414	-	396,689.8700	-	376,792.7032	-
Total (Scopes 1~3)	1,784,157.9881	-	1,770,636.0221	-	1,680,682.5504	-
ISO 14064-1 GHG External Verification	Verification Passed (Scopes 1~3)	-	Verification Passed (Scopes 1~3)	-	Assurance to be completed by August 2025 (Scopes 1~3)	-
Biogenic GHG	49,850.7173	-	65,212.9992	-	69,671.4120	-

Note: In 2024, CLC followed ISO 14064-1:2018 to identify 2023 Scope 3 Category 3~6 indirect GHG emission, including upstream transportation and distribution, purchased goods, solid and liquid waste treatment, and downstream leased assets. Total emissions were 396,689.8700 tCO₂e and were third-party certified. The estimated Scope 3 GHG emission for 2024 is 376,792.7032 tCO₂e

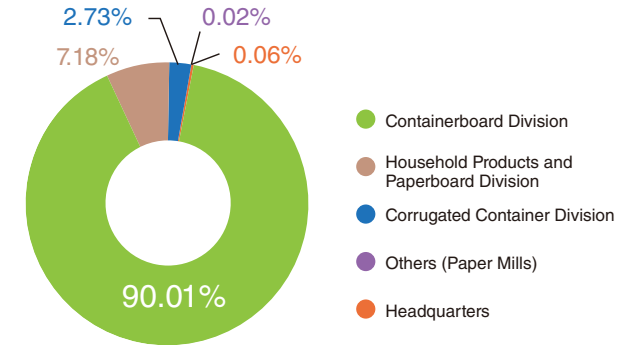
Consolidated Subsidiaries

Unit: tCO₂e

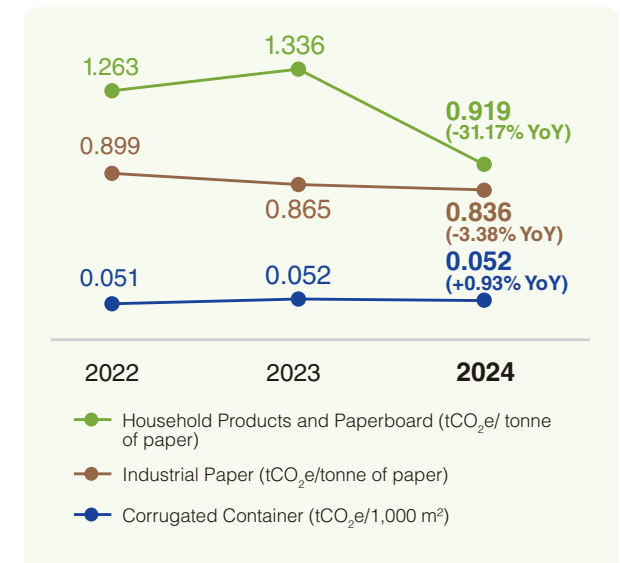
	2023	Share	2024	Share
Scope 1	585,384.7062	91.5%	634,739.9957	91.9%
Scope 2 Vietnam/China Electricity	54,196.5521	8.5%	55,919.2776	8.1%
Total (Scope 1~Scope 2)	639,581.2583	100%	690,659.2733	100%
Scope 3	21,183.6913	-	35,014.8500	-
Total (Scopes 1~3)	660,764.9496	-	725,674.1233	-
ISO 14064-1 GHG External Verification	Completed 4	-	Ongoing	-

Note: In 2023 and 2024, 33 and 37 subsidiaries under the consolidated financial statements completed GHG inventories, respectively. In 2023, 4 subsidiaries completed third-party assurance. In 2024, external verification is underway, with results to be uploaded to the website by December 2025. The goal is to achieve full assurance of the GHG inventory by 2026.

Business Unit GHG Emissions Share (Taiwan Parent Company)



Business Division – GHG Emission Intensity (Taiwan area)



Product Carbon Footprint Management for Societal Carbon Reduction

Industry First: 6 Household Paper Products Awarded Carbon Footprint Label; Expanding to 12 Items by 2025

CLC advanced Low-carbon Transition, becoming the only company in the industry with 6 carbon footprint labels for household paper products, with plans to expand to 12 items by 2025 to increase green consumer options and support societal decarbonization. In 2024, the ChuPei Paper Mill's biomass cogeneration system was fully operational, reducing carbon emissions intensity for household paper products and paperboard by 31.17% and raising alternative fuel usage to 47.6%. Over 90% of products used recovered paper, remanufactured food paper containers, and scraps; the remaining 10% used FSC™-certified pulp. Multiple products received the Ministry of Environment (Taiwan) Low-carbon Product Award.

CLC applies scientific methods to verify carbon reduction results, conducts routine carbon management for major products, and advances carbon reduction initiatives aligned with the national net-zero transition strategy, Green Lifestyle, to increase its impact on a sustainable future.



Product Carbon Footprint and Environmental Awards

- 2017: Dandelion Paper Towel – Excellent Award
- 2019: Dandelion Pull-out Toilet Tissue – Excellent Award
- 2020: Andante Pull-out Toilet Tissue – Highest Honor Special Excellence Award, Carbon Footprint Coefficient Contribution Award
- 2022: Ministry of Environment (Taiwan) - Resource Circulation Prospective Certification

Outstanding Unit for Green Procurement: Ministry of Environment (Taiwan), Hsinchu County Environmental Protection Bureau

- 2021~2024: Received awards for 4 consecutive years

Year/Items						
	Dandelion Hand Towel 200 sheets	Dandelion Toilet Tissue 100 sheets	Andante Toilet Tissue 110 sheets 200mm x 195mm	Andante Toilet Tissue 130 sheets (200 mm × 195 mm)	Andante Toilet Tissue 100 sheets (200 mm × 180 mm)	Andante Toilet Tissue 110 sheets (200 mm × 180 mm)
2012	750	260	340	-	-	-
2015	750 (Carbon Label)	320	380	-	-	-
2018	750 (Carbon Label)	280 (Carbon Label)	400 (Carbon Label)	-	-	-
Since 2022	750 (Carbon Label)	300 (Carbon Label)	400 (Carbon Label)	500 (Carbon Label)	360 (Carbon Label)	380 (Carbon Label)

Carbon Footprint:

* Note: Carbon footprint unit: gCO₂e/pack

* Note: Carbon label emissions are calculated using the emission factors of the reporting year

Note:

* Regular carbon footprint inventory was conducted, with the most recent year in 2022. Certificate validity: August 21, 2022 to August 20, 2027. The validity period was extended from 3 years to 5 years starting March 16, 2022.

* The carbon footprint inventory calculates total greenhouse gas emissions, converted to carbon dioxide, across all stages of the Product Lifecycle, including material acquisition, transportation, production, logistics, sales, consumer use, and final recycling or disposal. Annual carbon emissions may vary due to changes in production processes.

* Please refer to relevant environmental management certificates [CLC Website – Download](#)

Environmental Management and Environmental Protection Expenditures

CLC categorized environmental expenditures and investments, implemented an environmental accounting system in 2001, and invested NTD 1.23 billion in environmental initiatives in 2024. CLC will continue to invest in enhancing environmental performance.

Environmental Investments and Expenditures

	2024	2025
Taiwan	NTD 980 million Proportion of Expenditures by Item Air pollution control fee 16% Water pollution control fee 40% Waste disposal fee 28% 16% Allocated to Prevention and Environmental Management Investments	NTD 860 million (estimated) Main Items Installed New VOCs Control Equipment Desulfurization tower for air pollution control Wet Electrostatic Precipitator Baghouse Dust Collector Bottom ash system maintenance
Vietnam	NTD 250 million	NTD 2.087 billion (estimated) Main Items Slag furnace operation and maintenance costs Air Pollution Control Fee Expansion of G3 Power Boiler and No. 2 Incinerator Waste disposal fee Plant Noise Reduction Project Water Pollution Control and Discharge Fees Expansion of effluent sand filtration system Phase II wastewater system expansion: 10,000 CMD Water pollution control fees

Note: Environmental protection investment and expenditure comprise the previous year's air pollution control fees, water pollution control fees, and waste disposal fees, plus the current year's prevention and environmental management investment.

Unit : NTD 10,000

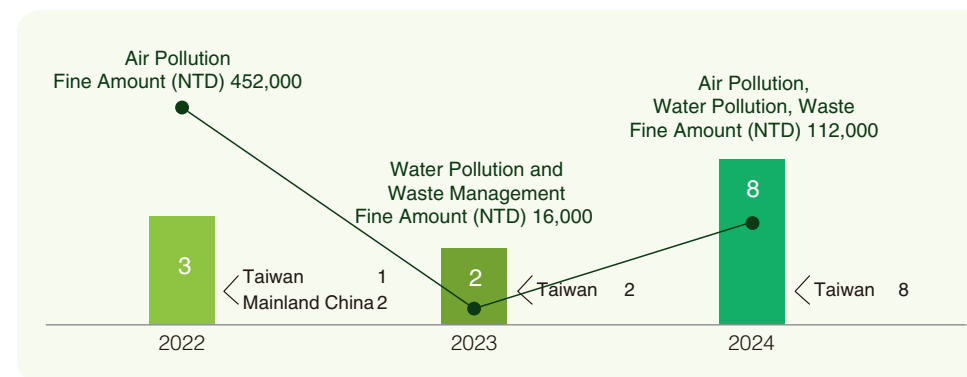
Category	2022	2023	2024
Air Pollution Control Fees	19,493	24,734	15,862
Water Pollution Control Fees	36,683	34,158	39,398
Waste Disposal Fee	34,683	28,372	26,890

Category	2023	2024	2025
Prevention and Environmental Management Investment	10,083	8,488	15,940

Note: Taiwan area.

Environmental Penalties

CLC aims for zero major violations and continues to invest in air, water, waste, and odor pollution control, implementing management mechanisms to ensure regulatory compliance. In 2024, CLC recorded no major fines but identified 8 administrative oversights across 23 plants in the Taiwan area, including 4 air pollution, 2 water pollution, and 2 waste management cases, with total fines of NTD 112,000. All deficiencies have been corrected, personnel training has been enhanced, and preventive mechanisms have been established. CLC will continue to advance digitalization, strengthen staff training, optimize SOPs, and increase R&D investment in advanced equipment to improve environmental management and uphold its environmental commitments.



2024 Environmental Regulatory Compliance Improvement Measures

CLC promptly initiated corrective actions for deficiencies identified in the implementation of environmental regulations in 2024 to ensure compliance and strengthen preventive measures to avoid recurrence

- ✓ The Vehicle Emissions Inspection Reminder Mechanism was established to ensure all vehicles undergo timely inspections and remain compliant.
- ✓ The water permit was promptly revised and submitted for approval to ensure on-site processes complied with regulatory requirements.
- ✓ Waste clearance certificates for demolition contracting projects have been submitted for review. Future contracts will specify requirements to ensure all construction activities are included and processed in compliance with regulations.
- ✓ A process pipeline rupture caused a brief wastewater overflow. Emergency response procedures were immediately activated to collect and treat the overflow. A high-risk leakage point inspection mechanism was established to strengthen daily management.



4.2 Energy Management

Material Issue

energy management

Strategy

Company-wide participation to improve energy efficiency, implement carbon reduction, and advance green production. Actions include supporting renewable energy development, increasing alternative fuel utilization, and reducing dependence on fossil fuels.



2030

2025

2024

Goals

Goals

Goals and Results

- Taiwan Parent Company targets a 10% reduction in unit product energy consumption (base year: 2019)

- Alternative fuel ratio : 25% (Taiwan Parent Company) ; > 15% (Vietnam Binh Duong Paper Mill)

- Continue to expand renewable energy facilities at suitable sites

- Taiwan Parent Company targets a 5% reduction in unit product energy consumption (base year: 2019)

- Alternative fuel ratio : 20% (Taiwan Parent Company) ; > 15% (Vietnam Binh Duong Paper Mill)

- Continue to expand renewable energy facilities at suitable sites
 - ➔ Continue to optimize anaerobic wastewater systems and expand biogas-to-green electricity applications to increase Carbon Reduction

- Plan to install biomass boiler at Houli Paper Mill

- Continue expanding ISO 50001 energy management system implementation in overseas subsidiaries

- Achieve a 5% reduction in unit product energy consumption at Taiwan Parent Company (base year: 2019)
 - ➔ Actual reduction reached 1.91%, falling short of the goal mainly due to market demand and equipment trial runs. Ongoing equipment and process optimization is underway to further reduce energy consumption
 - ➔ The containerboard division reduced energy intensity by 0.72%

- Reach 15% alternative fuel energy ratio at the Taiwan Parent Company
 - ➔ The alternative fuel ratio reached 19.58% (+3.86% YoY) for the Taiwan Parent Company; Vietnam Binh Duong Paper Mill achieved 18.44%

- Renewable energy equipment at Taiwan sites met the regulatory requirement for large electricity users, with installed renewable energy capacity reaching 10% of contracted capacity
- To start operation of Taiwan's largest high-efficiency Biomass CFB Boiler System at ChuPei Paper Mill
 - ➔ 2024 Full-scale operations underway

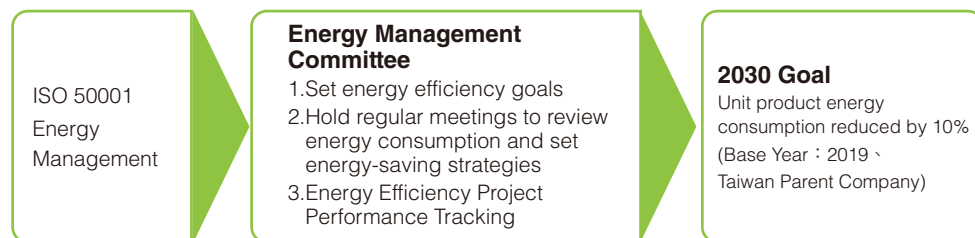
- A total of 11,927 wind power renewable energy certificates and 2,160 solar renewable energy certificates were obtained, totaling 14,087 certificates

- Overseas subsidiaries initiated the implementation of the ISO 50001 energy management system
 - ➔ Vietnam Binh Duong Plant and Bac Giang Plant were certified

Digitalization of ISO 50001 Smart Management to Enhance Green Energy Efficiency

CLC implemented the ISO 50001 energy management system across all mills/plants, established energy management mechanisms, and regularly reviewed energy efficiency and energy-saving targets. To meet the annual 1% energy-saving commitment, each mill/plant developed specific energy-saving plans, including high-efficiency cogeneration systems, renewable energy installations, and equipment optimization. Smart systems were introduced to enhance carbon reduction performance and support the transition to a new low-carbon & green energy paper company.

Energy Management



CLC implemented the ISO 50001 energy management system in the Paper Division in 2013 and extended it to all Taiwan sites in 2015. A cross-departmental Energy Management Committee was established to set energy-saving targets, regularly review energy consumption, monitor project performance, share energy-saving technologies, and recognize achievements. The committee encouraged employees to identify energy-saving opportunities and improve resource efficiency. In 2022, CLC began implementing the ISO 50001 energy management system at overseas sites. In 2024, the Vietnam Binh Duong Plant and Bac Giang Plant obtained certification. CLC will continue to expand the system to overseas sites, conduct annual verifications, and advance intelligent energy management.

Carbon Reduction Initiatives

A total of 537 energy-saving projects have been implemented in 2024 and continuously improving energy efficiency

2030 Goal	Reduce Taiwan Parent Company unit product energy consumption by 10% (base year: 2019)
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CLC enhanced energy efficiency by utilizing ISO 50001 energy management, intelligent controls, and cross-plant benchmarking to optimize paper machine operations. In 2024, CLC invested NTD 118.23 million in 57 energy-saving projects, including process improvements, equipment upgrades, and energy management. These initiatives saved 22,072,007 kWh of electricity (79,458.34 GJ), reduced CO₂e emissions by 10,904 tonnes, and lowered energy costs by NTD 28.49 million. From 2013 to 2024, **CLC completed 537 energy-saving projects, achieving cumulative electricity savings of 127,970,000 kWh and carbon reduction of 88,241 tonnes CO₂e.**

In 2024, the energy emission intensity of the containerboard division decreased by 0.72% to 8.79 GJ/tonne of paper. The Household Products & Paperboard Division and Corrugated Container Division maintained energy emission intensities at 16.59 GJ/ tonne of paper and 0.61 GJ/ thousand m², respectively. Unit product energy consumption decreased by 1.91% compared to the 2019 baseline, falling short of the 5% reduction goal due to increased energy use from market demand and equipment commissioning. CLC will continue to optimize equipment and processes to reduce energy consumption.

Note: The energy improvement rate for each plant, compared to the base year, was weighted by each plant's share of total energy consumption (in GJ). The company-wide improvement rate was calculated as the sum of each plant's improvement rate multiplied by its share, and then converted to unit product energy consumption. A positive improvement rate indicates a decrease in unit product energy consumption; a negative rate indicates an increase. All energy values were standardized to GJ.

2024 Energy Conservation and Carbon Reduction Project Performance

Category	Energy Savings (kWh/as)	Carbon Reduction Amount (tonnes CO ₂ e)	Process Optimization 22 cases Equipment Upgrades 35 cases	
			Cost Savings (NTD 10,000)	Investment Amount (NTD 10,000)
Process Optimiza-tion	10,612,483	5,243	270	22
Equipment Up-grades	11,459,524	5,661	2,580	11,818
Total	22,072,007	10,904	2,849	11,840

Performance of Carbon Reduction Projects in the Past 3 Years (2022~2024)

	2022	2023	2024	Cumulative
Number of Cases	49	44	57	150
Energy Savings (kWh/as)	10,319,775	13,889,310	22,072,007	46,281,092
Carbon Reduction Amount (tonnes CO₂e)	6,639	8,343	10,904	25,886
Cost Savings (NTD 10,000)	3,388	7,204	2,849	13,441
Investment Amount (NTD 10,000)	2,767	9,143	11,840	23,746

Note: Taiwan Parent Company.



2024 Energy Consumption Overview

Unit : GJ

	Containerboard Division			Corrugated Container Division			Household Products and Paperboard Division			Vietnam Binh Duong Paper Mill		
	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
On-site Renewable Energy	1,106	5,681	5,838	0	0	0	9,513	0	0	0	0	0
Coal	9,264,564	9,825,822	9,449,230	0	0	0	641,943	605,779	451,498	2,212,211	5,835,481	5,316,599
Heavy Oil/Diesel	24,509	21,743	21,958	0	0	0	0	0	0	2,436	4,393	2,418
Natural Gas	0	0	0	312,382	296,968	298,455	95,894	93,955	85,434	26,297	90,857	0
Pulp and Paper Sludge	32,548	33,365	32,018	0	0	0	26,958	21,608	24,002	11,648	14,734	90,314
SRF (RDF 5)	451,185	564,171	481,536	0	0	0	0	96,152	55,580	10,334	10,049	64,005
SRF (RDF 3)	438,698	452,912	474,213	0	0	0	0	420,235	838,870	144,308	242,335	583,881
Waste Tires	95,574	83,163	24,628	0	0	0	0	0	0	0	0	0
Wood Chips	313,126	592,950	338,483	0	0	0	0	0	40,413	198,767	374,825	0
Biofuels	-	-	521,144	-	-	0	-	-	0	-	-	456,374
Purchased Electricity	866,107	846,328	1,031,495	120,453	116,716	123,841	445,804	363,375	194,564	125,652	146,708	137,624
Purchased Steam	258,656	254,646	51,747	0	0	0	0	0	0	0	0	0
Electricity Sales	34,097	87,167	81,234	0	0	0	0	0	0	0	0	0
Steam Sales	211,253	210,311	2,753	0	0	0	0	0	0	0	0	31,848
Total Consumption	11,500,724	12,383,301	12,348,303	432,835	413,684	422,296	1,220,112	1,601,105	1,690,361	2,731,652	6,719,381	6,619,367

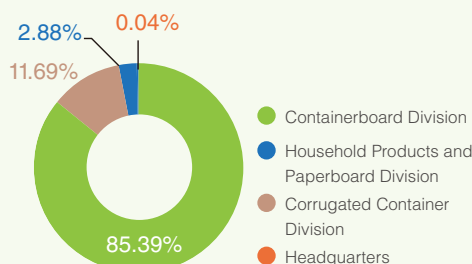
Note 1: Electricity calorific value is set at 860 kcal/kWh as announced by the Bureau of Energy; fuel calorific value is calculated as the average at each production site.

Note 2: SRF refers to solid recovered fuel. RDF refers to refuse derived fuel. RDF3 is solid waste further shredded with most non-combustible components removed, including metals, glass, and other organics. RDF5 is combustible waste compressed into cylindrical, spherical, or pellet forms.

Note 3: Taiwan Parent Company, Vietnam Binh Duong Paper Mill.

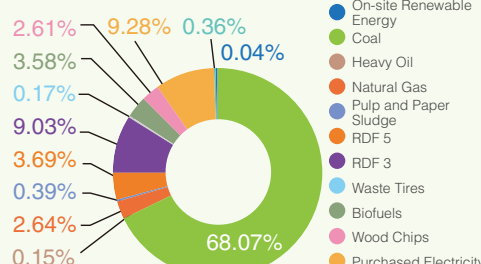
Note 4: Biomass fuels include wood pellets, cashew nut shells, pelletized rice husks, shredded street trees, and biogas.

Energy Consumption by Business Division



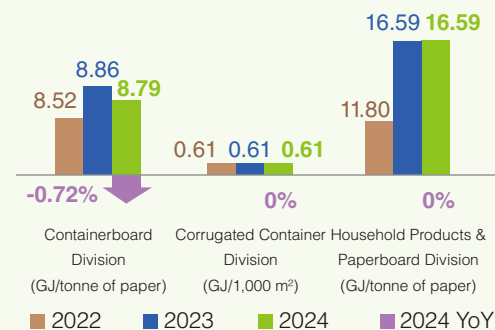
Note: Taiwan Parent Company.

Fuel Type



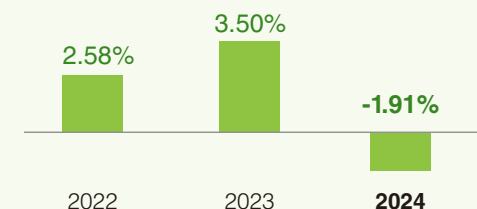
Note: Taiwan Parent Company.

Business Unit Energy Emissions Intensity



Note: Taiwan Parent Company.

Unit Product Energy Consumption – Company-wide (Base Year: 2019)



Note 1: Taiwan Parent Company.

Note 2: Higher unit product energy consumption was due to recent market demand and equipment commissioning. Ongoing equipment and process optimization will reduce energy consumption.

Accelerate Renewable Energy Development and Green Energy Opportunities

Increase Renewable Energy Capacity, Achieve Green Energy Targets Ahead of Schedule for Major Electricity Users

CLC installed wind, solar, and biogas renewable energy facilities based on each plant's geographic and production characteristics. By 2022, total renewable energy installed capacity in Taiwan reached 12,056 kW, nearly double that of 2020. In 2023, Houli Paper Mill expanded solar installations and launched a biogas project. ChuPei Paper Mill and Houli Paper Mill achieved the regulatory requirement for major electricity users ahead of schedule, reaching 10% renewable energy installed capacity before 2025 to accelerate low-carbon transition.

Sole industry holder of both wind and solar renewable energy certificates, with a total of 14,087 certificates accumulated

Since 2003, CLC has expanded renewable energy adoption, becoming the first paper company in Taiwan to obtain wind renewable energy certificates in 2017 and the only one to hold both wind and solar renewable energy certificates after acquiring solar certificates in 2023. The wind power system at ChuPei Paper Mill was damaged in 2022, limiting green energy output due to delayed repairs, but was restored in March 2025. As of the end of 2024, CLC had obtained 11,927 wind renewable energy certificates and 2,160 solar renewable energy certificates, totaling 14,087 certificates, equivalent to the annual electricity consumption of 3,913 households (based on Taipower's average monthly household electricity consumption of 300 kWh), demonstrating progress in low-carbon transition.

Waste-to-Energy: Biogas Power Generation for Sustainable Green Electricity

In 2022, CLC Tayuan Paper Mill commenced commercial operation of two 1,200 kW gas engine generators. In 2024, power generation reached approximately 11.5 million kWh, achieving a carbon reduction of 5,700 tCO₂e. Tayuan Paper Mill also installed a waste heat recovery boiler, converting generator exhaust into 6,200 tonnes of steam annually for use in paper production. CLC plans to install two 2,000 kW biogas power units at Houli Paper Mill, with estimated annual generation exceeding 10 million kWh and a carbon reduction of over 5,200 tCO₂e.

Leveraging Paper Industry Strengths to Expand Wastewater-to-energy Opportunities

CLC will evaluate participation in the Ministry of Environment (Taiwan)'s Wastewater Treatment Energy Conversion project, leveraging its experience and technologies in the papermaking industry. Through the 1+N model, CLC will collaborate with industry, government, and academia to promote wastewater resource utilization and low-carbon intelligent treatment, supporting energy creation and carbon reduction for sustainability.



CLC participated in the Ministry of Environment (Taiwan) [Wastewater-to-Energy Press Conference](#) (2025.2.13)

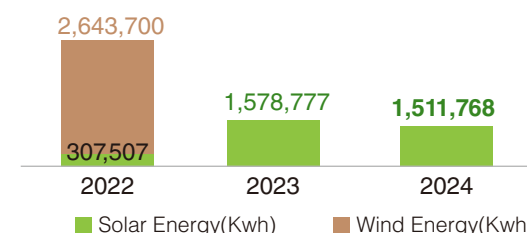


Minister of Environment (Taiwan) Chi-Ming Peng led an inspection of the CLC Tayuan Paper Mill biogas green power system on February 24, 2025

Year	Plant	Renewable Energy Equipment	Installed Capacity (kW)
2003	ChuPei Paper Mill	✓ 1st wind power installation in the pulp and paper industry; at the time, the largest wind power generator in Asia	1,750
2011	Houli Paper Mill	✓ Solar panels were installed on the roof of the Paper Machine 10 automated warehouse to reduce fa-cility temperature and lower air conditioning en-ergy consumption	493.5
2019	Taichung Port Transshipment Warehouse	✓ Solar PV panels	1,822.8
2021	Yanchao New Plant	✓ Solar PV panels	4,300
2022	Tayuan Paper Mill	✓ Biogas Power Generation: 2 Units	2,400
2022	Houli Paper Mill	✓ Rooftop Solar Panel Expansion	1,290
Under Construction	Houli Paper Mill	✓ Biogas Power Generation: 2 Units	2,000

Note: Taiwan Parent Company.

Renewable Energy Generation



Note: Taiwan Parent Company. The wind power system at ChuPei Paper Mill was damaged in 2022, resulting in reduced green energy output due to delayed maintenance.

Industry-leading Cogeneration Management and Intelligent Power-saving Demonstration

Since 1984, CLC introduced the first large-scale cogeneration system to the paper industry. In 2019, CLC implemented intelligent management for the G3 cogeneration boiler at Houli Paper Mill and expanded this to four high-efficiency Cogeneration systems at Houli and Tayuan Paper Mills. By optimizing boiler monitoring, CLC extended overhaul cycles, achieved zero unplanned failures, and improved operational and power generation efficiency, establishing a model for intelligent energy management recognized by the industry.



ChuPei Paper Mill commissioned Taiwan's largest high-efficiency biomass cogeneration system, advancing low-carbon circular green energy fuel

CLC invested in the largest high-efficiency biomass cogeneration system at ChuPei Paper Mill, with trial operation in 2023 and full-scale operation in 2024. This expanded SRF residue recovery and increased the company's alternative fuel utilization rate. The system integrated Power SCADA and PI systems to maximize electricity use and power generation efficiency, achieving significant carbon reduction.



Achieving Multi-fuel Utilization

- ✓ The only facility nationwide with 4 fuel input ports: coal, SRF, pulp and paper sludge, and biomass fuel
- ✓ High-pressure, medium-temperature biomass cogeneration system achieves optimal energy utilization through cogeneration and SRF combustion



Expanding Alternative Fuel Utilization Capacity

- ✓ SRF co-firing capability: 0%~100%
- ✓ Maximum design processing capacity: 14,000 tonnes of SRF per month



Power Generation Capacity Exceeding Regulatory Requirements

- ✓ Power generation efficiency reached 29% (regulatory standard: 25%)
- ✓ Installed generator capacity: 16,000 kW
- ✓ Annual power generation of 126 million kWh, equivalent to the annual electricity consumption of 35,200 households



Reduced Coal Consumption and Emissions to Lower Air Pollution

- ✓ Effective Dioxin Suppression: Furnace gas temperature > 850°C, gas residence time > 2 seconds
- ✓ Annual replacement of 30,064 tonnes of coal and Carbon Reduction of 33,595 tCO₂e

Accelerating Low-carbon Circular Alternative Fuel Adoption for Net Zero Transition

2030 Goal	25% Alternative Fuel Ratio (Taiwan Parent Company), 15% (Vietnam Binh Duong Paper Mill)
2024 Achievements	• The Alternative Fuel Ratio reached 19.58% (+3.86% YoY), replacing 112,673 tCO₂e for the Taiwan Parent Company • Alternative Fuel Ratio reached 18.44% at Vietnam Binh Duong Paper Mill

98% of Taiwan's energy is imported. To improve energy efficiency and reduce fossil fuel dependence, CLC develops alternative fuels by utilizing process residues and applying technologies to increase both quantity and quality, thereby raising the utilization rate of alternative fuels.

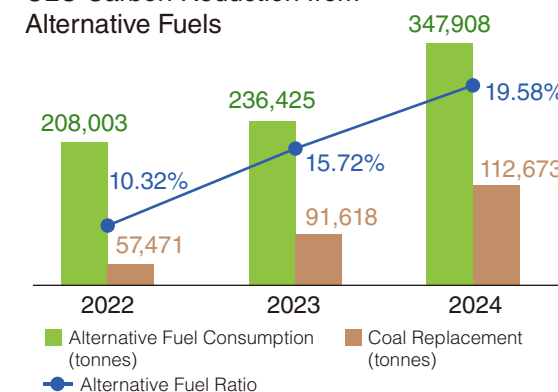
Establishment of Agricultural and Forestry Material Resource Taskforce to Advance Circular Alternative Fuels

CLC's Taiwan Parent Company set a 25% alternative fuel ratio target for 2030. In 2022, the Climate Change and Circular Economy Office established the Agroforestry Material Resource Utilization Taskforce to lead R&D on alternative fuel technologies and circular resource utilization, ensuring stable domestic and international agroforestry residual material supply and supporting the development of a sustainable biomass material supply ecosystem. Vietnam Binh Duong Paper Mill set a medium- and long-term target of 15% alternative fuel use to reduce fossil fuel consumption.

2024 Achievements:

- Expand domestic biofuel processing to include street trees and waste wood
- The alternative fuel ratio in Taiwan reached 19.58% (+3.86% YoY), replacing 112,673 tonnes of coal
- Vietnam Binh Duong Paper Mill reached an alternative fuel ratio of 18.44%

CLC Carbon Reduction from Alternative Fuels



Note 1: Taiwan Parent Company.

Note 2: Alternative fuel ratio = Total alternative fuel energy consumption / (Total energy consumption - electricity sold - steam sold).



4.3 Water Resource Management

Material Issue

Water Resource Management

Strategy

Enhance wastewater treatment and process water efficiency.



2030

2025

2024

Goals

- The containerboard division targets a 10% reduction in unit product water consumption (base year: 2019)
- Enhance water conservation potential and recycled water volume

Goals

- The containerboard division targets a 5% reduction in unit product water consumption (base year: 2019)
- Enhance water treatment efficiency
 - ➔ Plan to add anaerobic treatment equipment at Houli Paper Mill
- Enhance Water Conservation Potential and Recycled Water Volume

Goals and Results

- Decrease unit product water consumption in the Containerboard Division by 5% (base year: 2019)
 - ➔ Achieved an 11.08% year-on-year reduction and a 20.7% decrease from the base year.
- Enhance water treatment efficiency
 - ➔ Tayuan Paper Mill is renovating the trash rack, with completion scheduled by the end of 2025
 - ➔ Wastewater optimization at Tayuan Box Plant is underway and will be completed by the end of 2025
- Reduce process water consumption and increasing recycled water use
 - ➔ Recycled water accounted for 17.69% of total water withdrawal, an increase of 5.85% YoY

Value Water Resources

Resources are critical to the papermaking industry. When selecting production sites, CLC evaluates water sources based on regulatory requirements, long-term business needs, and local community water demand to ensure a balance between operations and regional water sustainability. CLC conducts risk assessments in accordance with ISO 14001, sets internal water control standards exceeding legal requirements, and ensures compliant water discharge.

2030 Goal

Reduce unit water consumption for industrial paper products in Taiwan by 10%

2024 Achievements: 20.7% reduction in water consumption, record-high recycled water usage

CLC continues to upgrade water resource management by expanding water sources, strengthening prevention and control, and implementing Water conservation solutions to improve resource efficiency. CLC has developed a digital water resource PDCA management system to enhance management accuracy

- **Real-time monitoring:** Hourly tracking of well water and each unit's water consumption to ensure autonomous management
- **Water rights alert:** The system issues real-time notifications when well usage reaches 90% of the allocated quota
- **Abnormal Usage Monitoring:** Automatically notifies the unit to address abnormal water usage

Maximizing Water Efficiency: Recycled up to 26 Times, 96.3% Recovery Rate

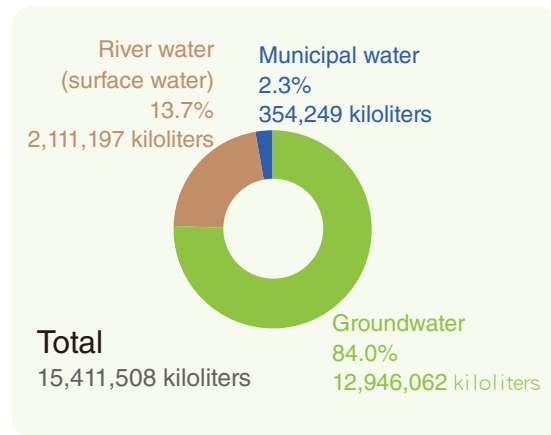
In 2024, CLC invested NTD 392 million in water resource optimization and facility upgrades to further enhance water treatment efficiency upon project completion.

- **Houli Paper Mill:** planned to install anaerobic treatment facilities and a biogas power generation system; added a 3rd-stage treatment system to enhance water purification capacity
 - **Tayuan Paper Mill:** completed trash rack renovation to improve preliminary wastewater treatment efficiency
 - **Tayuan Box Plant:** implemented a wastewater optimization project
- CLC achieved further improvements in water conservation in 2024. Unit product water consumption for industrial paper was 8.42 kiloliter/tonne of paper, a reduction of 11.08% from the previous year and 20.7% from the 2019 baseline, surpassing the original 5% reduction goal. Recycled water accounted for 17.69% of total water withdrawal in 2024 (+ 5.85% YoY), reaching a new high.

Internal water conservation measures are implemented and wastewater classification and discharge management are strengthened, focusing on process water conservation and recycling. All mills/plants are equipped with wastewater treatment systems and 24-hour water quality monitoring to ensure regulatory compliance. CLC manages process water usage to optimize wastewater treatment efficiency and support ecological balance and biodiversity.

Process water sources at CLC include groundwater, river water, and tap water. Plants manage water resources through rainwater recycling systems, white water recycling, ultrafiltration, and effluent water recycling to enable tiered management, recycling, and reuse, reducing consumption and maximizing water use efficiency. Annual water balance data are completed in accordance with Water Resources Agency regulations, and some paper mills have implemented smart water meters for real-time monitoring and control of water usage.

Water Sources (2024)

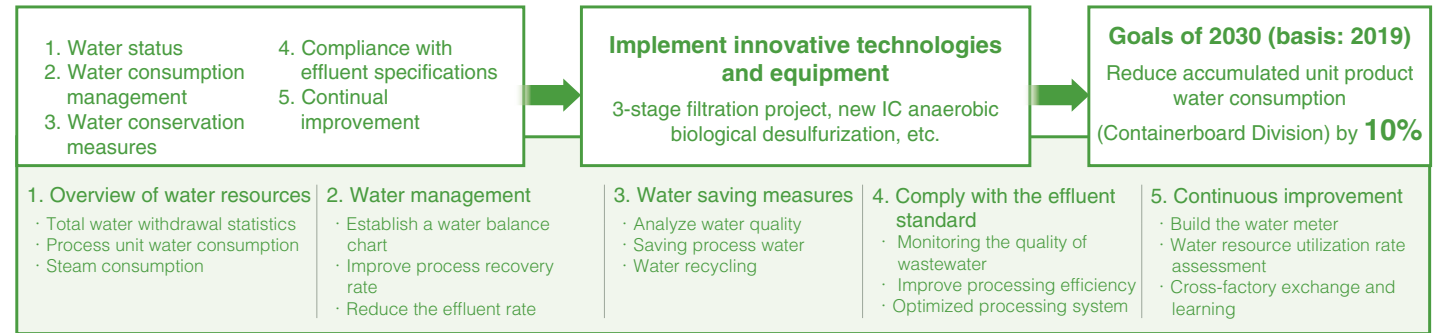


Note: Taiwan Parent Company.

In 2024, the Taiwan Parent Company's total water withdrawal was 15,411 million liters, with surface water and groundwater accounting for 97.7% and tap water 2.3%. This was a decrease of 1,068 million liters from 2023. Total water consumption was 2,575 million liters. Water source management followed Water Resources Agency indicators, and water use was reduced in accordance with government regulations during supply restrictions. CLC's sites in Taiwan, Mainland China, and Vietnam were not located in areas of significant water stress.

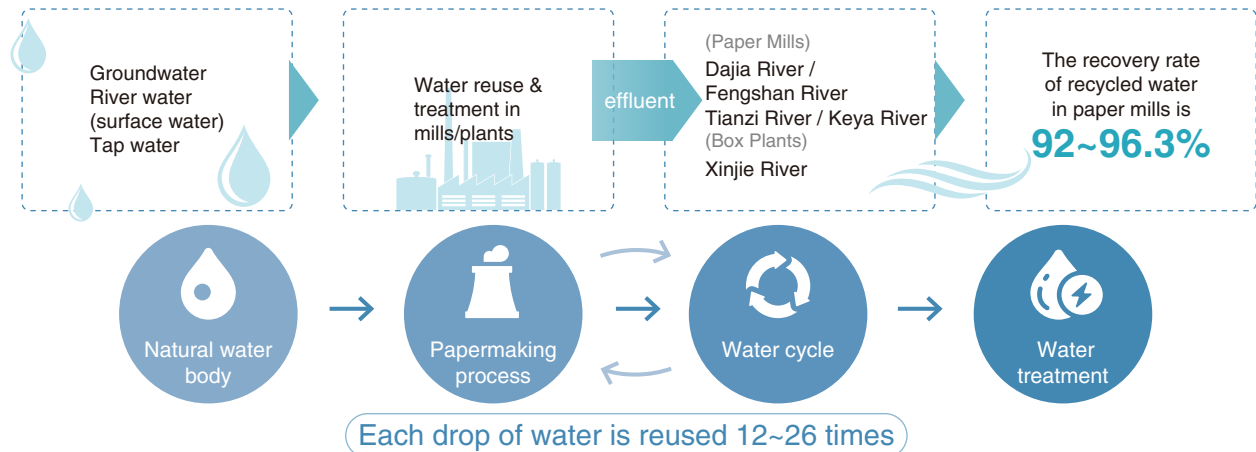
CLC's water sources are located in areas with low water stress, with none in high-stress regions. In response to reduced municipal water supply or zoned outages, CLC implements several measures, including: (1) Adjusts tap water usage and increases effluent recycling and reuse in production, (2) Substitutes fresh water with recovered effluent, (3) Optimizes process management—including papermaking and printing schedules and water conservation models—to reduce water dependency and enhance operational resilience.

Water Management Strategy



2024 Water Resource Management Project → Unit Product Water Reduction

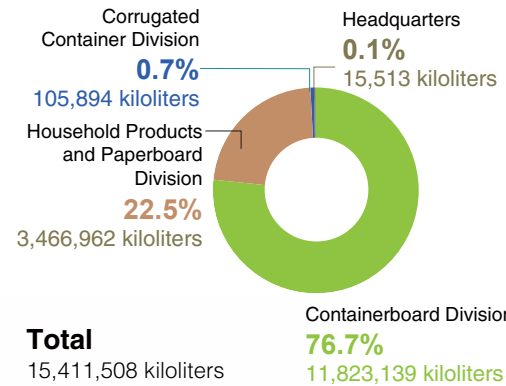
- Containerboard Division: Secondary IC anaerobic treatment equipment and the biogas power generation system
- Corrugated Container Division: Centralized production of identical ink colors to reduce machine wash frequency



Water Withdrawal Summary for the Past 3 Years (2022~2024) Taiwan Parent Company

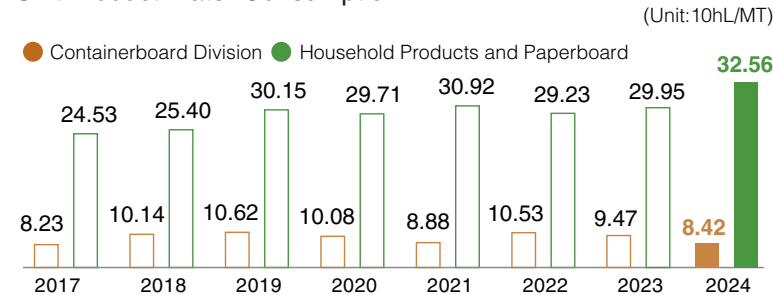
Unit: 10hL	containerboard division			Household Products and Paperboard Division			Corrugated Container Division			Others (Headquarters & Paper Mills)			Total		
Item	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
River water (sur-face water)	3,429,431	3,569,163	2,111,197	0	0	0	0	0	0	0	0	0	3,429,431	3,569,163	2,111,197
Groundwater	10,498,625	9,279,604	9,482,720	3,306,386	3,193,920	3,448,458	12,848	8,120	14,884	0	0	0	13,817,859	12,481,644	12,946,062
Municipal water	280,031	307,935	229,222	18,433	18,433	18,504	89,266	88,263	91,010	17,197	14,796	15,513	404,927	429,427	354,249
total water with-drawal	14,208,087	13,156,702	11,823,139	3,324,819	3,212,353	3,466,962	102,114	96,383	105,894	17,197	14,796	15,513	17,652,217	16,480,234	15,411,508
Total Discharge	13,540,547	10,818,035	10,067,970	3,095,962	2,924,786	2,768,405	0	306	583	0	0	0	16,636,509	13,743,127	12,836,958
total water con-sumption	667,540	2,338,667	1,755,169	228,857	287,567	698,557	102,114	96,077	105,311	17,197	14,796	15,513	1,015,708	2,737,107	2,574,550

Water Intake of Divisions (2024)



Note: Taiwan Parent Company.

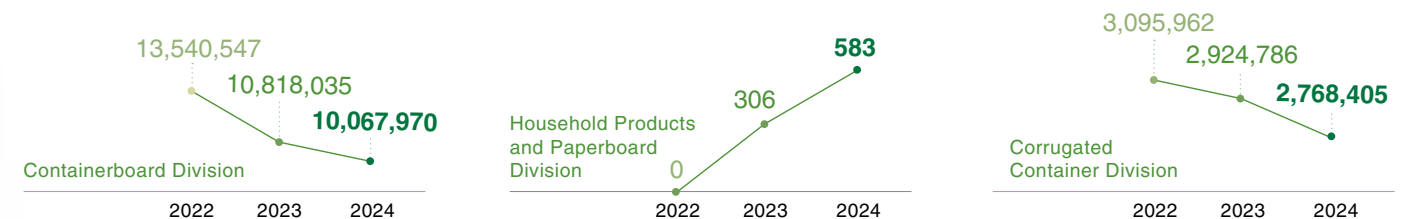
Unit Product Water Consumption



Note 1: Taiwan Parent Company.

Note 2: Since 2021, the calculation formula has been adjusted to total water consumption divided by production volume.

Effluent Discharge Volume (Unit: 10 hL)



Note 1: Taiwan Parent Company.

Note 2: Since 2022, all water used by the Corrugated Container Division has been fully reused in the production process.

Effluent

All CLC mills/plants are equipped with water treatment systems. The Containerboard and Household Products and Paperboard Divisions use biological treatment and regularly monitor effluent quality to ensure compliance with standards, and continue to implement the wastewater plant QC-Recorder to optimize water treatment operations. The Corrugated Container Division applies physical and chemical treatment and recycles treated wastewater for process rinsing and starch preparation, significantly reducing water consumption.



Taiwan Plant Effluent Water Quality (2024)

	Suspended Solids (SS) mg/L	Biochemical Oxygen Demand (BOD) mg/L	Chemical Oxygen Demand (COD) mg/L	True Color Value
Standard Value	30.0	30.0	160.0/180.0	400.0
Houli Paper Mill	5.3	7.9	127.0	220.0
Tayuan Paper Mill	9.0	14.8	90.9	160.0
Hsinchu Paper Mill	5.5	2.8	77.6	34.0
ChuPei Paper Mill	10.5	8.9	35.9	26.0

Note: According to effluent discharge standards, if waste paper accounts for 60% or more of the Material, the COD limit is 180 mg/L; if less than 60%, the COD limit is 160 mg/L (ap-plicable to ChuPei Paper Mill).

Water Resource Conservation

CLC supported SDGs 6 "Clean Water and Sanitation" by adopting 80 public restrooms in Taiwan and implementing water resource conservation initiatives. Tayuan Paper Mill and Hsinchu Paper Mill adopted nearby river basins, conducted monthly river inspections, and regularly monitored water quality. Employees participated in river cleanup activities every 6months. Hsinchu Paper Mill and local residents established the Water Environment Patrol Team to patrol and maintain the Keya Creek basin. CLC participated in the "Tamsui River Pact—Do One Thing for the Tamsui River" initiative by implementing green procurement, adopting parks for biodiversity, and promoting water conservation. To support Taiwan's 2050 Net Zero Vision, the government introduced 12 key strategies for the 2025 Net Zero Transformation, including "Green Lifestyle." In 2024, CLC organized activities to encourage employees to take concrete actions to mitigate climate change through changes in daily habits and behaviors.

CLC received the inaugural Water Sustainability Award from the Water Quality Protection Division, Ministry of Environment (Taiwan)

In response to the United Nations World Water Day on March 22, the Ministry of Environment (Taiwan) held the inaugural Sustainable Water Award on March 21, 2024, to promote water quality protection and resource conservation. CLC Tayuan Paper Mill implemented source control, separate treatment, and high-efficiency recovery technologies to achieve wastewater recycling and reuse, advancing water resource circulation. The plant was recognized as an Outstanding Enterprise in Resource Utilization in the traditional industry category.



Terms and Definition

Reclaimed water

As defined by the Reclaimed Water Resources Development Act, includes system reclaimed water and non-system reclaimed water. System reclaimed water refers to treated wastewater or effluent from sewer systems that is reused. Non-system reclaimed water refers to treated wastewater or effluent not entering sewer systems that is also reused.

Recycled water

As defined by the Regulations for Water Pollution Control Measures and Testing and Reporting Management, refers to wastewater that has been treated and reused in production processes without discharge, with measures implemented to prevent human contact and associated health risks.



4.4 Air Quality Management

Material Issue

air quality management

Strategy

Reduce air pollutant emissions and improve air quality.



2030

2025

2024

Goals

- Taiwan Parent Company target: 33% reduction in NO_x emission concentration (baseline year: 2019)
- No violations or fines related to air pollution or odor anticipated

Goals

- Taiwan Parent Company targets an 18% reduction in NO_x emission concentration (base year: 2019)
- Houli Paper Mill Boiler Denitrification System Replacement Project
- No violations or fines related to air pollution or odor anticipated

Goals and Results

- Reduce NO_x emission concentration by 15% at the Taiwan Parent Company (base year: 2019)
 - ➔ NO_x emission concentration decreased by 48%
 - ➔ Installed plate heat exchanger for the desulfurization system at Tayuan Paper Mill
- No violations or fines related to air pollution or odor were recorded
 - ➔ 0 cases

Strengthen Air Emissions Management to Ensure Compliance with Environmental Standards

CLC continuously strengthens air quality management by enforcing stricter controls and precise emission source monitoring to reduce air pollution. All major paper mills are equipped with continuous automatic air quality monitoring systems connected to regulatory authorities, ensuring transparent and compliant emission data. Regular inspections of boiler equipment and emission pipelines are conducted to maintain stable operations. CLC implements a three-stage air pollution management strategy, reducing emissions through source reduction and end-of-pipe treatment

- **Source Management:** Integrate energy resources to reduce coal and heavy oil consumption, minimizing pollutant emissions
- **Process Optimization:** Continuously improve production systems to enhance energy efficiency and reduce pollutant emissions
- **End-of-pipe Control:** Installation of emission treatment equipment to enhance pollutant filtration and removal capacity

We established long-term air pollution reduction targets and continuously reduced emissions through process improvements and upgrades to emission treatment equipment. In 2024, NO_x emission concentration in the Taiwan area decreased by 48% compared to the 2019 baseline, significantly exceeding the annual reduction target of 15%.

Air Pollution Control Facility Upgrades for Enhanced Air Quality

CLC upgraded equipment to reduce air pollution, including constructing an indoor coal yard at Houli Paper Mill in 2019 to control particulate emissions. In 2020, CLC added dust control equipment at coal bunker entrances and exits, installed water mist foam dust removal devices, and introduced a baghouse ash pneumatic conveying system. Multiple SCR units were installed to improve air quality. Biogas desulfurization equipment was installed at the Tayuan Paper Mill wastewater treatment plant, the G2 unit at Houli Paper Mill operated at reduced load, and high-quality coal was procured, significantly reducing SO_x emissions.

In 2024, a plate heat exchanger was added to the desulfurization system at Tayuan Paper Mill to enhance exhaust gas treatment efficiency. In 2025, the company will proceed with the boiler denitrification system replacement at Houli Paper Mill to further strengthen air pollution control and optimize air quality.

Note: SCR (Selective Catalytic Reduction) is a technology for removing NO_x (nitrogen oxides) from flue gas.

CLC Air Pollution Management Strategy

1. Source Management
2. Process System Optimization
3. End Control

Innovation Technology and Equipment Implementation

Installed dust control equipment, dust monitoring devices, and gas-fired boilers

2030 Goal

NO_x : -33%
(Base Year:2019 ~ Taiwan Parent Company)

1st Paper Company in Taiwan to Establish an Indoor Coal Yard

Indoor coal storage facilities reduce particulate emissions and comply with regulations for enclosed structures. CLC Houli Paper Mill and ChuPei Paper Mill completed construction of indoor coal yards. Coal silos are divided into 3 zones for separate storage by coal type, enabling allocation and transport based on boiler combustion characteristics. Regular pile turning is conducted to prevent spontaneous combustion.

1st Corrugated Container Company to Fully Replace Fuel Boilers with Natural Gas, Achieving Environmental and Operational Gains

Since 2013, CLC replaced all fuel oil boilers at box plants with natural gas boilers, completing the transition in 2020. This upgrade increased combustion efficiency by over 5%, reduced greenhouse gas emissions by 27%, nitrogen oxide emissions by 63%, and total suspended particulate emissions by 93%. These measures significantly reduced air pollutant emissions and fuel costs. CLC's air quality management performance attracted visits from industry, government, and academia, establishing the company as a benchmark in environmental management.



Note: Calculated according to Ministry of Environment (Taiwan) regulations for emission factors, control efficiency, and measurement standards for particulate matter, lead, cadmium, mercury, arsenic, hexavalent chromium, and dioxins in fixed source air pollution control fee declarations.

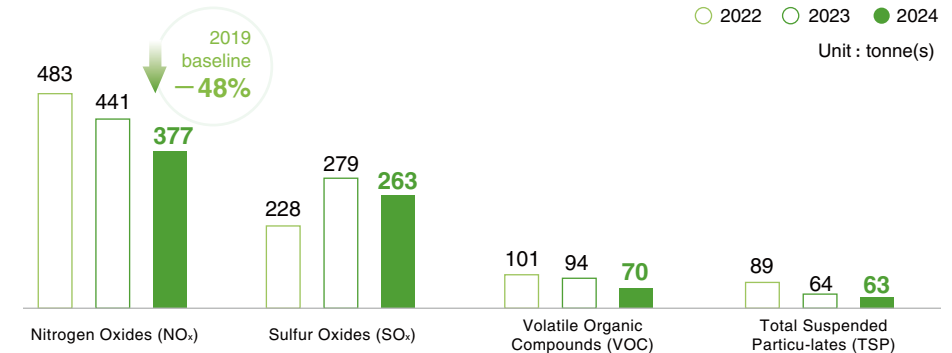
Strengthen Odor Control to Improve Plant Environmental Quality

CLC addressed plant odor issues through process and system optimization, achieving measurable results. Each unit identified odor sources and developed odor maps to target mitigation actions. High-efficiency air pollution control equipment was installed to reduce odors and pollutant emissions. In 2024, CLC implemented four major odor management measures and received no fines related to air pollution odors.

Plant Odor Management Practices

- ➔ Improved waste paper storage and increased pulp chemical retention to reduce organic matter entering production and wastewater treatment.
- ➔ Flue-gas desulfurization (FGD) equipment retrofit.
- ➔ The wastewater plant was enclosed, and the biogas treatment process operated under sealed negative pressure extraction.
- ➔ Established perimeter monitoring and odor management with real-time alerts and self-audits.

Air Pollutant Emissions



Note: Taiwan Parent Company

Smart Factory × Digital Inspection

CLC Panqiao Plant Established a Low-emission Production Environment

On September 10, 30 mid- and senior-level officials from the New Taipei City Government participated in an exchange on sustainable development strategies and actions at the Headquarters and Panqiao Box Plant.

Panqiao Plant presented the Collaborative Center Ink Mixing Team's VOC reduction measures. VOCs, with vapor pressure above 0.1 mmHg, react with NO_x under sunlight to increase ozone and photochemical smog. Excessive inhalation may cause headaches or irritation to the eyes and respiratory tract.

CLC Panqiao Plant established a smart factory and implemented digitalization for real-time production line monitoring, minimizing VOCs emissions. The digital inspection system reduced paper use, optimized workflows, improved production efficiency, and supported data-driven decision-making, driving sustainable management.





4.5 Waste Resource Utilization

Material Issue

Waste-to-Resources

Strategy

Promote circular reuse of resources, expand waste resource utilization channels, and increase the resource utilization rate annually to achieve the vision of zero waste.



2030

Goals

- Waste-to-resource ratio : > 97% (Taiwan Parent Company) ; > 95% (Vietnam Binh Duong Paper Mill)
- All box plants to reduce unit product waste by 6% (base year: 2024)
- Advancing Circular Economy in Waste Management

2025

Goals

- Waste-to-resource ratio : > 97% (Taiwan Parent Company) ; > 95% (Vietnam Binh Duong Paper Mill)
- Reduce unit product waste at all box plants by 1% (base year: 2024)
- Implement waste resource activation and regeneration programs

2024

Goals and Results

- Waste-to-resource ratio > 97% (Taiwan Parent Company)
 - ➔ 334,099 tonnes of waste were converted to resources, achieving a 97.8% waste-to-resources ratio for the Taiwan Parent Company; Vietnam Binh Duong Paper Mill reached 98.7%
- Implement waste resource activation and regeneration programs
 - ➔ Tayuan Paper Mill is optimizing the SRF process, doubling monthly processing capacity to 12,120 tonnes
 - ➔ Reduced residual waste to below 6%

2024 Waste-to-resources Ratio Reached 97.8%, Exceeding Annual Goals

CLC adheres to the principle of "no waste, only misplaced resources" and is committed to sustainable resource management. The company implements four core strategies—source reduction, reuse, resource circulation, and flow management—to enhance waste treatment efficiency. All waste generated is classified as general industrial waste, with no hazardous industrial waste produced. Operations comply with environmental regulations and ensure environmental safety.

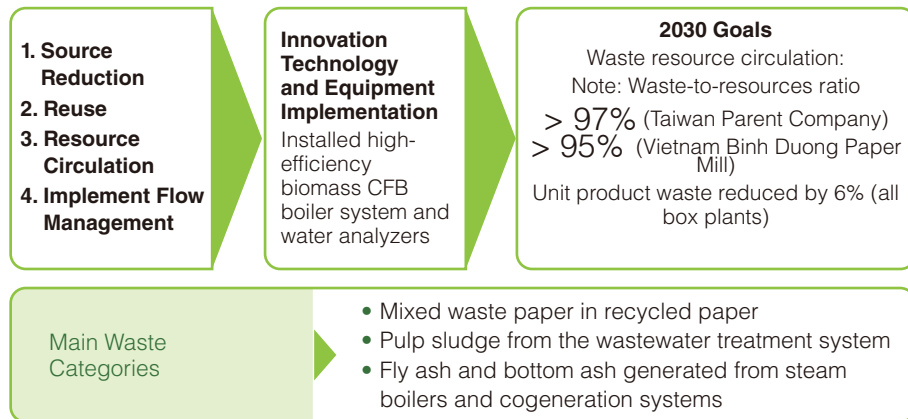
CLC advanced circular economy by converting process residues into resources and expanding the reuse of waste paper mixtures and co-combustion ash. In 2024, waste reuse reached 334,099 tonnes, raising the waste-to-resources ratio to 97.8%, up 1.9% from last year and surpassing the 97% annual goal. Vietnam Binh Duong Paper Mill achieved a 98.7% waste-to-resources ratio and set a medium- and long-term goal of 95%.

To enhance resource efficiency and waste management, CLC set a 2030 target for all box plants to reduce unit product waste by 6%, using 24 kg/m² in 2024 as the baseline. This target aligns with circular economy principles and serves as a quantitative benchmark for internal risk control and recycling performance, strengthening consistent sustainable management across all sites.



Ministry of Environment (Taiwan) Resource Circulation Administration 2024 Resource Circulation Silver Award – Tayuan Paper Mill

CLC Resource Circulation Management Strategy



Source Reduction

- Promote accurate sorting and recycling of paper to increase recovered paper quality and quantity
- Announced stricter inspection standards and supported supplier transformation to reduce non-paper materials at the source
- Enhance process resource efficiency to reduce waste generation



Reuse

- A heat recovery boiler was installed to utilize impurities from recovered paper and paper pulp sludge as fuel, recovering thermal energy and generating steam for process reuse
- Impurities from recovered paper are processed into SRF to replace a portion of coal in steam boilers



Resource Circulation

- Waste was properly sorted and processed both in-house and externally, then recovered for reuse in the pulp and paper industry and other sectors, such as converting fly ash into cement

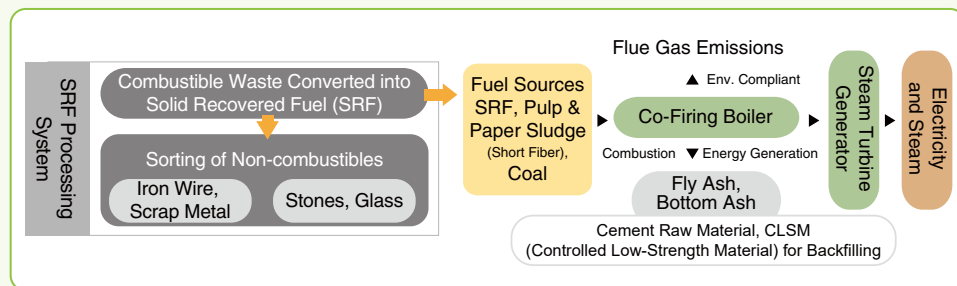


Implement Flow Management

- Establish comprehensive industrial waste flow management and fulfill producer responsibility

Driving Waste-to-energy: CLC Innovation Leads Green Circularity

CLC utilizes innovative waste treatment technologies to convert papermaking residues into SRF (Solid Recovered Fuel), reducing landfill impact, decreasing coal dependence, and lowering GHG emissions.



In 2024, the high-efficiency biomass cogeneration system at ChuPei Paper Mill was fully operational, significantly increasing waste reuse efficiency across all factories. Tayuan Paper Mill completed dust-proof net installation at its pre-treatment residual waste storage site to prevent dispersion. The SRF process was optimized, doubling monthly processing capacity from 6,000 tonnes to 12,120 tonnes, further enhancing resource recovery.

Strengthen Waste Flow Management to Ensure Compliance

CLC strictly monitors waste flows, selects qualified disposal and recycling vendors, and conducts regular on-site audits to ensure all waste is legally and properly treated or recovered. The company continuously enhances audit effectiveness and tracking management to maintain transparency and control in waste treatment processes.

CLC Recovered Materials Innovation Project

- Introduced the 1st national waste paper moisture analyzer to enhance intelligent identification and testing of recovered paper quality, increasing carbon reduction and cost efficiency.
- Guided recyclers in transformation and upgrading, implemented accurate sorting and optimal material utilization, reducing residual waste from 10~13% to below 6%.
- Innovative Technologies for Full Recycling of Waste Food Paper Containers: ChuPei Paper Mill was the 1st in Taiwan to achieve full recycling and regeneration of waste food paper containers. In 2023, the 66,000-tonne annual capacity recovered bleached pulp line at Tayuan Paper Mill began commercial operation, increasing the Group's certified processing volume. In 2024, ChuPei Paper Mill obtained approval to expand processing capacity. The Group's total processing volume reached 14,700 tonnes per month, enabling the annual recovery of up to 50% of Taiwan's food paper container waste.
- Partnered with reuse operators to convert imported ink and shipping pallets from box plants into biomass fuel for boilers, replacing coal for carbon neutrality.

Waste Reuse Methods (Taiwan Parent Company)

Unit : tonne (s)

Category	2022	2023	2024	Reuse Methods
Resource-Recovered Waste (A)				
Mixed Waste Paper	124,414	118,637	135,161	Processed into SRF solid re-covered fuel
Pulp and Paper Sludge	98,543	98,966	98,873	Cogeneration boiler fuel
Fly Ash/Bottom Ash	85,743	77,535	69,085	Reuse in cement and concrete plants
Other Waste	12,469	32,932	30,980	Waste wood and waste lu-bricating oil: approved for reuse
Non-resource-Recovered Waste (B)	14,817	13,160	7,411	Incinerator fly ash, waste pa-per mixtures, co-incineration ash
Total Waste (A+B)	335,986	328,070	341,510	
Waste Resource Re-covery Rate(A/(A+B))	95.6%	95.9%	97.8%	

4.6 TNFD Biodiversity

Paper for Nature: Biodiversity Vision

Each sheet of paper originates from forests. CLC applies the "secondary forest" concept by using recovered paper as material. Over 90% of products are made from recovered Material. CLC also sources 100% FSC™-certified sustainable wood pulp. Innovation and green principles are integrated into product R&D to deliver sustainable value and provide green consumption options.

No. 1 Paper Company in Taiwan

CLC Became a TNFD Early Adopter, Leading Industry Dialogue on Nature-related Risks

CLC advanced the Nature Positive Vision in response to climate change and resource limitations. In 2023, CLC signed to support the Taskforce on Nature-related Financial Disclosures (TNFD). In 2024, CLC became the 1st pulp and paper industry in Taiwan to join the TNFD Early Adopters and initiated natural capital risk assessments and strategic planning.

CLC adopted the TNFD Version 1.0 frameworks and initiated an internal L.E.A.P. analysis to comprehensively assess its dependence and impact on natural resources. CLC integrated industry, government, and academia resources to conduct natural capital and biodiversity research projects at its plants, strengthening risk management and corporate resilience. Beginning in 2025, CLC will disclose in accordance with the TNFD frameworks, focusing on governance, strategy, risk management, and metrics to ensure business operations are aligned with environmental sustainability, and will collaborate with industry partners to advance sustainable economic and environmental development.

Enterprises Rooted in Nature: Sustainability beyond Carbon Reduction

CLC President Advanced "Nature Positive Growth" through the TNFD Framework

CLC President Ching-Piao Chang advanced the company's transition from carbon reduction to "Nature Positive Growth". He emphasized the company's reliance on natural capital and ecosystem services, requiring comprehensive assessment of ecological impacts in uplift, avoided loss, threat reduction, and maintenance. CLC adopted the TNFD framework to address climate change and ensure biodiversity sustainability.

Ching-Piao Chang's sustainability philosophy was recognized by the industry, leading to his invitation to write the foreword for "Nature Positive Growth Management," published by China Productivity Center in July 2024. He aimed to share knowledge through paper and books, extending the company's sustainability mission to all global citizens and making environmental protection an actionable guide.



Natural Risk and Opportunity Assessment Process: L.E.A.P.

LOCATE

Identify Key Business Activity Locations

Priority pilot locations are identified by [Open Information on the National Ecological Green Network, Forestry and Nature Conservation Agency, Ministry of Agriculture, Executive Yuan](#) assessing the significance of local nature conservation and CLC's interaction with the environment at each core pulp and paper business site

Identification Principles

1. Identify whether key business sites are located in or adjacent to areas of high biodiversity importance
2. Confirm key business interactions with natural resources, such as operations located in water-stressed areas

EVALUATE

Evaluation of Key Business Activity Dependencies and Impacts

Evaluate the dependence of key business activities on environmental assets and ecosystem services, and assess their impact on the natural environment and local communities

ASSESS

Natural Risk and Opportunity Assessment

Analyze the potential natural risks and development opportunities CLC may face based on its dependence and impact on nature

PREPARE

Nature Strategy and Reporting Disclosure

Based on the analysis of nature-related risks and opportunities, CLC evaluated current actions, defined future strategic directions, and disclosed pilot results





Potential Impacts of CLC on Nature

Drivers of Natural Change	Potential Influence and Affected Parties	Response Strategies
 Climate Change	Core business activities of the organization Business activities generate greenhouse gas emissions, increasing carbon fee and carbon tax costs. Extreme climate events such as flooding and heatwaves may disrupt or damage production equipment, impacting operations. Over 90% of CLC products use recovered paper; climate events affect recovered paper supply and price volatility both domestically and internationally Local communities and relevant stakeholder groups GHG emissions contribute to global warming, increasing the risk of climate-related disasters for local residents and stakeholders Local Ecosystem Long-term GHG emissions increase the risk of extreme climate events such as forest fires, floods, and droughts, impacting ecosystem integrity and local biodiversity	- Invest in advanced low-carbon technologies and equipment to reduce operating costs and enhance carbon reduction - Reduce natural resource consumption, develop low-carbon circular fuels, and establish a low-carbon biomass resource ecosystem through public-private collaboration
 Resource Use/ Replenishment (Forest Re-sources)	Core business activities of the organization Due to limited forest resources, the "cut first, then replant" carbon reduction approach is not fully applicable in Taiwan. CLC uses over 90% domestic and international recovered paper in its products, with only a small portion made from imported virgin pulp Local communities and relevant stakeholder groups Unsustainable exploitation of forest resources reduces soil and water conservation capacity, increasing erosion risk and impacting indigenous peoples and stakeholders Local Ecosystem Destruction of natural forests or lack of management in plantations in Taiwan reduces ecosystem diversity, impacting soil, water resources, and endangered species	- Expand global circular economy sites, increase recovered paper utilization, and reduce natural wood consumption - Focused on research and development of paper-based solutions, prioritized recovered paper as the primary material to reduce virgin pulp use and support secondary forest creation - Establish green procurement goals and prioritize the purchase of FSC™-certified forest pulp and products or equipment that meet energy efficiency standards and hold the Green Mark - Implemented an afforestation project with National Chung Hsing University at Huisun Forest, targeting enhanced local carbon sinks, improved ecological and soil and water conservation, and increased employment opportunities for indigenous communities, achieving environmental, ecological, and social benefits - Over 100,000 trees have been planted at domestic and overseas mills/plants, creating high-oxygen production areas and green belts
 Resource Use/ Replenishment (Water Resources) Pollution/ Pollution Removal (Wastewater Discharge) State of Nature	Core business activities of the organization CLC's core business activities are paper and paperboard manufacturing, with production processes highly dependent on water resources. Plants are located near water sources, and effluent treatment is implemented to prevent water pollution. Water shortages or drought directly impact operations Local communities and relevant stakeholder groups Water scarcity or pollution significantly impacts local residents' quality of life and health Local Ecosystem Water resource depletion or pollution directly impacts local ecosystems, threatening the survival of aquatic species	- Water resource planning for plant development prioritizes regulatory compliance, business needs, and the water requirements of surrounding communities - Established a comprehensive water resource management and treatment system, diversified water sources, and implemented prevention and control measures. Enhanced resource efficiency through circulation, recycling, and reuse, and continuously introduced innovative water conservation solutions to maximize water utilization - Since 2016, Tayuan Paper Mill has adopted the adjacent stream, established a Water Environment Patrol Team, conducted monthly inspections, and implemented regular water quality monitoring. In 2021, the mill partnered with the Department of Life Sciences at National Central University to conduct long-term ecological monitoring, assessing local species and environmental requirements to maintain aquatic biodiversity around the plant

65th Anniversary Natural Carbon Sink Restoration Program

CLC launched long-term monitoring and restoration of burned areas in Huisun Forest

In 2021, a wildfire destroyed over 21 hectares of Huisun Forest, impacting local ecosystem stability. CLC reduced reliance on virgin forests through recovered paper technologies and initiated forest restoration.

For its 65th anniversary, CLC launched the "Nature Sustainability, Paper Towards Net Zero" initiative. In partnership with the Forest Management Office of National Chung Hsing University, the Institute of Circular Economy, and the Atayal and Seediq communities, CLC implemented a **post-fire land restoration project**. In April 2024, 500 native fire-resistant trees were planted, and ecosystem recovery is being monitored using scientific methods.

Technology-enabled Ecological Monitoring to Enhance Carbon Sinks and Habitat Restoration

Wildfires play a key role in plant regeneration and biodiversity. To support this natural process, restoration of burned areas is critical. The reforestation project applies NASA Landsat satellite remote sensing for 6 years of monitoring and maintenance to assess carbon sink capacity and habitat restoration, aiming to enhance forest carbon storage and stabilize habitats for local species.

CLC engaged local indigenous communities in forest restoration and maintenance, creating green jobs and supporting both ecological conservation and the local economy.



CLC employees and supply chain partners planted 500 trees in response to the "Plants for the Planet" initiative.

Streams and Wetlands

CLC has implemented ISO 14001 at all domestic and overseas mills/plants and adopted PDCA water resource management to ensure compliant effluent discharge. Stable water sources are maintained for nearby streams and wetlands to support biodiversity. Water conservation and graded water usage management are executed through water resource strategies and inter-plant collaboration. CLC prioritizes ecological conservation near its mills/plants. Tayuan Paper Mill and Hsinchu Paper Mill have long-term river adoption programs and organize Water Environment Patrol Teams with employees and local residents for monthly and holiday stream patrols, maintaining the Qiayi River section and Keya River basin.

Since 2021, CLC Tayuan Paper Mill partnered with Associate Professor Fu-Guo Liu's team from National Central University to implement the Ecological Monitoring and Sustainable Action project. Research found that the local ecosystem was comparable to the GaoRong Wildlife Conservation 731 Pond, with adjacent water bodies serving as winter habitats for waterfowl and newly recorded as a site for *Helice formosensis* crabs. Local biodiversity reached a level similar to national wildlife conservation areas.

Note: For more information on the "Biodiversity at CLC" manual by Associate Professor Liu's team, please scan the QR code



CLC Tayuan Paper Mill commissions external organizations for ecological monitoring of stream and water quality, shares data with the Taoyuan City Environmental Protection Bureau, and invites employees to participate in stream cleaning activities every 6 months.

Vietnam Binh Duong Plant Maintains 20% Green Space for Ecological Coexistence

CLC prioritized ecological conservation and site greening at the Vietnam Binh Duong Paper Mill during Phase 2 and Phase 3 expansion, reserving approximately 20% of the site as green space with over 70 plant species, including more than 10 fruit trees. Informational signs in Chinese and Vietnamese were installed. The green areas support carbon reduction, temperature regulation, air purification, and provide educational and recreational benefits. The park-like environment is used by employees for recreation and has received positive feedback from visiting vendors and officials.



05

Diverse and Inclusive Culture

We uphold diversity and inclusion by building a healthy and equitable workplace and fostering an environment for fair development and continuous learning, enabling growth together with employees.

- 5.1 Diversity and Equal Opportunity
- 5.2 Talent Cultivation and Development
- 5.3 Healthy Workplace

- ▲ Selected as a constituent of the TWSE RA Taiwan Employment Creation 99 Index for **14** consecutive years
- ▲ Salary raises for **18** consecutive years
- ▲ Employee Stock Ownership Trust (ESOT) achieved **57.2%** employee participation
- ▲ Received the 1111 Job Bank **Happy Enterprise Recognition Gold Award** for **5** consecutive years
- ▲ **CLC AI Academy** established, **1st AI Application Competition** held
- ▲ **10 Plants** certified as Healthy Workplaces by the MOHW
- ▲ **2,149** in-person participants attended OH&S promotion activities





5.1 Diversity and Equal Opportunity

Material Issue

Equal Employment

Strategy

Provide competitive salaries and comprehensive employee benefits to attract diverse talent and ensure workplace equality.



2030

2025

2024

Goals

Goals

Goals and Results

- Diversify employee benefits

- Strengthen the Employee Assistance Program (EAP)

- Average employee salary to increase by 25% over 2020

- Maintain a healthy turnover rate below 12%

- Diversify employee benefits

- Implement Human Rights Due Diligence and establish a Risk Matrix, with optimization of Human Rights Risk Management Measures planned for completion by 2026

- Strengthen the Employee Assistance Program (EAP)

- Providing competitive compensation packages

- Ongoing monitoring of annual turnover rate

- Diversify employee benefits
 - ➔ Continuing to enhance "Workplace Equality, Communication, and Compensation" based on Employee Engagement Survey results
 - ➔ Employee benefits expenditure per person is NTD 38,000
- Enhance employee rights and benefits
 - ➔ Offering leave options exceeding legal requirements, including Prenatal Check-up Leave, Fully Paid Engagement Leave, and Natural Disaster Leave
 - ➔ Annual health checkups provided; NTD 1,500 subsidy for new employee health checkups
 - ➔ Global sites are enhancing work environments; working hours at Vietnam operations are reduced beyond regulatory requirements
 - ➔ Advancing the Friendly Workplace Initiative and revising the Sexual Harassment Prevention Measures and Complaint and Disciplinary Procedures
 - ➔ Conducting Human Rights Risk Identification and promoting Human Rights Due Diligence

- Strength en the Employee Assistance Program (EAP)
 - ➔ Ongoing enhancement of the EAP for work, life, and health
 - ➔ Ongoing construction and expansion of employee dormitories to provide comfortable, convenient accommodations equipped with energy-saving and recreational facilities
 - ➔ Digital HR 'AI Assistant - MuYu' is online, providing efficient inquiry services and addressing employee needs

- Provid competitive compensation packages
 - ➔ Salary Adjustment Rate: approximately 2%, +5.3% compared to 2020

- Maintain a healthy turnover rate
 - ➔ Turnover rate remains stable at 10.7%
 - ➔ Power BI is being used to consolidate domestic and overseas Resignation and Retirement Overview data to enable timely countermeasure planning

Human Resources Strategy: Realizing Global Localization of Key Talent



CLC prioritizes talent development by maintaining a competitive compensation system and comprehensive training framework to attract skilled professionals. Talent selection is guided by the principle of sincerity and trustworthiness, focusing on candidates who align with the company's culture, vision, and core values to meet workforce needs for domestic and international expansion and sustainable operations.

Management Policy

- ✓ Enhance Human Resources Management and Appoint Local Key Talent
- ✓ Launched the 10-Year Sustainability Talent Development Program to cultivate green-collar talent

Employees are key to sustainable operations. Focusing on long-term talent development, the company conducts real-time tracking of salary and labor market trends, aligning employee compensation and benefits with medium- and long-term development strategies and annual business performance. Compensation policies and systems are continuously optimized based on employee feedback to support sustainable prosperity for both employees and the company.

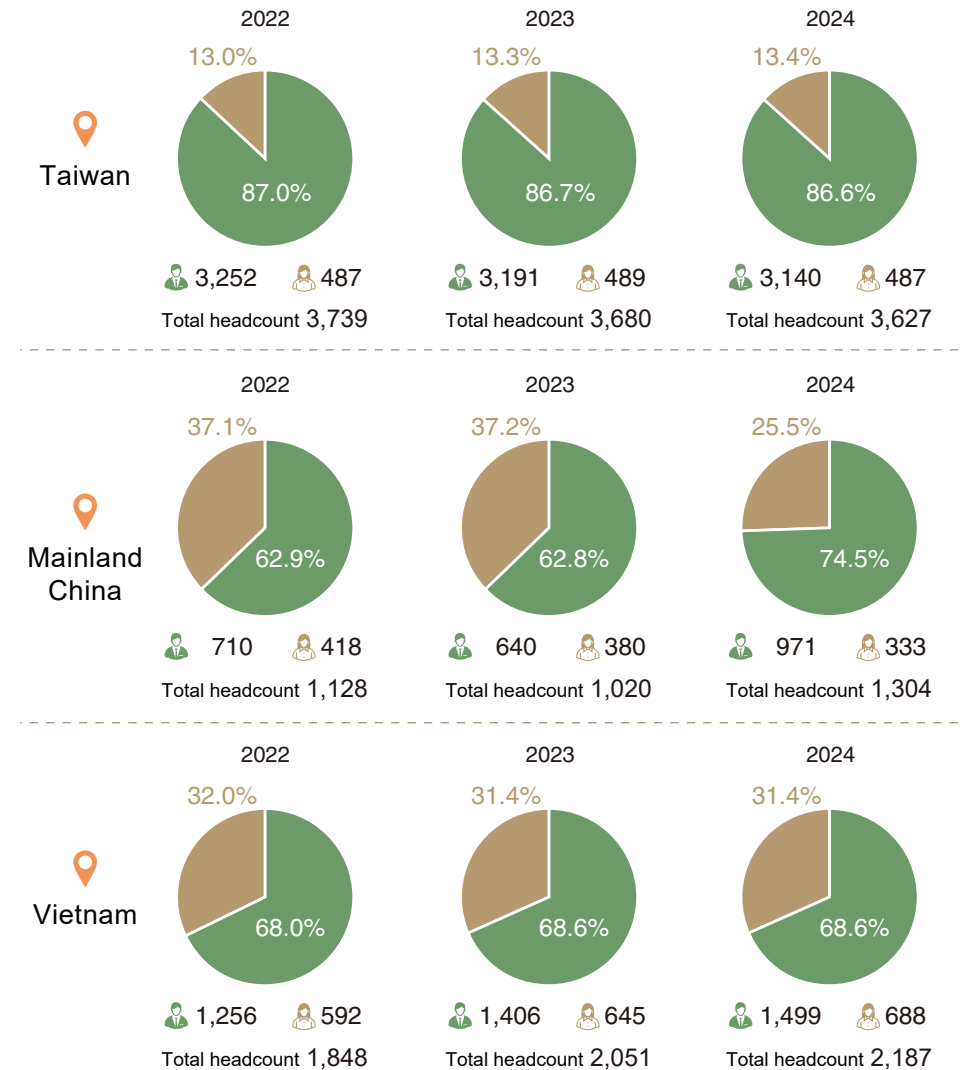
Enhancing Women's Representation

Female employees accounted for 13.4% in the Taiwan Parent Company and 22.2% in the Consolidated Company

By the end of 2024, major operating sites in Taiwan, Mainland China, and Vietnam employed 6,785 people (+34 YoY). The Taiwan Parent Company had 3,627 employees, including 2,073 frontline staff, 1,406 management, and 148 locally hired senior executives; total headcount in Taiwan decreased by 53 compared to the previous year. Due to the characteristics of the papermaking industry, the proportion of male employees remained higher; however, recruitment of female employees continued in production, R&D, marketing, and digitalization management. In 2024, female employees accounted for 13.4% in the Taiwan area and 22.2% in the Consolidated Company. Recruitment, employment, and development were based on work capability, with equal treatment regardless of nationality, gender, ethnicity, religion, skin color, age, sexual orientation, marital status, or political affiliation. No discrimination incidents occurred in 2024.

Note: Senior executives are first-level unit supervisors

CLC Gender Structure of Employees



Note: For more information on CLC's workforce structure, including job categories, age, years of service, education distribution, and employment contracts, please refer to [the Appendix Employee Information List](#)

Value Human Rights and Development Diversity

"Through fair and open recruitment channels, all employees are entitled to equal rights and benefits regardless of gender, race, and nationality, in order to protect basic human rights."

Human Rights: Diversity and Inclusion

CLC complies with local labor laws at all domestic and overseas business locations, is committed to protecting the basic human rights of all employees, and supports the core principles of international conventions. The CLC Human Rights Policy ensures fair and dignified treatment for all personnel, including diversity, inclusion, anti-discrimination, prohibition of forced labor, and a ban on child labor. CLC strictly prohibits child labor, verifies applicant information during recruitment, and has established procedures to address any illegal employment of child labor. Relevant requirements are included in the New Employee Recruitment Implementation Guidelines.

Strengthening Employee Education and Inclusive Workplace Mechanisms

CLC disseminates human rights information to employees through the EIP internal website, internal publications, and the E-Learning system. In 2024, key topics included workplace unlawful infringement and prevention and handling of workplace bullying. Emphasizing workplace equality and communication, CLC continues to hold relevant seminars and advance the Friendly Workplace Initiative, including revisions to the Sexual Harassment Prevention Measures and Complaint and Disciplinary Procedures. **From 2021 to 2024, a total of 5 in-person courses (18 sessions) and 1 online course were conducted in the Taiwan area, with 2,510 participants.** Course topics included personnel issues, effective communication, building a quality communication environment, and gender-friendly workplace seminars. CLC has also established mechanisms for workplace sexual harassment and corruption complaints, with an employee opinion mailbox and reporting channels for violations of ethical conduct available on the internal website.

"CLC Human Rights Policy Management Guidelines"

- Diversity, Inclusion, and Anti-Discrimination
- Prohibition of Child Labor and Forced Labor
- Anti-Corruption and Integrity Management
- Healthy and Safe Workplace, Work-life Balance
- Freedom of Assembly, Association, and Open Communication Channels

※For the complete Human Rights Policy, please refer to the CLC Website [Human Rights Policy](#)

Equal Opportunity and Inclusive Employment

CLC ensures equal employment opportunities for disadvantaged groups by complying with the People with Disabilities Rights Protection Act and the Indigenous Peoples Employment Rights Protection Act, providing appropriate positions for individuals with disabilities. In 2024, CLC employed 41 individuals with disabilities in the Taiwan area, meeting legal requirements, and hired 29 indigenous employees. To promote retention, a Long-term Service Bonus for Indigenous Employees was implemented at Taiwan mills/plants, awarded 24 times in 2024. CLC prioritizes hiring local employees at all domestic and overseas sites to enhance workforce stability. Where local recruitment was insufficient for certain production lines, foreign workers were introduced at Taiwan plants to maintain operational continuity.

CLC Equal Opportunity and Inclusive Employment Overview

*Note: Taiwan area

Category	2022	2023	2024
People with Disabilities	41	40	41
Indigenous peoples	23	27	29

Promoting Workforce Youth and Women's Advancement to Entry-level Management

The papermaking industry operates 24 hours, resulting in a predominantly male frontline supervisory structure, with a male-to-female ratio of 12.2:1 among team leaders. Although team leader is an entry-level management position, promotion previously required an average of 11 years of service. Since 2018, CLC has promoted 66 employees with less than 5 years of service to team leader, with women accounting for 10.6%. This has lowered the seniority threshold and improved gender balance, advancing a more inclusive management culture. CLC also supports external recognition of outstanding talent, demonstrating ongoing commitment to talent development and organizational optimization.

Gender Ratio of Entry-level Supervisors with Less than 5 Years of Service

Period	2014~2017	2018~2024
Proportion	0 0%	7 10.6%
Proportion	48 100%	59 89.4%

Note 1: Taiwan Area

Note 2: Proportion calculation = Number of male (female) entry-level managers / Total number of entry-level managers



CLC Taichung Box Plant: 2 Employees Recognized as Model Workers



Human Rights Due Diligence & Management

Adhering to a people-oriented and diversity-respecting approach, CLC incorporates the United Nations Guiding Principles on Business and Human Rights (UNGPs), the Universal Declaration of Human Rights, and International Labour Organization Core Labor Standards into sustainability governance and risk management. The CLC Human Rights Policy Management Guidelines ensure respect for the fundamental rights of all employees and stakeholders throughout operations.

CLC's 5 Key Human Rights Policy Areas and Management Guidelines

Diversity, Inclusion, and Anti-discrimination	- Establish a diverse, equitable, and inclusive workplace; prohibit all forms of discrimination. - A comprehensive grievance mechanism is in place to protect employee privacy and prevent human rights violations.
Prohibition of Child Labor and Forced Labor	- Prohibit employment under age 16 and ensure supplier compliance. - Require voluntary labor contracts to eliminate forced labor.
Anti-corruption and Integrity Management	- Follow the CLC Code of Ethical Conduct and related Procedures for Handling Unethical Conduct, in line with the principle of sincerity and trustworthiness. - Serious violations will result in strict disciplinary action without exception.
Healthy and Safe Workplace and Work-life Balance	- Promoting Occupational Safety and Health Policy: risk management, safe operations, health protection. - Through the ISO 45001 framework, continuously fostering a safe and healthy work environment to promote employee well-being.
Freedom of Assembly, Association, and Open Communication Channels	- Respect employees' rights to form or join labor unions; CLC mills in ChuPei and Hsinchu, and 6 mills/plants in Vietnam, have formal union agreements. - Maintain open two-way communication through various channels such as labor-management meetings, the suggestion system, and the Chairperson's and the audit mailbox.

Note: For the complete Human Rights Policy, please refer to the CLC Website – [Human Rights Policy](#)

Advancing Human Rights Due Diligence

Focusing on Key Risks and Taking Proactive Measures

CLC is implementing systems, training, and risk identification to reduce potential human rights impacts. In 2024, 37 hours of human rights advocacy and education training were held, with 734 participants, to strengthen awareness and workplace respect. Headquarters, following the Risk Management Operating Procedures, is identifying key risks in labor conditions and working hours management, gender equality, and health and safety, and is implementing targeted actions to support organizational sustainability.

Key Human Rights Risk Identification and Strategic Actions

Risk Issues	Risk Identification	Strategic Actions
I. Labor Conditions and Working Hours Management	Excessive working hours or lack of compensatory leave may affect employees' physical and mental health.	- An overtime management system and application process are in place, requiring advance application and supervisor approval - Established compensatory leave mechanisms to ensure reasonable working hours - The HR Department conducts monthly reviews of abnormal attendance and working hours data and reports irregularities - Conduct semiannual reviews of abnormal attendance rates at each plant and incorporate results into Year KPI management
II. Prevention of Sexual Harassment and Workplace Discrimination	Lack of grievance channels may delay handling of sexual harassment or discrimination cases, affecting employee well-being and company reputation.	- In compliance with the Gender Equality in Employment Act, gender equality is promoted and workplace sexual harassment prevention measures are established - Annual sexual harassment prevention and workplace inclusion training for supervisors - An anonymous complaint mailbox and an independent review team are in place to ensure an initial response within 3 days and case closure within 30 days 2 grievance cases resolved in 2024
III. Health and Safety	Inadequate training and protective measures for the work environment may result in occupational injuries.	- On-site Clinic for Occupational Health and Safety - Conduct annual and ad hoc identification of occupational safety and health risks and opportunities, and implement preventive, corrective, and control measures for potential hazards - Accident Investigation and Compensation Guidelines in place to ensure prompt response, investigation, and care mechanisms

The HQs Administration Division launched the CLC Human Rights Risk Identification and Due Diligence Promotion project in 2024, referencing GRI 3 Material Issue Management and GRI 410 Security Practices to establish the due diligence process. In Q4 2024, human rights risk issues were identified and the questionnaire was designed. Following consultation with external experts, the human rights due diligence questionnaire survey is scheduled for Q3 2025. High-risk units will be included in the annual audit plan, and internal control mechanisms will be established to reduce key human rights risks, enhance system transparency and sensitivity, and align with international sustainability standards while safeguarding employee welfare.

Human Rights Due Diligence Process and Implementation Timeline

Timeline	Item	Action
Q4 2024	Human Rights Risk Identification	- Identified potential human rights issues in the papermaking industry based on international human rights guidelines and industry characteristics - Consolidate internal and external stakeholder concerns, conduct preliminary risk identification, and establish an issue list
	Human Rights Risk Assessment	- Cross-functional HR and HSE teams assess key human rights risks, define risk impacts, and develop action plans - Completed due diligence questionnaire design and finalized supporting interview tools
2025	Human Rights Due Diligence	- Conducted due diligence surveys to identify risks among frontline production staff, female employees, and new hires - Compile survey results and establish a Risk Matrix
2026~	Establish Human Rights Risk Management Measures	- Review internal systems and processes based on Risk Matrix results, propose improvement and tracking mechanisms, and incorporate into internal management indicators - Material and high-risk issues are disclosed and integrated into the annual audit plan - Established a real-time major human rights incident reporting mechanism and integrated it into the internal control system
	Regular Review and Follow-up Improvement	- Regularly assess human rights risks and investigation procedures to ensure effective mitigation of human rights impacts - The case handling process is continuously revised to prevent recurrence of similar cases

Implement Training Programs to Optimize Management Organization

→ Elite Talent Rotation and Training Program

CLC conducts annual selection of high-performing employees for job rotation to develop diverse competencies and promotes outstanding performers to management positions for further management training.

→ Talents Recommendation and Training Planning System

CLC has established a comprehensive talent development system centered on organizational growth and multi-competency training, with structured learning and training programs for all levels. Since 2023, a talent nomination and development system has enabled supervisors to recommend high-potential employees, followed by competency assessments, targeted training, and career planning. As of the end of 2024, 19 individuals were successfully recommended, with 52 personnel changes recorded.

Applicability and Retention

CLC determines compensation based on education, professional knowledge, technologies, and relevant experience. Transparent policies are in place for promotion, salary adjustment, external training, and talent pool recommendations to support management career development. Mid- and senior-level managers receive executive health checkups, medical subsidies, and vehicle purchase subsidies. In 2024, the Taiwan area hired 351 new employees, accounting for 9.4% of total staff; 9.4% were male and 11.5% were female

Note: For details on the age distribution and regional breakdown of new CLC employees, see [Appendix – Employee Information List](#)

People-oriented, Talent Optimization

Maintain a Healthy Turnover Rate to Drive Organizational Vitality

To sustain organizational vitality, CLC maintained a stable turnover rate of around 10% in recent years. In 2024, 418 employees left in the Taiwan area, with a Turnover Rate of 10.7% (male: 9.5%, female: 1.3%). The company addressed retirements and labor shortages by recruiting new employees through job fairs and academic collaboration, fostering workforce diversity and innovation.

To retain talent and reduce turnover impact, direct supervisors and the HR conduct interviews with employees submitting resignation applications, offering internal transfer opportunities and career guidance to support employee development and strengthen organizational stability and employee engagement.

Anonymous Survey on Resignation Reasons, Digitalization System for Risk Management

Since 2019, CLC has used an Online Anonymous Survey to collect feedback from departing employees on six key aspects, including job content, competency development, and work feedback, as a basis for management analysis and review. To date, 279 valid responses have been collected, providing data to support ongoing human resources policy improvements. In 2024, CLC used the Power BI Digitalization system to integrate and visualize group-wide employee departure and retirement data, enabling real-time tracking and early identification of potential turnover risks for timely response.

Turnover Rate in the Past 3 Years

Year	2022	2023	2024
Total Turnover	345	406	390
Number of Employees	3,739	3,680	3,627
Turnover Rate	9.2%	11.0%	10.7%

Note 1: Taiwan Area

Note 2: For age distribution and regional breakdown of CLC departed employees, see the [Appendix – Employee Information List](#)

Re-employment of Senior Talent to Address Workforce Aging

CLC addressed labor shortages and an aging workforce by fostering a workplace culture that values experience and professional expertise. In 2024, 17 employees in the Taiwan area reached retirement age. Since 2018, 9 retired employees were rehired on short-term consultant contracts to support knowledge transfer and technologies, ensuring workforce continuity and adaptation to labor market changes.

Comprehensive Retirement System: Full Pension Funding

CLC allocates pension funds to Bank of Taiwan trust and individual accounts in accordance with the Labor Standards Act and Labor Pension Act, and implements the Employee Retirement Implementation Guidelines. An actuarial firm conducts annual reviews of retirement reserve account balances to ensure sufficient funding. Supervisors present the "Meritorious Service to CLC" retirement gold medal to long-serving retirees. The old pension scheme funding met required standards and was approved by the New Taipei City Labor Affairs Department for temporary suspension of further contributions. CLC will continue to monitor account status to ensure employee retirement protection and long-term welfare.



Listening to Employees

Digital HR – AI Assistant Mu Yu—Addresses Employee Needs

CLC collects employee feedback through multiple channels, including quarterly labor-management meetings, the annual Employee Engagement Survey, new employee feedback collection, exit interviews, the corporate labor union, and anonymous communication channels on the EIP internal website. In 2024, the Information Department developed the AI Assistant - MuYu to provide real-time responses and support for employee needs, enabling more efficient issue resolution and communication.



► Employee Assistance:

Dedicated HR staff respond to employee inquiries and provide information on regulations related to employee rights.



► Chairperson's Mailbox and Audit Hotline:

Public individual email addresses provided to encourage feedback.



► New Employee Feedback Survey:

Aggregates suggestions for decision-making and actively responds to employee input.



► Digital HR:

AI Assistant - MuYu provides real-time personal information inquiries, personnel applications, form downloads, and FAQ services.

Industry First Comprehensive Employee Voice Survey: Systematic Collection of Authentic Workplace Feedback

Since 2019, CLC has been the only company in the paper industry to systematically conduct comprehensive employee voice surveys, demonstrating a strong commitment to listening to employees and optimizing the workplace. The survey scope has expanded annually to cover six key areas: workplace environment, career development, supervisor incentives, colleague communication, corporate culture, and sustainable development.

CLC is increasing employee participation through incentive mechanisms to enhance the representativeness and applicability of survey results, which serve as a key basis for adjusting HR policies and management systems, and for fostering a people-centered sustainable workplace culture.

Enhancing Response Mechanisms and Advancing Workplace Equality and Communication Culture

In 2024, CLC continued to enhance the Employee Engagement Survey, focusing on workplace equality, communication mechanisms, and compensation and benefits. The HQs Administration Division established a cross-functional team to systematically analyze survey results, set specific optimization goals and action plans, and integrate these measures into human resources strategies and year planning to drive institutional improvements and achieve measurable outcomes.

- **Compensation Optimization:** Employee salaries increased for 18 consecutive years, with an annual rise of 1~3% . In 2024, welfare expenditure reached NTD 38,000 per person
- **Training and Development:** Promote elite rotation programs to enhance experience and develop young management talent
- **Organizational Communication:** Conducting communication and leadership training for mid- and senior-level managers to enhance organizational harmony and efficiency
- **Work Environment:** Constructed new dormitories at Hsinchu Paper Mill, ChuPei Paper Mill, Tayuan Box Plant, and Tayuan Paper Mill; continuously replacing outdated equipment to provide a comfortable office environment

CLC Dormitory Renovation and Upgrade for Employee Well-being

To reduce commuting pressure and living expenses while increasing willingness for job rotation, CLC established employee dormitories at all mills/plants and launched a nationwide dormitory renovation project in 2021, continuously upgrading equipment, expanding space, and introducing solar energy, heat pumps, and energy-saving technologies to create sustainable smart housing.

Dormitory Features



Comfortable
Living Space



Excellent Living
Amenities



Short Commute
Distance

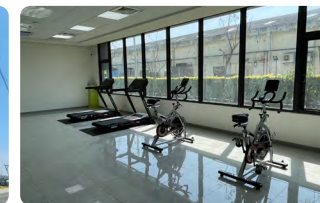


Ample Recreational
Facilities

The new "Yuanzhu" dormitory at Tayuan Box Plant was completed in July 2023, providing 96 beds with full living and recreational facilities. In April 2024, the "Andante Home" dormitory at ChuPei Paper Mill opened, offering 151 beds and comprehensive amenities, establishing a model standard for CLC dormitories. Dormitory capacity is being expanded nationwide, with the Tayuan Paper Mill renovation scheduled for completion by the end of 2026, and overseas accommodations are also being strengthened to support more employees.



ChuPei Paper Mill "Andante Home"



Tayuan Box Plant "Yuanzhu"

Industry-leading ESOT for Talent Retention; Employee Participation Rate Reached 57.2%

Subsidy Amount Up to NTD 43,990,000

Since 1998, CLC has led the industry in implementing the Employee Stock Ownership Trust (ESOT), encouraging employees to make monthly voluntary contributions, with the company matching 40% of the employees amount (up to NTD 3,200 monthly) for purchasing company stock. In 2024, the voluntary participation rate exceeded 57.2%, with the number of participants grew by 14% year-on-year. This system has enhanced employees financial autonomy and strengthened long-term savings and shared business results.

Year	2020	2021	2022	2023	2024
Number of employees participating in ESOT (persons)	1,613	1,648	1,795	1,818	2,073
Employee participation rate ^{Note 2}	47.4%	47.8%	51.7%	53.8%	57.2%
Trust Subsidy Amount (NTD 10,000)	3,553	3,538	3,893	4,052	4,399

Note 1: Taiwan Area

Note 2: Employee participation rate = Number of participating employees / (Total employees excluding blue-collar migrant workers)

Labor-management Meetings and Labor Union: Establishing a Robust Dialogue Mechanism

CLC holds quarterly labor-management coordination meetings at each mill/plant to facilitate mutual understanding and consensus. Two internal labor unions at ChuPei Paper Mill and Hsinchu Paper Mill convene annual member meetings and quarterly board meetings to address and follow up on union representatives' suggestions, ensuring employee needs and challenges are properly managed. In 2024, a total of 44 labor-management meetings were held company-wide.

CLC operates 6 mills/plants in Vietnam, each with a collective agreement signed with local labor unions. Ongoing communication and coordination ensure stable labor relations and a harmonious work environment.



Above-industry Compensation

18 Consecutive Years of Salary Increases; 2024 Up 5.3% vs. 2020

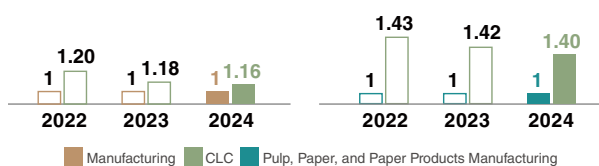
CLC offers competitive compensation packages, with entry-level salaries above the statutory minimum. Minimum starting salaries for new hires with a bachelor's degree exceeded the legal minimum by over 35%, and for those with a master's degree, by over 53%. The company implements gender equality and equal pay policies; pay differences at the same job level are primarily due to longer average tenure and higher overtime hours among male employees. Annual salary reviews are conducted based on market benchmarks and operational performance. Salaries have been adjusted upward for 18 consecutive years, with annual increases of approximately 1~3%; the 2024 adjustment rate was 2%. The average salary for full-time non-supervisory employees was NTD 845,000, with a median of NTD 793,000.

Average and Median Wage of Full-time Employees (Taiwan area)

	2022	2023	2024	Growth Rate
Number of full-time non-managerial employees (persons)	3,554	3,597	3,516	-1.1%
Average wage of full-time employees (NTD)	918,285	844,017	845,062	0.12%
Median wage of full-time employees (NTD)	849,955	785,970	793,494	0.96%

Note: Lower economic and trade activity in 2024 resulted in reduced performance and profitability, leading to decreased bonus payouts

Comparison of Regular Earnings of Employees in Different Industries by the DGBAS (Taiwan Area)



Note: For CLC's gender pay ratio and entry-level minimum salary compared to the local minimum wage, see the [Appendix – Employee Information List](#)

Over 70% of Operational Results Allocated to Basic-level Compensation

CLC allocates employee remuneration in accordance with the Securities and Exchange Act and related regulations when earnings are generated. The Compensation Committee determines the amount and distribution method, which are submitted to the BoD for approval and then distributed.

According to the amended Articles of Incorporation, effective 2024, CLC must allocate at least 1% of pre-tax profit (before employee compensation) as employee compensation. At least 60% of total employee compensation must be distributed to grassroots employees to ensure fairness and strengthen Incentives at all levels.

CLC maintains transparency and fairness in its compensation system, ensuring all employees share operational results, with frontline staff consistently receiving over 70% of total allocations in recent years, exceeding legal minimums. This demonstrates CLC's ongoing commitment to shared prosperity and extending compensation benefits to frontline levels.

To ensure the appropriateness and relevance of the compensation system, CLC continuously reviews business performance, employee contributions, and regulatory trends, making adjustments as needed to strengthen the alignment between compensation design and sustainability strategy. This approach enhances employee engagement, improves human capital management and sustainable governance, and supports stable operations and long-term competitiveness.

Employee Benefits

Better than the regulations: Employee benefits expenses per person up to NTD 38,000

CLC is committed to creating a work environment that enables talent to thrive, establishing comprehensive employee policies in full compliance with regulations, and providing benefits exceeding legal requirements, such as health checkups and diverse leave options. The company also implements measures to support employees' family lives and, through regular Employee Welfare Committee meetings, advances diversity and inclusion in welfare programs. In 2024, employee benefits expenditure per person reached approximately NTD 38,000. CLC received the 1111 Job Bank Happy Enterprise Recognition Gold Award for 5 consecutive years.



Unit : NTD 10,000	2022	2023	2024
Employee Benefits Expenses	18,701.6	16,010.7	13,705.2
Average Employee Benefits Expenditure	5.0	4.4	3.8

Note: Taiwan area

Benefits Superior to Regulations

Item	Content	Regulations
Health Checkup		
New Employee Health Checkup	Submit a general physical examination report and receipt dated within 3 months prior to onboarding; the company subsidizes up to NTD 1,500	None
General Health Checkup	Annual free health checkups provided for all employees, regardless of age	Examination frequency varies by age group
Executive Health Checkup Subsidy	NTD 17,000~23,000 per year	None
Leave		
Fully Paid Engagement Leave	One-day paid leave	None
Prenatal Check-up Leave	8 Days	7 days
Paternity and Prenatal Accompaniment Leave	8 Days	7 days
Natural Disaster Leave	Paid Leave	None
Reduced Working Hours		
Vietnam Area	44 hours/week	48 hours/week

Note: Except for the reduced working hours at the Vietnam plant, all other items are welfare benefits of the Taiwan parent company.

Benefits

Diverse Parental Support

- Multiple measures were implemented to support employee childbirth. In 2024, 72 children were born to CLC employees, resulting in a crude birth rate of 1.99%, significantly exceeding Taiwan's crude birth rate of 0.58%.
- Provide NT\$10,000 Childbirth Allowance for each newborn; both parents employed by the company may apply separately. In 2024, total disbursement reached NTD 720,000.
- Tuition fee discounts offered by 10 contracted kindergartens in Taiwan.

Year	2022	2023	2024	
CLC Crude Birth Rate	1.98%	1.74%	1.99%	
Taiwan Crude Birth Rate	0.60%	0.57%	0.58%	
Year	2022	2023	2024	2022~2024
Childbirth Allowance (Unit : NTD 10,000)	75.0	64.0	72.0	211.0

- Supportive Workplace for Pregnant Employees and Parents:** Employees who are parents are eligible for paternity leave for prenatal checkups, paternity leave, parental leave, and family care leave exceeding statutory requirements. Facilities include lactation rooms and designated parking for pregnant employees. Parental leave utilization in 2024 is shown in the table below

Item		
Total number of employees taking parental leave	187	20
Total number of employees applying for parental leave (A)	19	11
Total employees reinstated after parental leave (B)	10	4
Number of employees expected to return from parental leave	10	4
Parental leave reinstatement rate (B/A)	52.6%	36.3%
Number of employees reinstated after parental leave in the previous year (C)	8	4
Total employees who returned from parental leave in the previous year and remained employed for 12 months (D)	5	1
Parental leave retention rate (D/C)	62.5%	25%

Grants and Scholarship for Children

- Basic Education Allowance:** Employees' children from elementary through graduate school are eligible for annual semester scholarships. In 2024, NTD 6,394,000 was disbursed, totaling NTD 19,887,000 over 2022~2024.
- Scholarships** for Education and Diverse Development: In 2024, 21 recipients received a total of NTD 117,000 for outstanding achievements, including competition awards of up to NTD 9,000 per person. Total disbursements reached NTD 345,000 from 2022~2024.

Year	2022	2023	2024	2022~2024
Children's Scholarships (NTD 10,000)	702.2	647.1	639.4	1,988.7

Club Allowance

- Each employee received an annual subsidy of up to NTD 4,000 for club activities, with full funding for instructors and coaches. In 2024, there were 26 clubs with 950 participants, accounting for 26.2% of all employees.



Item	2022	2023	2024	2022~2024
Total Number of Clubs	25	25	26	-
Club Participation Total	851	887	950	-
Total Subsidy Amount (Unit : NTD 10,000)	264.4	231.7	281.4	783.5

Note: Taiwan area

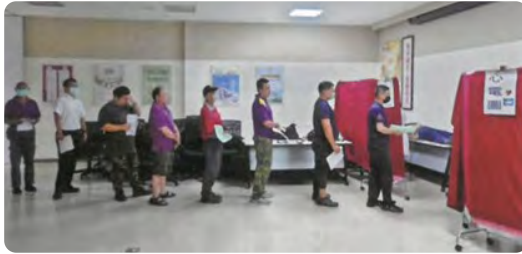
5.1 Diversity and Equal Opportunity

5.2 Talent Cultivation and Development

5.3 Healthy Workplace

Employee Health Checkup

- Annual free health checkup provided for all employees, regardless of age.
- Signed preferential health checkup programs for employees and dependents with 13 medical center or teaching hospital-level health checkup institutions.
- A subsidy of NTD 17,000–23,000 per person was provided for in-depth health check-ups for mid- and senior-level executives, with a total disbursement of NTD 5,893,000 in 2024.



Medical Subsidy

- Major illness subsidy (annual NTD 100,000), hospitalization subsidy (annual NTD 30,000), family emergency assistance (funded by Cheng Huo-Tien Charity Foundation), and accident disaster subsidy. Total subsidies disbursed in 2024 reached NTD 5,256,000.

Year	2022	2023	2024	2022~ 2024
Medical Subsidies for Employees and Dependents (Unit: NTD 10,000)	467.0	547.5	525.6	1,540.1

Travel Allowance

- Annual employee trips are organized, with travel subsidies of NTD 11,000~14,000 per person provided since 2020, including foreign employees.

Year	2022	2023	2024	2022~ 2024
Employee Travel Allowance (Unit: NTD 10,000)	1,195.6	2,319.4	2,055.6	5,570.6

Free Meal Provision	Free meals and overtime snacks are provided, with a hygienic dining environment.
Congratulatory Allowance	Wedding and birthday cash allowances.
Diverse Leave Options	• Paid natural disaster leave exceeding legal requirements and attendance bonuses. • One day paid engagement leave. • Menstrual leave: 1 time monthly.
Dormitory and Rental Subsidy	Transfer Dormitory/Rental Subsidy • Employees officially transferred to other counties or cities within the Taiwan area are provided with plant dormitories or may apply for a monthly rental subsidy of NTD 6,000 for external housing. An additional subsidy covers transportation for 4 round trips home. • Overseas employees are provided with on-site dormitory accommodation or a monthly housing allowance of USD 300~500, as well as annual transportation subsidies including 6 round-trip air tickets. Assignment Allowance In addition to base salary, employees assigned overseas receive a monthly assignment (living) allowance of at least USD 1,315 or RMB 8,120, depending on location and position. For short-term overseas business support, a support allowance of NTD 1,200 per day or NTD 36,000 monthly is provided.
Employee Assistance Program (EAP)	I. Work (Scope: Management Strategy, Work Adaptation, Career Assistance) • CLC Total Learning Talent Development System Provide systematic and targeted learning pathways by integrating internal instructors and job rotation to cultivate versatile paper industry talent, enabling employees to meet industry demands and job requirements. • Expat Employee Living and Working Training II. Life (Scope: Personal Life Issues Affecting Work) • Emergency assistance fund provided by the CLC Foundation for employees facing hardship due to injury or illness • Financial and insurance consulting, legal consulting • The Employee Consultation Operation Guidelines specify procedures for handling employee grievances, including interpretation of management regulations, psychological counseling, and life counseling • Assistance for Foreign Employees' Daily Life → Coordinating with agencies to provide medical assistance and address daily adaptation challenges for migrant workers → Foreign employees are invited to participate in the annual factory anniversary event → Provide travel subsidies and arrange itineraries for foreign employees → Full reimbursement for inbound quarantine and isolation expenses III. Health (Scope: Services to Maintain Employee Health and Enhance Quality of Work and Life) • Professional On-Site Medical Services → Employ on-site nurses and arrange regular physician consultations → Blood pressure monitors are installed in plants to encourage employees to monitor their blood pressure • Develop digitalization health service tools → 2019 CLC Health Management System Platform: Digitalized and Systematic Employee Health Management → In 2020, CLC launched the LINE@ Health Care Circle, where a team of nurses provided real-time medical information and advice, supported comprehensive epidemic investigations, and enabled immediate employee health monitoring during the pandemic

Note: Taiwan area



5.2 Talent Cultivation and Development

Material Issue

Talent Development

Strategy

Accumulate talent strengths and enhance job rotation and succession to drive sustainable organizational growth.



2030

Goals

- Training hour per staff up to 48 hours/ year (Taiwan Parent Company/Consolidated Company)
- Establish key talent pool and develop talent development roadmap

2025

Goals

- Training hour per staff up to 45 hours/ year (Taiwan Parent Company/Consolidated Company)
- Develop 300 internal instructors and advance both in-person and digitalization courses
 - ➔ Ongoing enhancement of hierarchical education and training
 - ➔ Continuing to add Digitalization courses
- Advance "AI green-collar" competencies and strengthen the Green-collar Talent pool

2024

Goals and Results

- Training hour per staff up to 42 hours/ year (Taiwan Parent Company/Consolidated Company)
 - ➔ Average annual training hours per person reached 60.8 for the Taiwan Parent Company and 47.5 for the Consolidated Company
 - ➔ Upgraded international management capabilities by holding 24 in-person courses across 47 sessions, marking the highest annual total to date
- Develop 300 internal instructors
 - ➔ Cultivated 332 internal instructors
 - ➔ Strengthen supervisor professional and management competencies, as well as team communication training
 - ➔ Continued to implement the international talent recruitment policy and the talent retention program
- Enhance AI green-collar competencies and strengthening the Green-collar Talent pool
 - ➔ Established the "CLC AI Academy", completed 9 courses in 21 sessions, and held the 1st AI Application Competition
 - ➔ Added 32 new E-Learning courses covering ESG and AI

People-oriented: Strengthening "Green-Collar and AI" Competencies to Enhance Corporate Sustainability and Resilience

Talent is essential to sustainable operations. In response to overseas expansion and international sustainable supply chain trends, CLC is advancing Low-carbon Smart Papermaking by leveraging technologies and operations to enhance internal carbon reduction and maximize sustainable impact. The company prioritizes AI green-collar talent development and cultivates a workplace centered on honor, responsibility, and achievement to attract and retain talent. CLC fosters a diverse and inclusive learning organization for sustainable talent development, targeting an average of 48 training hours per person by 2030 (Taiwan Parent Company/Consolidated Company), at least 300 internal instructors by 2025, and a younger management team through systematic sustainable competency education. In line with overseas expansion, CLC is rotating and developing international talent, strengthening the global green-collar talent pool to ensure future resilience and competitiveness.

10-year Sustainability Talent Development Program for Low-carbon Operations Transformation

CLC established a 10-year talent development plan under the "Smart Low-carbon Intelligent Paper" strategy, defining core and professional competencies by **position and grade in technologies and engineering, ESG governance, AI Digitalization, crisis management, and international languages**. The plan integrates digitalization-based talent management and evaluation systems to upgrade capabilities across the Consolidated Company. Internal training goals and curricula are dynamically set according to industry trends, with long-term management development programs for key roles. The company promotes academic collaboration, internships, interdisciplinary programs, and internal academies. Mandatory courses for promotion include ESG Sustainable Operations and Code of Ethical Conduct and Anti-corruption Advocacy, strengthening ESG knowledge and ethical compliance to build a stable sustainable talent pool.

Milestone Year of AI Applications: CLC AI Academy Established to Strengthen Group Sustainability through Intelligent Manufacturing

In response to rapid global AI development and evolving sustainability trends, CLC designated 2024 as the milestone year of AI applications. The company independently developed a GPT system to enhance administrative efficiency and HR quality. In manufacturing, CLC advanced intelligent factory transformation in line with Industry 4.0 policy, improving equipment integration, strengthening energy-saving and carbon reduction monitoring, and reducing labor dependence through automation to address long-standing workforce structure challenges. In corporate governance, CLC emphasized learning and application by establishing the **CLC AI Academy** in 2024, offering 9 courses, 21 in-person training sessions, and 10 online courses, with participation from 1,722 employees, representing nearly 50% of the Taiwan area workforce. To further deepen learning outcomes, CLC held its 1st AI Application Competition, attracting 31 cross-departmental teams. This initiative facilitated AI integration into daily operations, promoted cross-departmental collaboration, and enhanced talent retention through healthy competition.



Note: See [Highlight 2](#) of this report

Establish Own Responsible Units, to Draw up Training Strategies and Targets

In response to low-carbon operations transformation and group globalization, CLC is expanding key talent training, establishing a best practice sharing system, and setting up dedicated training units to systematically plan and implement talent development strategies. The company is also building a corporate and industry key talent pool and utilizing diverse training resources to strengthen management succession and enhance organizational talent resilience and competitiveness.



The HQs Administration Division coordinated company-wide education and training

Includes core competency and professional skills training to strengthen employees' understanding of operational strategy, corporate culture, sustainability, and industry knowledge, while enhancing cohesion.



Business Units (All Domestic and Overseas Mills/Plants)

Dedicated to strengthening employee competency training, with a focus on experience transfer and innovation, by integrating internal instructors, Total Productive Maintenance, and Excellent Proposals Improvement and Management Mechanisms to provide a systematic and goal-oriented learning environment.

Upgraded International Management Capabilities: Average Training Hours Per Capita Significantly Exceeded Annual Goals

A minimum learning hour threshold was established for mandatory and supplementary professional training to encourage employees to enhance their competencies. In 2024, the Taiwan Parent Company recorded a total of 220,655 learning hours (including E-Learning), with an average of 60.8 hours per person. The Consolidated Company reached 326,033 total training hours, averaging 47.5 hours per person. In 2024, 24 in-person courses were conducted across 47 sessions in the Taiwan area, totaling 219.5 hours and 1,878 participants, both reaching record highs.

Employee Education and Training

Region	Item	2022	2023	2024
Goals	Average Training Hours (per person)	✓ >42	✓ >42	✓ >42
	Average Training Hours (per person)	56.0	67.7	60.8
Taiwan Parent Company	Total Employee Training Hours	206,132	249,036	220,655
	Average Training Expense (NTD per person)	2,064	1,457	1,536
	Total Employee Training Expenditure (NTD)	7,596,276	5,354,582	5,571,045
	Average Training Hours (per person)	45.0	54.6	47.5
Consolidated Company	Total Employee Training Hours	305,459	335,690	326,033
	Average Training Expense (NTD per person)	1,432	1,117	1,051
	Total Employee Training Expenditure (NTD)	9,726,000	6,860,916	7,208,223
	Average Training Hours (per person)	45.0	54.6	47.5

Note: Training hours include internal training, external training, digitalization learning, and work guidance.



For details on the CLC Talent Training System

see the [CLC Website](#)



3 Training Channels: E-Learning, the Excellent Proposals Mechanism, Total Productive Maintenance (TPM)

E-Learning : Ubiquitous lifelong learning with systematized follow-up of training effectiveness

Since 2003, CLC invested NTD 1.4 million to develop digital learning modules, establishing a 24-hour digital learning platform for unrestricted employee self-learning. In 2011, an additional NTD 1.23 million was invested to upgrade the system with knowledge management and license management modules, integrated with the internal promotion system. In 2022, CLC invested NTD 1.38 million to further enhance the system by adding mobile learning functions, enabling employees to learn via mobile devices, systematically record learning progress and hours, and strengthening cybersecurity. In 2024, total employee training hours across CLC plants in Taiwan, Mainland China, and Vietnam reached 326,033 hours, including 35,590 hours of online learning (10.9%).

● Continual expansion in line with industry trends: Accumulated 523 e-learning courses in 31 categories

Full support for employee lifelong learning to cultivate green-collar talent. Expanded professional training in smart papermaking, zero-carbon transition, low-carbon transition, recycling technologies optimization, and risk management, as well as courses in languages, science, health, and ethics to strengthen ESG competencies. In 2024, 32 new online courses were added; 119 new courses were added over the past 3 years.

● Professional Expertise Transfer: Dual Approach with Internal and External Instructor Programs

Since 2022, CLC integrated the Internal Seed Instructor Cultivation and Training Program, adding courses in electronic equipment video instruction, digitalization course planning, and video editing, and shared these through a digital platform. In addition, ongoing monitoring of employee work needs and industry trends is conducted, with external experts and instructors invited to deliver the latest professional insights and practical experience, ensuring continued development of professional competencies.

Year	Launch new online courses
2022	33
2023	54
2024	32
Total	119

ESG Excellent Proposals Improvement and Management Mechanisms: Over 1,000 proposals annually, with cumulative revenue of nearly NTD 1.2 billion over 4 years

● Establish Internal Advice Channel: Encourage employees to identify issues and co-develop ESG innovation initiatives

The Excellent Proposals Improvement System was launched in 2008, using competition-based incentives to encourage employees to proactively identify and solve problems, fostering healthy competition and enhancing problem-solving and innovation capabilities. In 2024, nearly 50 benchmark cases were selected, generating NTD 170 million in value, with a cumulative total of nearly NTD 1.2 billion from 2021 to 2024. Related cases were uploaded to the E-Learning platform to strengthen digitalization experience transfer.

TPM: Implemented domestic and overseas training and knowledge transfer, cultivating 332 internal instructors

● 6 Core Skills Training to Enhance Production and Equipment Efficiency

CLC implemented Total Productive Maintenance (TPM) in 1999, introducing 6 core skills training to enhance production and equipment efficiency. All mills/plants established TPM executive secretaries and arranged internal and external instructors for on-site training. Professional production management courses were provided for frontline employees, frontline supervisors, and middle managers, with practical training to strengthen basic skills. Cross-plant exchange sessions were held every 6 months, totaling over 40 times. In 2024, CLC Talin Box Plant participated in the Greater China TPM Conference, presenting specific production equipment cases to demonstrate the application of the 6 TPM skills on the production line and sharing experience in integrating TPM with digitalization.



● Smart Manufacturing Upgrading and Application, Overseas Learning as 2 Core Training Themes

✓ Smart Manufacturing Upgrading and Application

Smart manufacturing upgrading and application: Enhance equipment reliability and operational efficiency through digital systems such as process optimization and autonomous machine learning. Strengthen personnel management and knowledge transfer to mitigate the impact of senior staff retirement and limited experience among new employees.

✓ Overseas Learning Integration

Overseas learning integration: Enhance the promotion of overseas ISO and TPM activities and training for Taiwanese staff expatriates to properly ingrain technology and data locally and accelerate the fundamental education of local employees.

● Expand Incubation Projects to Strengthen Knowledge Transfer

Since 2001, the Internal Instructor System has been implemented for TPM management, production, quality, environmental safety, and energy, facilitating the transfer of experience and accumulation of knowledge to strengthen core competencies. In March 2022, the Internal Seed Instructor Development Training Project was launched, with external instructors providing teaching skills training. By the end of 2024, 332 internal instructors had been developed. These instructors provide on-the-job training to enhance core skills and serve as corporate volunteers to promote social sustainability education.

Multifaceted Channels for Continuing Education: Allowance for External Training and Continuing Education and Foreign Language Improvement Program

External Training and Further Education Subsidies: Sustainability Degree Programs, Industry-Academia Internships

● In-service Education Subsidy: NTD 100,000 for master's programs; NTD 150,000 for doctoral programs

CLC collaborated with Da-Yeh University and the Taiwan Paper Industry Association to offer credit courses in pulping and papermaking, providing employees with on-the-job training and tuition subsidies. In recent years, in-service education subsidies were expanded to NTD 100,000 per employee for master's programs and NTD 150,000 for doctoral programs, with 8 employees applying from 2022 to 2024.

● Professional Competency Training Subsidy: Papermaking Expertise, ESG Certification

Provide employees with flexible self-directed learning options, including GMP Quality Assurance Engineer Certification and Class A Wastewater Treatment Certification, along with related training subsidies.

● Foreign Language Proficiency Enhancement Project: Incentive program covered 3 languages, with 156 applications

Foreign language incentive bonuses were introduced in 2006. In 2015, eligible languages expanded from English and Japanese to include Vietnamese. A total of 156 applications have been submitted.

Industry-Academia Collaboration for Green-collar Talent Development in Taiwan

✓ Internship and Graduate Student Talent Development

Internship positions were offered at all mills/plants during winter and summer breaks, with scholarships provided to support students from papermaking-related majors in transitioning to the workforce. Since 2019, industry-academia collaboration projects have been implemented with the Department of Forestry at National Chung Hsing University, Minghsin University of Science and Technology, Lunghwa University of Science and Technology, and Vanung University, with dedicated mentors conducting on-site practical training. A total of 123 internship positions have been provided. Since 2023, retention scholarships of up to NTD 72,000 have been offered to encourage outstanding students to join the industry after graduation. A master's student scholarship program was established, granting eligible students NTD 120,000 per semester for up to 2 academic years to attract talent from forestry, engineering, chemical engineering, and related science and agriculture disciplines.

✓ Elite Talent Academic Collaboration Program: Circular economy executive development and low-carbon operations technology development

In 2022, partnered with National Chung Hsing University and 11 leading circular economy enterprises to establish Asia's 1st Circular Economy Research Institute, cultivating advanced and specialized talent for the national circular economy.



CLC Paper Fun Reading Bar offers a variety of publications for employees.

Diversity and Inclusion for a More Inclusive Workplace

We value professional innovation and multifaceted inclusion, emphasizing the assessment of management and technical capabilities of key talents and mid- to senior-level managers. We are committed to addressing stereotypes of labor-intensive and aging industries by promoting high-potential young employees and advancing gender diversity to build a gender-friendly workplace and a younger, more diverse management team.

CLC conducts annual performance evaluations for employees with over 1 year of service, including reinstated staff. New employees are assessed under a separate evaluation system. All assessments are conducted without gender bias. Rewards are determined based on individual performance ratings and annual operating results.

To advance ESG talent development and build a localized green-collar talent pool, thematic training for mid- and senior-level managers in 2024 focused on team communication, management guideline development, management rotation, and digitalization decision-making. Digitalization management tools were introduced to establish modular management guidelines, ensuring consistent management standards for managers involved in overseas expansion.

- ✓ From 2018 to 2024, **364** employees were promoted to managerial positions, with **109** under age 35 (27.5%), advancing management rejuvenation.
- ✓ From 2018 to 2024, **66** outstanding entry-level employees with less than 5 years of service were promoted to managerial positions, with women accounting for **10.6%**.
- ✓ In the 2024 performance evaluation of **3,006** employees (91% male, 91% female), the proportion of females rated A exceeded that of males.

Note: For details on CLC employee evaluation status, see the [Appendix – Employee Information List](#)

Enhancing Managerial Competencies, Deploying Key Management Talent Pools Domestically and Internationally

✓ Enhancing Leadership and Global Perspective, Record High for In-Person Courses

CLC continues to strengthen leadership training for mid- and senior-level managers and implements overseas operations and management training to enhance international management capabilities. In 2024, HQs coordinated 24 courses across 47 sessions, totaling 219.5 hours and 1,878 participants. In-person sessions reached a record high, improving learning outcomes and experience sharing through face-to-face instruction.

A systematic curriculum and planned job rotation have been implemented to develop key personnel at all levels to support overseas expansion, demonstrating CLC's commitment to strengthening talent competitiveness in global operations.



✓ Digital Transformation Seed Program: Strengthening decision-making with big data

Since 2021, Power BI has been implemented to enable big data visualization and real-time tracking of operational KPIs and key indicators, allowing managers to conduct integrated analysis and make decisions via mobile devices. In 2024, 4 AI applications workshops were held for the Chairperson, Vice Chairperson, and senior executives to strengthen digitalization capabilities and enhance decision-making efficiency and foresight.

✓ Enhance Legal Compliance and Protect Labor Rights

CLC emphasized legal compliance and harmonious labor relations. In 2024, 5 human resources and labor law courses were conducted, utilizing practical case studies to illustrate labor law applications and solutions. These sessions enabled supervisors to address common regulatory issues and prevent labor disputes.



Recruiting Overseas Industry Talents and Management Assistants

✓ Developing International Talent for Globalization and the New Southbound Policy

In line with CLC's global expansion and New Southbound strategies, the Regulations for Management of Overseas Expatriates are continuously optimized to encourage employees to take overseas assignments and broaden their international perspective. Through the Corrugated Container Key Training Program, key expatriate talent with multinational management capabilities are systematically developed, with annual overseas assignments consistently exceeding 100, strengthening operational capacity at overseas sites.

Year	2020	2021	2022	2023	2024
Number of Expatriates	132	140	145	192	102

Note: Taiwan area

✓ Hiring and developing over a dozen overseas Chinese and international students into management assistants of overseas locations.

Since 2016, CLC has recruited overseas Chinese and international graduates from Taiwan and assigned them as reserve managers at overseas sites. Over 10 local managers have been trained and appointed as section chiefs or team leaders.

✓ Implementing the talents retention plan in response to the government's international talents recruitment policy.

CLC compiled and reviewed qualified lists of foreign migrant workers with professional skills, assessed their expertise and retention willingness, and supported long-term employment in Taiwan to address labor shortages. For those whose contracts expired and returned home, reemployment at CLC's overseas sites was facilitated to retain paper industry expertise. In 2024, CLC revised foreign employee employment and management regulations. From 2025, 3 to 5 mid-level technical personnel will be transferred for long-term retention.

Developing Future Management Talents by Holding "New Employees Consensus Camp" (3 Days, 2 Nights) Every Year

✓ Help the new member to improve the understanding of CLCs operational strategies, and industry and cohere the loyalty of new employees. °



2024 New Employees Consensus Camp (11.20–11.22).



65 Years of CLC Craftsmanship Showcased by PTS Documentary on Papermaking Aesthetics

A carton composed of six panels embodies a spirit of continuous craftsmanship refinement.

As we celebrated our 65th anniversary in 2024, the Golden Bell Award-winning Public Television program "Clap Hands in the Factory" filmed its 2nd season at CLC's Tayuan Paper Mill and Tayuan Box Plant, using 4K cameras and advanced audio equipment to document the corrugated paper production process and corrugated container die-cutting, highlighting applications of paper products and the industrial aesthetics of papermaking.

Several CLC professionals were interviewed on the program, sharing their dedication to quality, passion for technologies, and pursuit of innovation, revealing the expertise behind modern papermaking.

After 8 months of post-production, "Clap Hands in the Factory 2" EP5 "The Past and Present of Paper" premiered on PTS on November 15, 2024. The episode showcased the cultural and industrial significance of paper and highlighted CLC's commitment to **sustainability, talent development, and innovation** in papermaking.



"Clapping Hands in the Factory" received the 58th Golden Bell Award for "Lifestyle Program". Produced in 4K, the program featured site visits to aircraft maintenance, dairy, screw, bakery, logging, and rice wine facilities, using multi-angle filming to document manufacturing processes and craftsmanship.

Craftsmanship Perspective, Sustainable Inheritance



Boyang Zheng
Tayuan Paper Mill
Quality Control
Section Chief

2024 marks the 65th anniversary of CLC. Skills and expertise have been passed down through generations of talent, with each mentor hoping successors will excel. Building on past achievements, I aim to plant the seeds of growth in each CLC Unit, becoming a sturdy tree for future successors to find shade or a shoulder for them to stand on.



Yalin Wu
Tayuan Box Plant
Structural Design
by the Design
Center

A passion for corrugated structures and a commitment to excellence in R&D drive me to embrace every design challenge. Carton manufacturing involves multiple stages, where even a minor design error can result in rework or production line interruptions. I consistently uphold rigorous standards and strive to infuse creativity into corrugated paper, transforming it into works of art.



Weipeng Wang
Tayuan Paper Mill
Deputy Section
Chief, Pulpboard
Section

The pulp and paper industry implements product recycling, waste-to-energy, white water recycling, and biogas power generation as core circular economy practices. These circular economy practices turn waste into valuable resources, demonstrating that sustainable resource management is key to long-term wealth and a better future.



"Clap Hands in the Factory 2" Streaming Platforms [PTS+](#)



5.3 Healthy Workplace

Material Issue

Healthy Workplace

Strategy

Risk management, safe operations, health protection.



2030

2025

2024

Goals

Goals

Goals and Results

- Foster a health and safety culture by targeting a 5% YoY increase in participants in OH&S and health promotion activities and seminars starting from 2025
- Ongoing support for the implementation of ISO 45001 occupational health and safety management systems at new overseas plants
- Implementing Zero Workplace Accidents

- Target 2,000 participants for OH&S and health promotion activities
- Annual employee occupational safety and health training: 22 hours per person
- Ongoing support for the implementation of ISO 45001 occupational health and safety management systems at new overseas plants
- Implementing Zero Workplace Accidents

- Target 1,900 participants for OH&S and health promotion activities
 - ➔ A total of 2,149 participants
 - ➔ Over the past 4 years, 30 feature articles were published in the Health Promotion Column, including 13 in 2024
 - ➔ Addressed employee risks of hypertension, hyperglycemia, and hyperlipidemia by holding weight management and health promotion seminars
 - ➔ Conducted customer satisfaction surveys on healthy meals to optimize employee dining
 - ➔ Lunched the "I care: I Have Something to Say" platform, with 34 proposals received and active company responses underway
- Annual employee occupational safety and health training: 22 hours per person
 - ➔ 35.7 hours per person, +7.6 hours YoY (Taiwan Parent Company); 26.9 hours per person (Consolidated Company)
- Ongoing support for the implementation of ISO 45001 occupational health and safety management systems at new overseas plants
 - ➔ 5 mills/plants in Vietnam are completed; Binh Giang Box Plant is under construction
- Implementing Zero Workplace Accidents
 - ➔ No major occupational accidents occurred in 2024

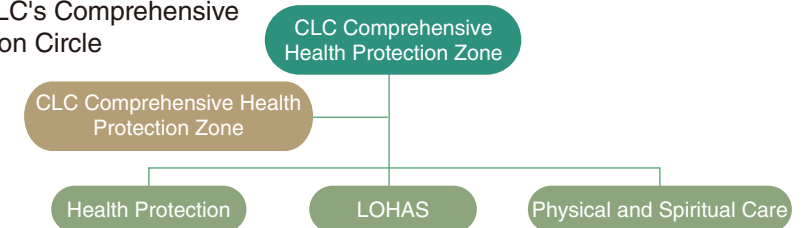


CLC Safety and Health Policy

“We believe that valuing the safety and health of every employee, together with effective risk management, is essential to realizing our vision of sustainable business development.”



Establishing CLC's Comprehensive Health Protection Circle



Optimizing Health and Safety Policy, Focusing on Systematic Risk Management, Safeguarding Employee Well-being

CLC established the ESH Promotion Committee in 2000 and implemented a health management system based on the ISO 45001 framework, covering employee healthcare and wellness with a focus on health protection, leisure and well-being, and physical and mental care.

In 2024, CLC enhanced its safety and health policy, establishing three core pillars: risk management, safe operations, and health protection. The updated policy is implemented through regular risk assessments, safety training, and equipment inspections to ensure workplace safety. Employee health management and emergency response capabilities are strengthened through health examinations, consultations, and emergency drills, supporting the goal of prevention over treatment.

CLC is committed to safeguarding employee well-being and workplace dignity by continuously enhancing occupational safety, health management, and integrating human rights into corporate governance. In 2024, the HQs conducted Human Rights Risk Identification^{Note}, identified 3 key risk issues, and initiated the implementation of a Human Rights Due Diligence mechanism to strengthen institutional response and policy enforcement, aiming to create a safer and fairer work environment.

Note: For the CLC Human Rights Risk Identification process, see [Section 5.1 Human Rights Risk Identification in this report](#)

Annual action plans are implemented by safety and health personnel, plant nurses, and occupational physicians at each CLC plant to advance health management and create a healthy workplace. By integrating health promotion and risk management, a comprehensive health protection system is established to ensure employees work in a safe and healthy environment.

CLC Safety and Health Policy

Policy: Risk Management, Operational Safety, Health Protection

Task Implementation



Workplace Risk Assessment:

Regular workplace risk assessments are conducted to promptly identify and address potential hazards.



OH&S Education and Training:

Comprehensive OH&S training is provided for all employees to enhance safety awareness and promote health.



Equipment Safety Inspection:

Safety inspections and maintenance are implemented through automated systems to ensure proper machinery operation.



Health Checks and Consultation:

Annual health checks and consultation channels are provided to safeguard employees' physical and mental health.



Emergency Response Drills:

Regular drills are conducted to simulate incidents and enhance response capabilities.

Management Process

Each plant completes annual ISO 45001 certification. In accordance with ISO/CNS 45001:2018, the leadership team and the HQs Health, Safety & Environment Department evaluate and set implementation directions, authorizing plant management representatives and safety and health departments.

➔ Conduct safety and health risk assessments

➔ Propose improvement and control measures

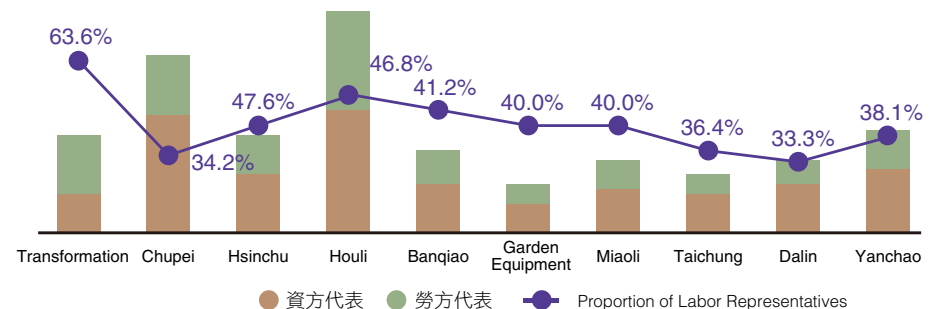
➔ Department heads, occupational safety personnel, plant nurses, and occupational physicians jointly participate in health management

Health Promotion Activities at Plants: +5% YoY Participation Target from 2025

CLC is implementing ongoing health promotion activities and enhanced care programs to advance workplace health, aiming for all sites to obtain the Healthy Workplace Accreditation from the MoHW. Short- and medium-term targets for participation have been set. In 2024, 114 health promotion activities and seminars were held, with 2,149 total participants.

Each CLC mill/plant has established an OH&S Committee comprising site supervisors, OH&S personnel, and other relevant staff. Labor representatives, elected by employees, accounted for 33.3%~63.6% of each committee and included production line workers, team leaders, section chiefs, TPM executive secretaries, and plant nurses. The OH&S Committee holds quarterly meetings to discuss and implement OH&S-related decisions and activities. CLC continues to support the implementation of ISO 45001 OH&S Management Systems at overseas sites. Vietnam Binh Duong Paper Mill, Binh Duong Plant, Viet Long Plant, Long An Plant, and Bac Giang Plant completed system implementation in 2023; Binh Gi Plant is actively introducing the system.

2024 OH&S Committee Labor and Management Representatives



Note: Taiwan Parent Company

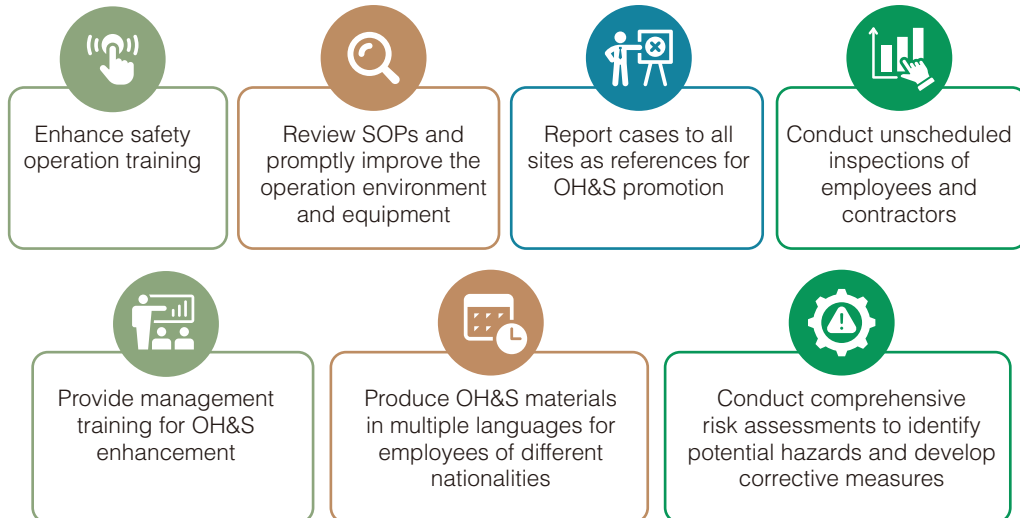
HSE Risk Assessment with a Total of 4,975 OH&S Proposals Received

CLC follows the ISO/CNS 45001:2018 management framework and PDCA cycle to establish EHS assessment criteria. Annual assessments of risks and opportunities are conducted, with improvement or control measures proposed and decided at management review meetings. Plant management representatives allocate resources as needed. When equipment or process changes, occupational accidents, or corrective actions for nonconformities occur, hazard identification and risk assessment are repeated.

To strengthen preventive management and continuous improvement, CLC identifies near-miss incidents as key risk indicators and tracks reporting records and corrective actions through its management system to reduce potential hazards. In addition, CLC promotes proposal-based improvements, encouraging employees to submit suggestions on operational safety and environmental issues. In 2024, a total of 4,975 safety and health proposals were submitted, and outstanding plants were recognized at the year-end performance review meetings.



In 2024, CLC Consolidated Company (Taiwan, Mainland China, Vietnam) reported 21 disabling employee injuries: 9 entanglements, 3 falls, 1 fall from height, 3 cuts, 2 crush injuries, 2 collisions, and 1 struck by falling object. No occupational diseases occurred. For non-employees, 4 disabling injuries were recorded: 1 fall from height, 1 collision, 1 cut, and 1 fall. No occupational diseases occurred. Targeted improvement measures were implemented to advance toward a zero-accident workplace:



Occupational Injury Improvement Case

Case 1 2024/11/9: Employee sustained a right-hand injury from folding machine operation

Improvement Measures:

1. The folding machine startup delay was extended to increase reaction time
2. Audiovisual alarms were installed on both sides of the machine to ensure all nearby personnel could hear and see alerts
3. Multilingual safety signs were posted to enhance foreign employees' awareness

Case 2 2024/11/8: Foreign employee sustained a left leg injury while covering waste paper with a tarpaulin

Improvement Measures:

1. Stacking methods for recovered paper particles at box plants were reviewed and improved
2. The OH&S Hazard Identification and Risk Assessment Form was reassessed
3. Raw Material Stockpile Tarpaulin Management Measures were immediately reviewed, formulated, and implemented

Note: For more information on CLC's occupational accident statistics, please refer to the [appendix – List of Healthy Workplace-related Information](#)

To strengthen real-time tracking of occupational safety and health regulations, CLC mills/plants implemented safety and health education and training plans. Employees participated in external seminars and training courses, while senior staff and external experts with practical experience in occupational safety regulations delivered lectures and conducted on-site diagnostics to enhance understanding of relevant laws and key implementation points. In 2024, the average safety and health training hours per employee reached 35.7 hours, increased 7.6 hours from 2023 (Taiwan Parent Company); in the consolidated company, the average was 26.9 hours.

Since 2021, CLC has published 30 articles in the Health Promotion Column of its Bimonthly Journal, focusing in 2024 on stress relief and insomnia. In 2024, 13 activities—including stress management courses and psychologist-led sessions—recorded 495 total participants. Practical stress relief methods were shared to support employee physical and mental health and improve quality of life and work efficiency.

Item	2021	2022	2023	2024
HSE Training Hours	95,542	78,130	93,342	128,033
Average training hours per employee	25.9	23.5	28.1	35.7
CLC Bimonthly Journal: Health Promotion Column (Number of Articles)	6	5	6	13

Note: 2024 Taiwan Parent Company in-person courses.

III. Prevention and Management of Hypertension, Hyperglycemia, and Hyperlipidemia

With increasing rates of dining out and sedentary lifestyles, unbalanced diets and obesity have become major health concerns, highlighting the importance of weight management. CLC promotes employee health through low-oil, low-salt meals, encourages exercise and healthy habits, and continues to subsidize diverse clubs. In 2024, 25 sports clubs accounted for 95% of all employee clubs, fostering a culture of physical activity.

In alignment with the governments "Three Highs" (hypertension, hyperglycemia, hyperlipidemia) prevention policy, CLC monitors employee waist circumference and BMI as key chronic disease risk indicators and conducts annual follow-up analyses after health checkups. In 2024, 61.6% of employees in the Taiwan area were overweight or obese, exceeding the national average note. These employees were classified as a "Three Highs Risk Group" and receive regular health tracking and professional consultations. CLC continues to implement the "Wellness Weight Management Program" and "Stay Away from the Three Highs" health seminars, promoting the "Five Health Strategies"—regular exercise, balanced diet, emotional well-being, adequate sleep, and avoidance of smoking and alcohol—to reduce chronic disease risk and strengthen employee health awareness and self-management.

Note: According to the Health Promotion Administration, Taiwan's adult overweight and obesity rate reached 50.8% in 2024.

The company conducts regular employee meal satisfaction surveys to optimize food quality and nutrition, implements cancer prevention and screening programs, promotes influenza vaccination, and provides timely health checkups and preventive measures to enhance employee health and overall health management performance.

Health Seminar – Creating a Workplace of Well-being

CLC holds health seminars and stress management activities, inviting psychologists to provide support and promote employee well-being and work-life balance.



Clinical psychologist Wei-Chung Huang was invited to Houli Paper Mill to deliver a lecture on stress relief and sleep improvement.



Tayuan Paper Mill invited a professional instructor to conduct the "Time to Get Moving" health promotion activity, providing on-site instruction in simple at-home strength training to improve cardiopulmonary function, muscle strength, and coordination, supporting both physical and cognitive health.

"I Care: I Have Something to Say" Platform for Employee Suggestions on Workplace Health and Safety Improvement

To strengthen workplace safety and health, CLC launched the "I care: I Have Something to Say" platform in January 2024, encouraging employees to submit anonymous proposals on safety, health, and emotional stress. In 2024, 34 proposals were received. The company responded to each proposal and publicly posted feedback to promote transparent communication and drive workplace improvements with employees.



Specialized Training to Strengthen Supervisory OH&S Law Responsibilities and Management Practices

In 2024, a series of specialized training courses on "The Role and Responsibilities of Supervisors under the Occupational Safety and Health Act" was organized, with active participation from supervisors at multiple levels. The courses enhanced regulatory awareness and emphasized practical application, supporting supervisors in embedding OH&S principles into daily management and corporate operations.



Prioritizing Operational Safety: Implemented a smoke-free policy, installed AEDs, and enhanced safety training

- Ongoing replacement and upgrade of equipment, integrated with digitalization management, to reduce safety risks
- All sites are equipped with AEDs to protect employees from the 2nd leading cause of death in Taiwan
- Hosted EHS seminars to enhance crisis awareness



CPR training session



Panqiao Plant received the Enterprise Disaster Prevention Award from the New Taipei City Government for active participation in disaster prevention collaboration.

Strengthening Global Disaster Prevention Drills: Vietnam Viva Tawana Plant Recognized as Fire Safety Model Enterprise

Based on the principle that "Company safety is a shared responsibility," fire safety drills are incorporated into employee education and training by CLC to enhance plant safety and strengthen emergency response capabilities. Annual fire drills at each mill/plant train employees in evacuation procedures, basic first aid, and the use of fire extinguishers and hydrants, reinforcing self-defense fire safety and prioritizing risk prevention.

At multiple domestic and overseas plants, fire brigades were established by CLC to ensure rapid emergency response. The Binh Duong Paper Mill fire brigade consisted of 49 members from the Water Treatment and General Affairs sections, who received intensive training and remained on standby to support both plant disaster prevention and community safety. In 2024, fire drills continued to be conducted at global sites by CLC. The Viet Long Box Plant was recognized as a model enterprise for fire safety in Dong Nai Province, Vietnam, demonstrating effective disaster management.



Enhancing the Management and Efficiency of Visits by External Units of HSE

We constantly optimize OH&S management by implementing an electronic ESH mill/plant visit response system to provide real-time and accurate information to ESH personnel and management, enhancing information sharing and management efficiency. There were 141 times of the ESH mill/plant visits in 2024.

Contractor Management

CLC established the Contractor ESH Management Guidelines to strengthen contractor safety management and protect operational safety, contractor personnel, and equipment. The ChuPei Paper Mill holds the Annual Outstanding Contractor Selection Event to promote contractor compliance with company policies and improve workplace safety. In 2024, CLC delivered safety and health training to contractors 9,055 times, totaling 5,763 hours.

- Select and verify qualified contractors to undertake contracts.
- Sign the OH&S and environmental management undertaking.
- Hold consultative organization meetings to publicize hazard factors required notification for in-house operation.
- Perform plan entry control and apply for safe work permit.
- Implement in-house construction control and abide by in-house OH&S management regulations.
- Work safety check points: hot work, work at height, lifting/hoisting, risk management, cutting.
- Publicize the electrical equipment management regulations.

Cross-factory Audit and OH&S Rating

Each mill/plant establishes annual OH&S goals and performance indicators in accordance with the OH&S management system. The HQs Health, Safety & Environment Department conducts cross-factory audits and annual mill/plant ratings to monitor implementation, consolidates results for management decision-making, and sets goals and indicators for the following year. Dynamic management processes and OH&S evaluations facilitate cross-factory and cross-division learning, strengthening the OH&S management system. Irregular OH&S inspections are also conducted at the factories in Vietnam, covering on-site 5S management, environmental management, and OH&S system operations, with overseas audits enhancing implementation. In 2024, we performed cross-factory OH&S audits on Corrugated Container Division at 7 mills and conducted annual OH&S rating on Containerboard Division, Household Products at 4 mills/plants.

Comprehensive Health Protection: CLC Digitalization Health Management System Platform

CLC independently developed the "CLC Health Management Platform" for real-time tracking of high health-risk employees, with analysis and improvement recommendations provided by plant nurses and occupational physicians.



Health Inspection

We value the mental and physical health of employees. Every new employee must submit a physical examination report, and active employees must take the annual health checkup. For employees working in special work environments, we provide special health checkups (e.g. noise, dust, and ionized radiation examination). Cases requiring management and follow-up as determined by the physician are managed according to the protection plan, with employees provided sufficient information for further medical attention.

- In 2024, 3,568 employees participated in general health checkup, with an achievement rate of 99.4%; and 1,148 employees took the special health checkup. Medical staff provided health guidance and consultations to employees with abnormal results.
- Since 2021, Dr. Guan Tang Li has served as medical director, providing weekly consultations on major medical and health care issues.



Improving Operation Environment

Besides improving the ventilation equipment, cooling systems were installed in key work areas to enhance workplace comfort.



Proactive Respiratory Health Protection: Companywide Smoking Ban, Smoking Cessation Classes and Competitions

- Promoted a smoke-free workplace across all sites to create a safe and healthy environment and reduce employee exposure to 2ndhand smoke.
- Since 2020, smoking cessation classes have been offered to provide professional support and encourage employees to participate.
- Since 2023, the Smoking Cessation Competition has been held. Through carbon monoxide testing, peer support and prize recognition, to enhance employees' motivation to quit smoking.



Health Promotion

We promote health management and health promotion activities to build a healthy workplace. In 2024, we held 114 health promotion activities and seminars, with 2,149 participants.



Health Protection

In accordance with the OH&S Act, stress management seminars, core muscle exercise sessions, ergonomics hazard prevention seminars, and on-site guidance are arranged to address overwork, maternity, ergonomics, workplace violence, and respiratory protection, thereby enhancing health protection.

Health Promotion Achievements Certified by 3 Major Organizations

In 2024, we promoted health initiatives and seminars on weight management, cancer prevention, and influenza vaccination, and enforced a smoke-free policy across all facilities. Preventive measures, including written assessments, were also implemented to address potential physical or mental harm during work, ensuring comprehensive protection of employee health.

CLC promoted work-life balance by establishing sports facilities in 11 mills/plants and fully subsidizing employee clubs for participation in health and leisure activities. Since 2020, CLC has partnered with the Sports Administration's Sports Calendar Platform to publicize events and competitions, actively creating a healthy and happy workplace.

- **CLC received the "iSports" certification from the Sports Administration for the 2nd time (2022~2025) for advancing a healthy workplace**



- **10 mills/plants awarded MoHW "Healthy Workplace": implemented site-specific projects, and established performance indicators for tracking and management. Coverage exceeded 90%, with continued efforts to extend certification**



- ➔ Health Promotion Mark: Headquarters, Panchiao Plant, Tayuan Box Plant, Hsinchu Paper Mill, Chupei Paper Mill, Tayuan Paper Mill
- ➔ Health Activation Mark: Miaoli Box Plant, Houli Paper Mill, Taichung Box Plant, Talin Box Plant

- **Recognized as a "Corporate Health Responsibility Enterprise" by CommonHealth Magazine for 6 consecutive years, and selected among the "Healthy 99 Enterprises"**



Knowing – Knowledge Advocacy

The CLC Bimonthly Journal, EIP internal website, and health management app share new health knowledge and organize health seminars.

Eating – Healthy Diet

The head office and mills offer free healthy meals which are checked by the professional medical staff in factory.

Exercising – Active Living

In alignment with Taiwan's Vision for Health and the promotion of sports, CLC encouraged employees to form clubs. In 2024, there were 25 clubs, with 95% focused on sports, and 930 employee participants.

Supporting – Medical Assistance

questionnaires to identify high-risk employees, provide health guidance, and arrange consultations with occupational physicians or referrals to medical institutions.

06

Social Value Co-Creation

Foster diversity and inclusion to enhance public well-being and drive positive social impact.



- ▲ NTD **33.01** million allocated to social welfare, including NTD **20** million for Hualien earthquake reconstruction
- ▲ Paper with Taiwan: Adoption of **10,000** kg CLC 65th Anniversary's Organic Rice
- ▲ Establishing the 1st **Paper Library with Counseling Functions**
Creating quality learning and counseling environments
- ▲ **3** new paper libraries established, totaling **31** nationwide
Planted **18,209** sustainable seeds
- ▲ A total of **19** sustainability workshops were held, training **1,108** teachers influenced **21,717** students
- ▲ **2,593** volunteer service hours; launched the Corporate Volunteer Conference



Material Issue

Supply Chain Management

Strategy

Guided by the vision of "CLC love paper & our earth," CLC integrates internal resources with the Cheng Huo-Tien Charity Foundation and the CLC Children's Care Foundation to advance four key initiatives: "Secondary Forest," "Care for Children," "Social Participation," and "Emergency Assistance."



2030

Goals

- Social welfare investment over NTD 10 million
- Expand impact through cross-sector collaboration to benefit more stakeholders
- Continue to optimize the volunteer system and incentivize employee participation
- Strengthen social engagement at overseas sites to promote local inclusion and sustainable impact
- Promote the Secondary Forest Program to enhance sustainability education and recycling awareness
- A total of 40 paper libraries to be established
- Regularly monitor paper library usage and maintenance to ensure sustainable resource use

2025

Goals

- Social welfare investment over NTD 10 million
- Expand impact through cross-sector collaboration to benefit more stakeholders
- Continue to optimize the volunteer system and incentivize employee participation
- Strengthen social engagement at overseas sites to promote local inclusion and sustainable impact
- Promote the Secondary Forest Program to enhance sustainability education and recycling awareness
- Add at least 2 paper libraries
- Regularly monitor paper library usage and maintenance to ensure sustainable resource use

2024

Goals and Results

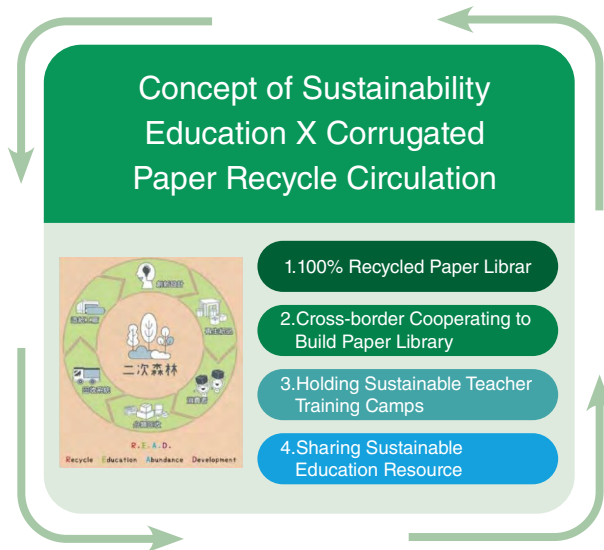
- Social welfare investment to exceed NTD 10 million
 - ➔ NTD 33.01 million, including NTD 20 million allocated for Hualien post-earthquake reconstruction
 - ➔ Provided support for 16 consecutive years, benefiting over 115,000 Taiwan Fund for Children and Families' households
 - ➔ Provided emergency assistance for 81 cases; cumulative total reached 383 cases in the past 5 years
 - ➔ Provided educational support to over 12,000 children and adolescents
- Enhance the corporate volunteer participation system
 - ➔ There were 456 environmental volunteer and 388 caring volunteer participations, totaling 2,593 service hours
 - ➔ Established the CLC Corporate Volunteer Management Guidelines and held the Corporate Volunteer Conference
- Expand social engagement mechanisms at overseas sites
 - ➔ Held the 3rd session of the CLC Vietnam Scholarship, supporting local communities
- Organize secondary forest promotion activities
 - ➔ Launched a paper recycling education website, conducted 19 workshops, trained 1,108 teachers, and reached 21,717 students
 - ➔ Assisted community recycling of 4,625 tonnes of paper, with a 5 year cumulative total of 8,939 tonnes
 - ➔ Opened factory tours, attracting over 2,000 visitors
- Establish 2 paper libraries
 - ➔ An additional 3 libraries were completed, bringing the total to 31, including 2 with Good Neighbor Foundation and 1 at Chenfu Elementary School
- Assess and maintain paper library operations
 - ➔ Maintained equipment for 9 paper libraries

Advancing Secondary Forest Education for a Green and Inclusive Future

➔ Goal: Complete 40 paper libraries by 2030

Since 2014, CLC has established paper libraries, delivering reading and environmental education resources to rural schools. These initiatives enable teachers and students to understand paper resources and environmental protection. CLC engages stakeholders through co-creation of paper libraries, sustainable workshops for teachers, and factory tours to advance secondary forest values.

In 2024, CLC applied the paper library concept to renovate school counseling rooms, providing dedicated spaces for counseling and communication. This initiative promoted sustainability awareness among students and supported Taiwan's advancement toward international sustainability standards.



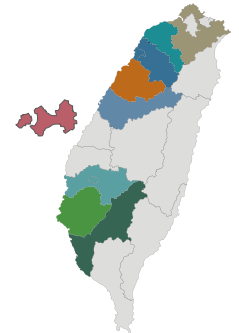
I. 100% Recovered Paper Library

31 Paper Libraries Established Nationwide, Reducing 180,000 Kilograms of Carbon Emissions

Using 1 tonne of recovered pulp reduces the need to cut down 20 trees, equivalent to creating a secondary forest

Since 2014, CLC has established at least 2 paper libraries annually, targeting a total of 40 by 2030. By 2024, 31 paper libraries were completed, benefiting 18,209 students. Also, CLC maintained 9 paper libraries in 2024. CLC will continue cross-sector collaboration to expand environmental education resources and promote recycling nationwide.

New Taipei City	Ji Swei/Pu Qian/Kuangfu/Sin Han/ He Ping*/ Chenfu (Elementary School)	Chiayi	San Ho Elementary School, Our Lady of China Foundation*
	Xinpu Junior High School (1 st Cross-Age Inclusive Learning Classroom)	Tainan	Liu Chia(Hu Dong Branch Campus) Elementary School*, Taiwan Olive Garden Care Association*
Taoyuan City	Wuquan/Chao Ing/Si Hai /Luo Fu* (Elementary School)	Kaohsiung City	An Chao, Hou Hong, Yangqiao, Chian Feng (Elementary School)
Hsinchu	Feng Kang/Ding Pu/Sin Gang (Elementary School)	Kinmen	Jin Ding Elementary School
Miaoli	Jungshing Elementary School		
Taichung	Nei-Pu/Yue Mei/Fu Chuen/Danan (Elementary School), Houli Library, Taichung School for the Visually Impaired/ Grace Church Taichung*		



Note 1: Schools marked with "*" are paper libraries established through collaboration between CLC and Good Neighbor Foundation

Note 2: Recycling 1 kilogram of recovered paper reduces carbon emissions by 5.8 kilograms. Each paper library uses 1,000 kilograms of recovered paper. 31 paper libraries reduce carbon emissions by 179,800 kilograms

Paper Library and Dollhouses Bring Care into School Counseling Room

Children's mental health has become a key focus. In 2024, CLC Paper Library and Uni-President Good Neighbor Foundation established a counseling space at Luofu Elementary School. CLC designed a theme tree installation and developed paper-based furniture, including a companion dollhouse and discussion table, to create a supportive environment for teacher-student communication.



65th Anniversary: RE: Flex Paper Shelf Engages Next Generation in Net Zero Living

In 2024, at the opening of the 30th paper library at Chenfu Elementary School, CLC introduced the "RE: Flex Paper Shelf," made from 100% recovered paper. CLC environmental volunteers, teachers, and students assembled the shelves through DIY activities for use as storage racks, reading stands, or tablet holders, strengthening children's sustainability awareness through experiential learning.



II. Cross-sector Collaboration for Paper Library Co-creation

Partnering with Green Sustainability Partners to Expand Secondary Forest Education Impact

Since 2022, CLC has collaborated with the Uni-President Good Neighbor Foundation to establish 6 paper libraries in schools prioritizing environmental education and student development. By 2024, over 10,000 kg of recovered paper from 7-ELEVEN and affiliated company resources were utilized, with more than 20 professionals involved. Completed sites include Hu Dong Branch of Liu Chia Elementary School, He Ping Elementary School, Grace Church Taichung, Our Lady of China Foundation (After-School Center), Taiwan Olive Garden Care Association (After-School Center), and Luo Fu Elementary School, converting traditional libraries into sustainable paper reading spaces.



Taiwan's Tallest Recovered Paper Tree Supports After-school Children

CLC partnered with the Good Neighbor Foundation to launch the 1st MINI paper library in 2023, creating multifunctional spaces for after-school learning and reading. In 2024, CLC established another MINI paper library at the Yongkang After-School Center of the Taiwan Olive Garden Care Association, featuring a 3-meter recovered paper tree tailored to the center's space.



III. Organized Sustainability Teacher Workshops and Delivered Integrated Teaching Resources

Partner with Tetra Pak and Future Parenting to train 1,800 sustainability education leaders by 2030

Since 2021, CLC has partnered with Tetra Pak and the Future Parenting Learning Platform to develop Taiwan's 1st modular "paper circulation and recovered" curriculum. The curriculum covers consumer identification of paper and food paper containers and the recovered process at paper mills, with materials including picture books, lesson brochures, presentations, interactive cards, and animations, provided free to teachers in Taiwan.

Since 2021, 19 teacher training camps were held, training 1,108 seed teachers and reaching 902 classes and 21,717 students. Collaboration with Kaohsiung Public Library provided additional training for teachers and parents. In 2024, seed teachers conducted the 1st on-campus demonstration lesson, enabling students to use the teaching materials and evaluate learning outcomes in recycling and sorting.



[Paper Circulation Recovering Recycling Three-Year Plan Results](#)

[Paper Circulation Recovering—Complete Teaching Tool Download Link](#)

Qiaoping Elementary School, Chiayi
Tingyu Gong, Teacher,

The lesson plan was implemented in 1st and 2nd grade classes, and the board game design enabled students to understand the paper manufacturing process and recycling mechanisms.

Zhonghe Junior High School
Tongjuan Yin, Teacher,

Implementation of the lesson plans in 1st and 2nd-year classes increased student participation in paper recycling discussions and enhanced understanding of paper recovering.

Launch of the Paper Circulation Recycling Learning Platform Providing Centralized Teaching Resources

In 2023, an educational animation project was launched to promote paper recycling education. In 2024, a dedicated teaching website was introduced, featuring the characters Paperman Long Long and Carton Soldier Le Le, with interactive design, videos, and quizzes to explain paper classification and recycling. The website provides free teaching tools to support teachers and the public in advancing paper circulation and recycling.

[Paper Circulation Recycling Learning Website](#)



IV. Multi-Channel Sharing of Sustainability Education Resources

Sharing Industrial Education Resources through Digital Platforms

CLC shared recycling education resources through online platforms for stakeholder engagement and resource recycling. By 2024, 38 videos were available on the official website, with 5 added in 2024. The recycling education webpage recorded 22,572 visits in 2024. CLC was exclusively featured by the Golden Bell Award-winning Public Television Service program "Clap Your Hands at the Factory 2," which filmed CLC mill professionals as the sole representative of modern papermaking, showcasing production processes and interviews to enhance public understanding of recycling and papermaking.



PTS Educational Program "Clap Hands at the Factory 2" EP5

[CLC Recycling Education Webpage – Love Paper, Love Earth](#)

Open Factory Tours to Advance Circular Economy in the Pulp and Paper Industry

Since its establishment in 1959, CLC has actively opened its mills/plants to the public, receiving an average of over 2,000 visitors per year, including customers, industry peers, government agencies, academic institutions, and environmental groups, to observe factory operations and exchange circular economy knowledge. Through collaboration and resource sharing, CLC advances secondary forest sustainability education.



The production team from the Police Broadcasting Service visited CLC ChuPei Paper Mill

Driving Change through External Sustainability Engagements

Since its 1st paper production, CLC has centered its operations on remanufacturing recovered paper. As sustainability awareness increased, CLC integrated sustainability into governance and leveraged its resources to share transformation experience. In 2024, CLC delivered 17 keynote speeches on green transformation, sustainable management, and talent development at the invitation of the Ministry of Labor, Ministry of Economic Affairs, local governments, universities, NGOs, and enterprises, engaging over 500 participants. These sessions provided practical knowledge and encouraged broader participation in sustainability initiatives. CLC will continue to advance green innovation and expand partnerships for a sustainable future.



Green Stories Integrated into Elementary Textbooks: CLC's Sustainability Transformation

CLC's sustainable transformation achievements were incorporated into elementary school environmental education. The sixth-grade social studies textbook "The World Sees Taiwan" by Han Lin Publishing featured CLC as one of 2 Taiwanese companies listed among the world's top 200 clean companies in 2022 by Corporate Knights. The textbook highlighted CLC's plant equipment upgrades, adoption of energy-saving green power, and annual recycling of 40% of domestic wastepaper into paper products, promoting resource circulation and sustainability.

This material was used by approximately 400,000 elementary school students in Taiwan. CLC was featured as a clean enterprise case in textbooks, enabling broader dissemination of sustainable development concepts and green practices. CLC will continue to advance green transformation and promote environmental education toward a net-zero future.



Han Lin Grade 6 Social Studies Textbook, Second Semester, 2024 Academic Year



Love Paper & Our Earth: Social Contribution

CLC established the Cheng Huo-Tien Charity Foundation in 1993 and the CLC Children's Foundation in 2006. Over 30 years, these two foundations invested NTD 142.07 million in social welfare. CLC commits over NTD 10 million annually to social welfare and sustainable development. In 2024, the two foundations and CLC Group allocated NTD 33.01 million to social welfare.

2024 Social Welfare Expenditure: Two Major Foundations and CLC Group

Unit: New Taiwan Dollar (NTD)

CLC: NTD 24.55 million

Cumulative total
NTD 99.79 million

CLC Children's Foundation: NTD 4.69 million donated

Cumulative total
NTD 55.53 million

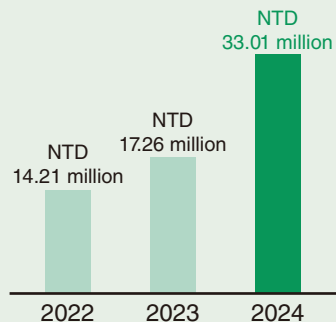
Cheng Huo-Tien Charity Foundation: NTD 3.77 million

cumulative total
NTD 86.54 million

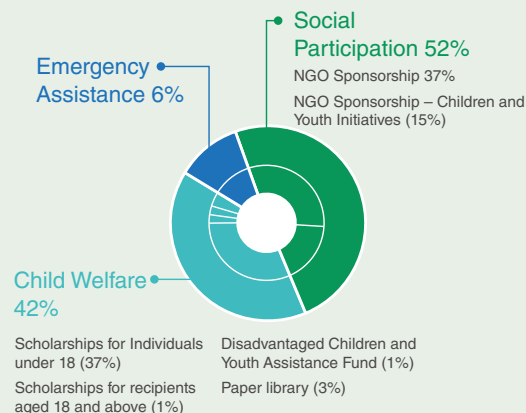
[CLC Foundation Annual Donation Details / Budget / Final Accounts](#)

NOTE: NTD 20 MILLION WAS ALLOCATED IN 2024 TO SUPPORT HUALIEN EARTHQUAKE RECONSTRUCTION

Social Welfare Expenditures in the Past 3 Years (CLC Group and Two Foundations)



2024 Social Welfare Expenditure Ratio of Two Foundations



Hualien 403 Earthquake: CLC Donated NTD 20 Million for Reconstruction

On April 3, 2024, a magnitude 7.2 earthquake struck Hualien. CLC Group, Cheng Huo-Tien Charity Foundation, and CLC Children's Foundation donated NTD 20 million to support relief and reconstruction efforts

Child Welfare

Promote children's education, welfare, and health through collaboration with social welfare organizations to address child and adolescent issues and expand opportunities for disadvantaged children.

CLC, through the CLC Children's Foundation, partnered with NGOs and social welfare organizations to implement the paper library project, provide scholarships for underprivileged students, emergency educational grants, nutritional lunch subsidies, and after-school care fee assistance for students near CLC mills/plants. CLC collaborated with the Taiwan Fund for Children and Families and the Seed of Love Education Foundation to promote greater awareness and support for children. In 2024, CLC awarded over NTD 3.2 million in scholarships to children and youth from 38 schools, including elementary, junior high, high schools, and universities. Cumulatively, CLC has supported over 12,000 children and youth, with total scholarship awards exceeding NTD 20 million.

Caring Support, Building Futures – CLC Caring Scholarship

CLC established the CLC Caring Scholarship in 2015 to support elementary schools near its mills/plants. In 2016, the program expanded to all nearby schools in Taiwan. Junior high school scholarships were added in 2018. Since 2022, the scholarship program has been extended to CLC's Vietnam operations. By 2024, three sessions have been completed, with a total of 286 scholarships awarded, continuing to spread love beyond borders.

CLC Caring Scholarship

Taiwan (19 sessions)

8,174 individuals
Elementary and junior high school students near CLC mills/plants in Taiwan

Vietnam (3 sessions)

286 individuals
Elementary school students adjacent to CLC Vietnam mills/ plants

Let Trees Grow High and Let Love Fly Scholarship

35 sessions

3,540 individuals
Children and youth in Child Welfare League Foundation foster care



Taiwan's Exclusive Scholarship for Foster Children: Let Trees Grow High and Let Love Fly

In 2007, CLC partnered with the Taiwan Fund for Children and Families to launch the "Let Trees Grow High and Let Love Fly" scholarship, providing financial awards to foster children and youth in elementary, junior high, senior high schools, and universities for academic achievement and character. This was the only scholarship in Taiwan dedicated to foster children and youth.

18 Years of Giving: Benefiting over 3,500 Recipients

In 2024, CLC and the Taiwan Fund for Children and Families held the 34th and 35th "Let Trees Grow High and Let Love Fly" Foster Children Scholarship Award Ceremonies. Over the past 18 years, CLC contributed more than NTD 8.9 million, benefiting over 3,500 recipients. CLC firmly believes that this is not only an investment in the growth of scholarship recipients, but also a contribution to building a stable and uplifting educational environment for society.



Public Welfare Partners

Taiwan Fund for Children and Families

Seed of Love Education Foundation

Elementary School Sport Association

Public Welfare Programs

- Let Trees Grow High and Let Love Fly Scholarship (2007~)
- Let Love in (2008~)
- Child Abuse Prevention Advocacy Program (2012~)
- Infinite Generation (2012~)

- Orphanage Scholarship Program (2007~)

- National Basketball Championship (2021~)

Love Paper & Our Earth Without Borders CLC Presented the 3rd Overseas Scholarship at Vietnam

In 2024, the Vietnam Corrugated Container Division awarded the CLC Vietnam Caring Scholarship to 286 students at elementary, junior high, and high schools near the Binh Duong, Viva Tawana, and Long An plants/mills.



Expanding Sustainable Influence: CLC Children's Foundation Launches Brand Revitalization Plan

To commemorate its 20th anniversary, the CLC Children's Foundation launched a rebranding initiative in 2024 to advance Net Positive. The initiative focuses on strengthening the core brand, integrating corporate resources, and developing high-value communication tools to expand support for children and youth in need through a clearer brand image and innovation communication strategies.

CLC Children's Foundation Rebranding Highlights

Develop New Visual Identity	Launched a dedicated foundation logo and CLC Caring Scholarship icon to enhance brand recognition.
Leverage Andante Brand Influence	Leveraged the high public recognition of the Andante toilet tissue IP "Andante Cat" to deepen the foundation's connection with the public.
Strengthen Social Advocacy Communication	Integrate CLC resources to enhance foundation impact and increase social participation.



CLC Children's Foundation and Cheng Huo-Tien Charity Foundation [Facebook](#)



Social Participation

Volunteer Service

Promoting Social Care and Provides Continuous Community Service

CLC established the CLC Volunteer Management Guidelines to systematize internal volunteer operations and encourage employee participation in public welfare activities. CLC has provided public recognition, volunteer leave, rewards, and professional service training, and supported the formation of internal volunteer organizations. For example, the Hsinchu Paper Mill and community residents jointly established the Water Patrol Team to maintain local streams on weekends. In 2024, CLC participated in 215 public welfare activities, with 844 employees contributing 2,593 service hours through Environmental Volunteers and Caring Volunteers.

2024 CLC Volunteer Services

Category	Sessions	Participants	Hours
Environmental Volunteers	94	456	1,219.5
Caring Volunteers	121	388	1,373.5
Total	215	844	2,593

Note: Taiwan area



CLC Environmental Volunteer

In 2024, CLC collected 4,625 tonnes of recovered paper through sorting campaigns, cleanups, and tree planting at each mill/plant, with a total of 8,939 tonnes accumulated from 2020 to 2024. CLC has also adopted and maintained 80 public restrooms, supplied eco-friendly toilet paper, and received recognition from Taichung City Government. Tayuan Paper Mill established a water patrol team for stream cleanups and has adopted a river since 2016, receiving a certificate of appreciation from Taoyuan City Government. Hsinchu Paper Mill partnered with Hsinchu City Government to enhance water patrols by donating sun hats and rain boots.



CLC Caring Volunteer

Volunteers have served in over 25 townships and partnered with external organizations on winter relief, festival supply donations, and blood drives. Prior to Lunar New Year, 5 major initiatives integrated cross-sector resources to expand impact.

CLC Employees Donated 4,140,000 cc of Blood in Taiwan

Since 2016, CLC employees have donated blood annually. In 2024, 194 bags (48,500 cc) were donated. Since 2022, CLC has partnered with the Police Broadcasting Service and Golden Tree Charity Foundation to encourage blood donation by providing household paper products. By the end of 2024, a total of 16,560 bags (4,140,000 cc) had been donated, providing critical support to countless lives.



CLC Volunteer Team Mobilized Advancing Philanthropy for Sustainable Development

CLC established the CLC Volunteer Management Guidelines in 2024 to strengthen volunteer service and integrate internal resources. The CLC Corporate Volunteer Conference brought together volunteer teams from all plants and mills, hosted by General Manager Ching-Piao Chang. Hui-Chen Pan, Director of the Taiwan Fund for Children and Families, delivered a session on practical volunteer methods to enhance employee professionalism. CLC will continue to connect company, foundations, and NGO resources to organize diverse volunteer activities, advancing social responsibility and sustainable development.



Integrating Volunteerism into CLC Culture: Annual Business Seminar Awards

CLC held its year-end business seminar and banquet on December 27, 2024, bringing together managers from all domestic and overseas mills/plants to review business performance and discuss future strategies. Management presented awards for environmental management, energy conservation, and the Outstanding Volunteer Unit Award, recognizing teams for professional achievements and contributions to social sustainability. CLC encourages all employees to integrate social contribution into sustainable operations, ensuring business development aligns with public welfare.



CLC Vice Chairperson Shu-Yun Cheng (left) presented the Outstanding Volunteer Unit Award.

CLC 65th Anniversary: Donated 10,000 kg of organic rice to individual recyclers for Mid-autumn Festival

Aligned with the "Nature Sustainability, Paper Towards Net Zero" 65th anniversary goals, CLC developed 100% recovered eco weed control paper in 2023 and, in 2024, partnered with Douliu and Taibao Farmers' Associations to adopt 10,000 kilograms of organic rice. CLC mobilized a corporate volunteer team for on-site harvest inspections and organic farming exchanges in Douliu. Prior to the Mid-Autumn Festival, CLC collaborated with the Environmental Protection Bureaus of Taoyuan City and Taichung City to distribute "CLC eco-friendly Farmland Organic Rice" to nearly 1,000 recycling households, promoting food safety and supporting a sustainable cycle among farmers, enterprises, and the community.



Note: For more information, please refer to the CLC website – [Press Release](#)

5 Major Care Initiatives: CLC Supported over 110,000 Taiwan Fund for Children and Families Beneficiary Households over 16 Years

Ahead of the 2025 Lunar New Year, CLC upheld its "love paper & our earth" commitment by supporting frontline individual recyclers and, in collaboration with local government agencies and 4 NGOs, launched the "5 Major Acts of Warmth," mobilizing corporate volunteers to drive positive impact.

Note: For more information, visit the CLC website – [Press Release](#)



1. Support for 82 Individual Recyclers in Taoyuan City



4. Ongoing support for 10,000 Taiwan Fund for Children and Families beneficiary households



2. Accompanying Hondao Senior Citizen's Welfare Foundation's lonely elders to celebrate Lunar New Year



5. Construct 80 sanitary toilets



3. Collaborated with Police Broadcasting Service to support 609 nursing center residents



Binh Duong paper mill distributed VND 100 million in New Year red envelopes

CLC donated VND 100,000,000 through the Vietnam Binh Duong paper mill for the 2025 Compassionate Spring Festival organized by the Binh Duong government and the Red Cross. The event awarded 1,000 scholarships of VND 5,000,000 each, distributed red envelopes of VND 1,000,000 to 200 residents and workers, and provided daily necessities valued at VND 500,000 to all recipients.



Environmental Education, Arts, and Sports Initiatives

CLC has sponsored road running races, cycling events, concerts, calligraphy competitions, and painting activities for the elderly for multiple years. We have also provided funding, training equipment, and coaching resources for rural school sports events. In line with the Group's "Nature Sustainability, Paper toward Net Zero" goals, CLC has integrated internal resources and partnered with NGOs and government agencies to implement environmental education programs, advancing sustainable environmental awareness.

Coexist with Nature: CLC and Society of Wilderness Lead Children in Nature Exploration

In response to global challenges such as climate change and biodiversity loss, and recognizing that modern children face heavy academic pressure and are surrounded by digital devices—factors that may affect their focus and well-being—CLC Children's Foundation partnered with the Society of Wilderness to hold the 2024 Nature Exploration Camp, a 3-day, 2-night program. The camp offered hands-on activities and field visits to enhance children's environmental awareness, concentration, creativity, and problem-solving skills, supporting environmental education and children's well-being.



Camp members collected 51 kilograms of waste during a beach cleanup, including plastic and glass recyclables.

Little Sanitation Captains Team up with CLC to Promote Waste Sorting & Recycling



By advancing a full circular economy, CLC operates the largest recovered paper recycling capacity in Taiwan. In 2024, CLC assisted the Hsinchu County Environmental Protection Bureau in organizing 3 "One-day Sanitation Captain: Recycling Mobilization" experiential camps. Nearly 100 elementary school teachers and students experienced cleaning team operations, and visited the CLC ChuPei Paper Mill to learn about the recycling and processing of paper and food paper containers, as well as the conversion of recovered paper into toilet tissue. This initiative strengthened environmental education and promoted resource regeneration.



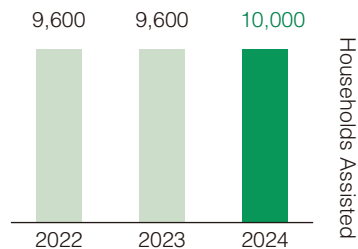
One-Day Sanitation Captain Camp Participant [Little Captain Fan](#)

The activity offered practical waste sorting training and a ride-along in the garbage truck passenger seat, enhancing understanding of sanitation team duties. I subsequently encouraged my family to practice proper waste sorting at home to help reduce the sanitation team's workload.

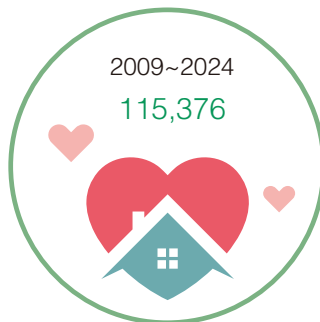
Emergency Assistance

Since 1993, the Cheng Huo-Tien Charity Foundation has provided emergency assistance. From 2009 to 2024, it sponsored the "Winter Warmth Care for Underprivileged Families" program for 16 consecutive years, collaborating with 22 organizations including Hondao Senior Citizen's Welfare Foundation, Tayuan Jen-Sho Temple Foundation, Huashan Social Welfare Foundation, Genesis Social Welfare Foundation, and Taiwan Fund for Children and Families. The Foundation donated household products, benefiting 115,376 families. In 2024, NTD 3.77 million supported 81 cases, with a total of 383 cases assisted from 2020 to 2024.

Winter Relief: Toilet Tissue Donation Program



Note: Taiwan area



CLC Unites and Supports the Vietnamese Community

Record Typhoon in 30 Years—CLC Vietnam Mills/Plants Delivered Post-Disaster Relief

In September 2024, Typhoon Yagi severely impacted northern Vietnam, destroying hundreds of thousands of houses and damaging roads, affecting millions. CLC Vietnam Binh Duong Paper Mill donated VND 100 million for disaster relief. The Binh Duong plant donated VND 50 million and supplied coconut mats, quilts, and essential goods. Employees from all 5 CLC Vietnam plants contributed a total of VND 81.52 million. These actions supported recovery efforts and strengthened community trust.

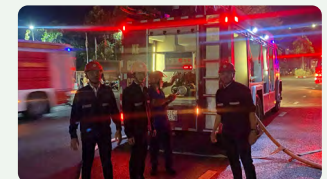


CLC Vietnam Operations and Employee Donations for Typhoon Yagi Relief

Binh Duong Paper Mill	Binh Duong Plant	Employees from the 5 Vietnam paper plants	Total
VND 100 million	VND 50,000,000	VND 81,520,000	VND 231,520,000

Binh Duong Industrial Zone Fire: CLC Fire Brigade Provided Emergency Assistance

CLC has established fire brigades at multiple sites to protect employees and local communities. On July 25, 2024, a fire broke out at a timber factory in An Hien Industrial Park, where CLC Binh Duong paper mill is located. The CLC fire brigade dispatched 8 members to assist firefighting efforts and returned after the fire was controlled at 4:26 a.m. on July 26. The CLC Binh Duong paper mill fire brigade consists of 49 members from the Water Treatment and General Affairs sections, who undergo regular training and remain on standby to support emergency response and community safety.





GRI Standards Index

Statement

The 2024 ESG Sustainability Report has been prepared in accordance with Global Reporting Initiative (GRI) Standards. The information disclosed in this report mainly covers data in the fiscal year 2024 (January 1, 2024 to December 31, 2024).

The version of GRI 1

GRI 1: Standards 2021

GRI	Disclosure Title	Chapter	Pages	Note
GRI 2: General Disclosures 2021				
Organization and reporting	2-1 Organizational details	About This Report	3	-
	2-2 Entities included in the organization's sustainability reporting	About This Report, 1.1 Operational Performance	3, 26	-
	2-3 Reporting period, frequency and contact point	About This Report, Identification of Stakeholders and Material Issues	3, 18~20	-
	2-4 Restatements of information	-	-	No restatements.
	2-5 External assurance	About This Report	142	-
Activities and workers	2-6 Activities, value chain and other business relationships	1.1 Operational Performance	26	-
	2-7 Employees	5.1 Diversity and Equal Opportunity	103	-
	2-8 Workers who are not employees	5.1 Diversity and Equal Opportunity	139~141	-
Governance	2-9 Governance structure and composition	1.2 Governance Organization	29	-
	2-10 Nomination and selection of the highest governance body	ESG Committee, 1.2 Governance Organization	14, 29	-
	2-11 Chair of the highest governance body	ESG Committee	14	-
	2-12 Role of the highest governance body in overseeing the management of impacts	ESG Committee	14	-
	2-13 Delegation of responsibility for managing impacts	ESG Committee, 1.3 Risk Management	14, 33	-
	2-14 Role of the highest governance body in sustainability reporting	ESG Committee	14	-
	2-15 Conflicts of interest	1.2 Governance Organization	29	-
	2-16 Communication of critical concerns	Identification of Stakeholders and Material Issues	18~20	-
	2-17 Collective knowledge of the highest governance body	1.2 Governance Organization	30	-
	2-18 Evaluation of the performance of the highest governance body	1.2 Governance Organization	30	-
	2-19 Remuneration policies	1.2 Governance Organization	32	-
	2-20 Process to determine remuneration	1.2 Governance Organization, 5.1 Diversity and Equal Opportunity	32, 108	-
	2-21 Annual total compensation ratio	5.1 Diversity and Equal Opportunity	108	-

GRI	Disclosure Title	Chapter	Pages	Note
Strategy, policies and practice	2-22 Statement on sustainable development strategy	Message from Top Management, Strategy and Objectives	4, 5	-
	2-23 Policy commitments	1.1 Operational Performance, 5.1 Diversity and Equal Opportunity	23, 104~105	-
	2-24 Embedding policy commitments	1.1 Operational Performance, 5.1 Diversity and Equal Opportunity	23, 104~105	-
	2-25 Processes to remediate negative impacts	ESG Committee Identification of Stakeholders and Material Issues	17~20	-
	2-26 Mechanisms for seeking advice and raising concerns	ESG Committee Identification of Stakeholders and Material Issues 5.1 Diversity and Equal Opportunity	17~20, 104~105	-
	2-27 Compliance with laws and regulations	1.5 Ethical Management	39	-
	2-28 Membership associations	1.1 Operational Performance	24	-
	2-29 Approach to stakeholder engagement	Identification of Stakeholders and Material Issues	18~20	-
Assessed stakeholder engagement	2-30 Collective bargaining agreements	-	108	Although our labor union in Taiwan has not yet signed a collective agreement, discussions and negotiations are ongoing. The union convenes an annual general meeting and quarterly meetings of the board and supervisors to actively address suggestions raised by union representatives. Overseas, all 6 mills/plants in Vietnam have signed collective agreements with their respective local labor unions.
Material Issue				
GRI 101: Biodiversity 2024	101-1 Policies to halt and reverse biodiversity loss	4.6 TNFD & Biodiversity	98~100	-
	101-2 Management of biodiversity impacts	4.6 TNFD & Biodiversity	98~100	-
	101-3 Access and benefit-sharing	4.6 TNFD & Biodiversity	98~100	-
	101-4 Identification of biodiversity impacts	4.6 TNFD & Biodiversity	98~100	-
	101-5 Locations with biodiversity impacts	4.6 TNFD & Biodiversity	98~100	-
	101-6 Direct drivers of biodiversity loss	4.6 TNFD & Biodiversity	98~100	-
	101-7 Changes to the state of biodiversity	4.6 TNFD & Biodiversity	98~100	-
	101-8 Ecosystem services	4.6 TNFD & Biodiversity	98~100	-



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GRI	Disclosure Title	Chapter	Pages	Note
GRI 200 : Economic Disclosures				
Economic Performance GRI 201:2016	201-1	Direct economic value generated and distributed	1.1 Operational Performance	26 -
	201-2	Financial implications and other risks and opportunities due to climate change	4.1 Action for Climate Change	77~80 -
	201-3	Defined benefit plan obligations and other retirement plans	5.1 Diversity and Equal Opportunity	106 -
	201-4	Financial assistance received from government	-	-
				NTD 319,816 thousand (Including the Ministry of Economic Affairs' Industrial Upgrade and Innovation Platform Guidance Program – 17,261 thousand yuan for carbon reduction technology optimization in the paper industry's wet section, and 300,231 thousand yuan for subsidies for the recycling and disposal of waste paper tableware)
Market Presence GRI 202:2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	5.1 Diversity and Equal Opportunity	140~141 -
	202-2	Proportion of senior management hired from the local community	5.1 Diversity and Equal Opportunity	139 -
Indirect Economic GRI 203: 2016	203-1	Infrastructure investments and services supported	6 Society	- Incomplete information
	203-2	Significant indirect economic impacts	6 Society	- Incomplete information
Procurement Practices GRI 204:2016	3-3 Management of material topics	Supply Chain Management	3.1 Supply Chain Management	60
	204-1	Proportion of spending on local suppliers	3.1 Supply Chain Management	65 -
Anti-corruption GRI205: 2016	205-1	Operations assessed for risks related to corruption	1.5 Ethical Management	39 -
	205-2	Communication and training about anti-corruption policies and procedures	1.5 Ethical Management	39 -
	205-3	Confirmed incidents of corruption and actions taken	-	- No corruption incidents.
Anticompetitive Behavior GRI206: 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1.5 Ethical Management	39 -
Tax GRI207: 2019	207-1	Approach to tax	1.1 Operational Performance	27 -
GRI 300 : Environmental Disclosures				
Materials GRI 301:2016	3-3 Management of material topics	Sustainable Products and Development	2.1 Sustainable Products and Development	41
	301-1	Materials used by weight or volume	2.2 Product Responsibility and Customer Service	52 -
	301-2	Recycled input materials used	2.2 Product Responsibility and Customer Service	52 -
	301-3	Reclaimed products and their packaging materials	2.1 Sustainable Products and Development	42~43 -

GRI	Disclosure Title	Chapter	Pages	Note
Energy GRI 302:2016	3-3 Management of material topics	Energy Management	4.2 Energy Management	85 -
	302-1	Energy consumption within the organization	4.2 Energy Management	87 -
	302-2	Energy consumption outside of the organization	4.2 Energy Management	87 -
	302-3	Energy intensity	4.2 Energy Management	87 -
	302-4	Reduction of energy consumption	4.2 Energy Management	86 -
Water and Effluents GRI 303:2018	302-5	Reductions in energy requirements of products and service	4.2 Energy Management	86 -
	303-1	Interactions with water as a shared resource	4.3 Water Management	90~91 -
	303-2	Management of water discharge-related impacts	4.3 Water Management	93 -
	303-3	Water withdrawal	4.3 Water Management	92 -
	303-4	Water discharge	4.3 Water Management	92 -
Emissions GRI 305:2016	303-5	Water consumption	4.3 Water Management	92 -
	3-3 Management of material topics	Action for Climate Change	4.1 Action for Climate Change	74
	305-1	Direct (Scope 1) GHG emissions	4.1 Action for Climate Change	82 -
	305-2	Energy indirect (Scope 2) GHG emissions	4.1 Action for Climate Change	82 -
	305-3	Other indirect (Scope 3) GHG emissions	4.1 Action for Climate Change	82 -
waste GRI 306 : 2020	305-4	GHG emissions intensity	4.1 Action for Climate Change	82 -
	305-5	Reduction of GHG emissions	4.1 Action for Climate Change	82 -
	305-6	Emissions of ozone-depleting substances (ODS)	-	- No emissions.
	305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	4.4 Air Quality Management	95 -
	3-3 Management of material topics	Waste-to-Resources	4.5 Waste to Resources	96
Supplier Environmental Assessment GRI 308:2016	306-1	Waste generation and significant waste-related impacts	4.5 Waste to Resources	96~97 -
	306-2	Management of significant waste-related impacts	4.5 Waste to Resources	96~97 -
	306-3	Waste generated	4.5 Waste to Resources	96~97 -
	306-4	Waste diverted from disposal	4.5 Waste to Resources	96~97 -
	306-5	Waste directed to disposal	4.5 Waste to Resources	96~97 -
Supplier Environmental Assessment GRI 308:2016	3-3 Management of material topics	Supply Chain Management	3.1 Supply Chain Management	60
	308-1	New suppliers that were screened using environmental criteria	3.1 Supply Chain Management	62~63 -
	308-2	Negative environmental impacts in the supply chain and actions taken	3.1 Supply Chain Management	62~63 -



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GRI	Disclosure Title	Chapter	Pages	Note
GRI 400 : Social Disclosures				
Employment GRI 401:2016	401-1	New employee hires and employee turnover	5.1 Diversity and Equal Opportunity	105,130 -
	401-2	Benefits provided to full-time employees that are not provided to temporary or parttime employees	5.1 Diversity and Equal Opportunity	109~110 -
	401-3	Parental leave	5.1 Diversity and Equal Opportunity	109 -
Labor/ Management Relations GRI402: 2016	402-1	Minimum notice periods regarding operational changes	-	- CLC will make advance notification regarding significant operational changes.
Occupational Health and Safety GRI 403: 2018	403-1	Occupational health and safety management system	5.3 Healthy Workplace	118 -
	403-2	Hazard identification, risk assessment, and incident investigation	5.3 Healthy Workplace	118~119 -
	403-3	Occupational health services	5.3 Healthy Workplace	122 -
	403-4	Worker participation, consultation, and communication on occupational health and safety	5.3 Healthy Workplace	119, 121 -
	403-5	Worker training on occupational health and safety	5.3 Healthy Workplace	119~121 -
	403-6	Promotion of worker health	5.3 Healthy Workplace	122 -
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5.3 Healthy Workplace	119, 121 -
	403-8	Workers covered by an occupational health and safety management system	5.3 Healthy Workplace	119 -
	403-9	Work-related injuries	5.3 Healthy Workplace	119 -
	403-10	Occupational disease	5.3 Healthy Workplace	119 -
Training and Education GRI 404 : 2016	3-3 Management of material topics	Talent Cultivation and Development	5.2 Talent Cultivation and Development	111
	404-1	Average hours of training per year per employee	5.2 Talent Cultivation and Development	112 -
	404-2	Programs for upgrading employee skills and transition assistance programs	5.2 Talent Cultivation and Development	113~114 -
	404-3	Percentage of employees receiving regular performance and career development reviews	5.2 Talent Cultivation and Development	114 -
Diversity and Equal Opportunity GRI 405: 2016	405-1	Diversity of governance bodies and employees	1.2 Governance Organization, 5.1 Diversity and Equal Opportunity	14, 104 -
	405-2	Ratio of basic salary and remuneration of women to men	5.1 Diversity and Equal Opportunity	140~141 -
Nondiscrimination GRI 406: 2016	406-1	Incidents of discrimination and corrective actions taken	-	- No incidents of discrimination.
Freedom of Association and Collective Bargaining GRI 407: 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	-	- All subsidiaries comply with the collective bargaining agreement in accordance with the laws and regulations of the host regions/countries and respect the right to collective bargaining and freedom of association of employees.

GRI	Disclosure Title	Chapter	Pages	Note
Child Labor GRI 408: 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	5.1 Diversity and Equal Opportunity	104~105 CLC promises that all employees are treated with respect and dignity, and no child labor will be used.
Forced or Compulsory Labor GRI 409: 2016	409-1	Operations and supplier Operations and suppliers at significant risk for incidents of forced or compulsory labor	-	- No forced or compulsory labor was reported in high-risk and suppliers' operational locations and suppliers.
Security Practices GRI 410: 2016	410-1	Security personnel trained in human rights policies or procedures	-	- Same as CLC employees.
Rights of Indigenous People GRI 411: 2016	411-1	Incidents of violations involving rights of indigenous peoples	-	- No incident in 2024.
Local Communities GRI 413: 2016	413-1	Operations with local community engagement, impact assessments, and development programs	6 Society	130~132 -
	413-2	Operations with significant actual and potential negative impacts on local communities	6 Society	130~132 -
Supplier Social Assessment GRI 414:2016	3-3 Management of material topics	Supply Chain Management	3.1 Supply Chain Management	60 -
	414-1	New suppliers that were screened using social criteria	3.1 Supply Chain Management	62 -
	414-2	Negative social impacts in the supply chain and actions taken	3.1 Supply Chain Management	62 -
Public Policy GRI 415: 2016	415-1	Political contributions	-	- No political contributions.
Customer Health and Safety GRI 416:2016	416-1	Assessment of the health and safety impacts of product and service categories	2.2 Product Responsibility and Customer Service	53~54 -
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	- No violation of relevant laws and regulations.
Marketing and Labeling GRI 417: 2016	417-1	Requirements for product and service information and labeling	2.2 Product Responsibility and Customer Service	53~54 Related service information and labeling are disclosed on products and the CSR website with 100% compliance with various international standards, voluntary disclosure standards, and green mark regulations.
	417-2	Incidents of non-compliance concerning product and service information and labeling	-	- No significant violation.
	417-3	Incidents of non-compliance concerning marketing communications	-	- No significant violation.
Customer Privacy GRI 418: 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	-	- No complaint regarding breach of customer privacy or lose in data.



SASB Index

Topic	Code	Category	Accounting Metrics	Data(Unit)/ Chapters	Page
Greenhouse Gas Emissions	RR-PP-110a.1	Quantitative	Gross global Scope 1 emissions	1,082,538.8406 CO ₂ e	82
	RR-PP-110a.2	Discussion and Analysis	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	4.1	75, 82
Air Quality	RR-PP-120a.1	Quantitative	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O) (2) SO ₂ (3) volatile organic compounds (VOCs) (4) particulate matter (PM) (5) hazardous air pollutants (HAPs)	(1) 377 tonnes (2) 263 tonnes (3) 70 tonnes (4) 63 tonnes (5) 0 ton(nes)	95
Energy Management	RR-PP-130a.1	Discussion and Analysis	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage from biomass, (4) Proportion of renewables (deducting biomass energy) (5) Capacity of self-generation of renewables	(1) 14,460,961 GJ (2) 9.28% (3) 19.58% (4) - (5) 0.04%	85~89
Water Management	RR-PP-140a.1	Quantitative	(1) Total water withdrawn, (2) total water consumed (3) total water withdrawn, percentage of each in regions with High or Extremely High Baseline Water Stress (4) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	(1) 15,411,508 (10 hL) (2) 2,574,550 (10 hL) (3) - (4) -	92
	RR-PP-140a.2	Discussion and Analysis	Amount of recycled and recovered fiber procured	4.3	90~92
Supply Chain Management	RR-PP-430a.1	Quantitative	Percentage of wood fiber sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fiber sourcing standards and percentage to each standard	(1) FSC™ pulp ratio 97.6% (2) 2.4%	67
	RR-PP-430a.2	Quantitative	Amount of recycled and recovered fiber procured	Utilized nearly 1.66 million tonnes of recovered paper and 1.746 million tonnes of renewable raw materials.	52
Activity Metrics	RR-PP-000.A	Quantitative	Pulp production	Not applicable – no pulp production.	-
	RR-PP-000.B	Quantitative	Paper production	Paper and Paperboard: 1.506 million tonnes	26
	RR-PP-000.C	Quantitative	Total wood fiber sourced	86,000 tonnes	52

Note 1 : Taiwan area

Note 2 : global Scope 1 emissions are counted by CLC.



International Financial Reporting Standards, IFRS

IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information

Description		Chapters	Description		Chapters
Governance	The objective of sustainability-related financial disclosures on governance is to enable users of general purpose financial reporting to understand the governance processes, controls and procedures used to monitor and manage sustainability-related risks and opportunities. An entity shall disclose information about the governance body or bodies (which can include a board, committee or equivalent body charged with governance) with oversight of sustainability-related risks and opportunities, and information about management's role in those processes.	Sustainable Management ch 1.1 ch 1.2 ch 1.3	Resilience	An entity shall disclose information that enables users of general purpose financial reporting to understand its capacity to adjust to the uncertainties arising from significant sustainability-related risks. An entity shall disclose a qualitative and, when applicable, a quantitative analysis of the resilience of its strategy and cash flows in relation to its significant sustainability-related risks, including how the analysis was undertaken and its time horizon. When providing quantitative information, an entity can disclose single amounts or a range.	Sustainable Management ch 1.1 ch 1.3
	Strategy	The objective of sustainability-related financial disclosures on strategy is to enable users of general purpose financial reporting to understand an entity's strategy for addressing significant sustainability-related risks and opportunities.		Sustainable Management Message from Top Management Major Issues ch 1.3	Risk management
Strategy and decision making	An entity shall disclose information that enables users of general purpose financial reporting to understand the effects of significant sustainability-related risks and opportunities on its strategy and decision-making.	Sustainable Management Major Issues ch 1.1 ch 1.3	Metrics and targets	The objective of sustainability-related financial disclosures on metrics and targets is to enable users of general purpose financial reporting to understand how an entity measures, monitors and manages its significant sustainability-related risks and opportunities. These disclosures shall enable users to understand how the entity assesses its performance, including progress towards the targets it has set.	Sustainable Management Major Issues ch 1.3
Sustainability related risks and opportunities	An entity shall disclose information that enables users of general purpose financial reporting to understand the significant sustainability-related risks and opportunities that could reasonably be expected to affect the entity's business model, strategy and cash flows, its access to finance and its cost of capital, over the short, medium or long term.	Sustainable Management ch 1.1 ch 1.3 ch 4.1		An entity shall disclose the financial statements to which the sustainability-related financial disclosures relate.	Sustainable Management ch 1.1
	An entity shall disclose information that enables users of general purpose financial reporting to understand its assessment of the current and anticipated effects of significant sustainability-related risks and opportunities on its business model.	Sustainable Management ch 1.1 ch 1.3 ch 4.1	General features	An entity shall disclose the industry or industries specified in the relevant IFRS Sustainability Disclosure Standard or industry-based SASB Standards that it has used when identifying disclosures about a significant sustainability-related risk or opportunity.	About this Report Sustainable Management Identification of Material Issues and Stakeholders' Engagement Appendix - SASB Index
Financial position, financial performance and cash flows	An entity shall disclose information that enables users of general purpose financial reporting to understand the effects of significant sustainability-related risks and opportunities on its financial position, financial performance and cash flows for the reporting period, and the anticipated effects over the short, medium and long term—including how sustainability-related risks and opportunities are included in the entity's financial planning. An entity shall disclose quantitative information unless it is unable to do so. If an entity is unable to provide quantitative information, it shall provide qualitative information. When providing quantitative information, an entity can disclose single amounts or a range.	Sustainable Management ch 1.1 ch 1.3		When providing sustainability-related financial disclosures an entity shall disclose comparative information that reflects updated estimates.	About this Report Sustainable Management
				An entity shall correct material prior period errors by restating the comparative amounts for the prior period(s) disclosed.	About this Report Sustainable Management



S2 Climate-related Disclosures

	Description	Chapters
Governance	The objective of climate-related financial disclosures on governance is to enable users of general purpose financial reports to understand the governance processes, controls and procedures an entity uses to monitor, manage and oversee climate related risks and opportunities.	Sustainable Management, ch4.1
	The governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities.	Sustainable Management, ch4.1
Strategy	The objective of climate-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities, the current and anticipated effects of those climate-related risks and opportunities on the entity's business model and value chain, the entity's strategy and decision-making, including information about its climate-related transition plan, the entity's financial position, financial performance and cash flows for the reporting period, and the climate resilience of the entity's strategy and its business.	Sustainable Management, ch4.1
Climate-related risks and opportunities	The objective of climate-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities, the current and anticipated effects of those climate-related risks and opportunities on the entity's model and value chain, the entity's strategy and decision-making, including information about its climate-related transition plan, the entity's financial position, financial performance and cash flows for the reporting period, and the climate resilience of the entity's strategy and its business model to climate-related	Sustainable Management, ch4.1
	An entity shall disclose information that enables of general purpose financial reports understand the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain.	Sustainable Management, ch4.1
Strategy and decision-making	An entity shall disclose information that enables of general purpose financial reports to understand effects of climate-related risks and opportunities on its strategy and decision-making. Information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, how the entity is resourcing, and plans to resource, the activities, and qualitative information about the progress of plans.	Sustainable Management, ch4.1

	Description	Chapters
Financial position, financial performance and cash flows	An entity shall disclose information that enables of general purpose financial reports to understand effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and the anticipated effects over the short, medium and long term.	Sustainable Management, ch4.1
Climate resilience	An entity shall disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities. The entity shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances.	Sustainable Management, ch4.1
Risk management	The objective of climate-related financial disclosures on risk management is to enable users of general purpose financial reports to understand an entity's processes to identify, assess, prioritise and monitor climate-related risks and opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process.	Sustainable Management, ch1.3, ch4.1
Metrics and targets	The objective of climate-related financial disclosures on metrics and targets is to enable users of general purpose financial reporting to understand how an entity measures, monitors and manages its significant climate-related risks and opportunities. These disclosures shall enable users to understand how the entity assesses its performance, including progress the targets it has set.	Sustainable Management, ch4.1



Employee Information Tables

CLC Manpower Structure in 2024

Item	Category	Taiwan		China		Vietnam		Subtotal				Total	
													
		Number	Number	Number	Number	Number	Number	Number	Ratio	Number	Ratio	Number	Ratio
Position	Labor	1,928	145	538	193	1,208	288	3,674	69.6%	626	41.5%	4,300	63.4%
	Labor Management*	1,068	338	96	139	289	399	1,453	27.5%	876	58.1%	2,329	34.3%
	Senior Management**	144	4	4	1	1	2	149	2.8%	7	0.5%	156	2.3%
Age	<30	424	62	50	33	761	362	1,235	23.4%	457	30.3%	1,692	24.9%
	30~50	1,949	261	486	289	701	306	3,136	59.4%	856	56.7%	3,992	58.8%
	≥ 51	767	164	102	11	36	21	905	17.2%	196	13.0%	1,101	16.2%
Seniority	≤ 5	757	121	207	117	1,064	430	2,028	38.4%	668	44.3%	2,696	39.7%
	6~15	1,207	128	339	187	407	235	1,953	37.0%	550	36.4%	2,503	36.9%
	16~25	468	41	92	29	27	24	587	11.1%	94	6.2%	681	10.0%
	26~35	564	172	0	0	0	0	564	10.7%	172	11.4%	736	10.8%
	≥ 36	144	25	0	0	0	0	144	2.7%	25	1.7%	169	2.5%

**Management: Number of supervisors (non-high-level), senior management: number of supervisor above level 6

Item	Category	Taiwan		China		Vietnam	
							
		Male	Female	Male	Female	Male	Female
Education	Below senior high school	6.0%	7.6%	54.5%	46.5%	23.3%	21.6%
	Senior high school	38.3%	29.6%	32.8%	21.9%	46.3%	32.1%
	University	49.9%	55.0%	12.7%	31.5%	30.2%	45.7%
	Master / PhD	5.8%	7.8%	0.0%	0.0%	0.2%	0.6%
Nationality	Taiwan	90.3%	92.6%				
	Foreign (Blue-collar)	9.7%	6.6%	China		Vietnam	
	Foreign (White-collar)	0.0%	0.8%				
Period of Employment Contract	Irregular	98.9%	96.7%	44.4%	40.8%	52.8%	56.9%
	Regular	1.1%	3.3%	55.6%	59.2%	47.2%	43.1%
Type of Employment Contract	Full time	100.0%	99.0%	100.0%	100.0%	100.0%	100.0%
	Part time	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%

New Employees (by Age and by Gender)

Item	2022		2023		2024	
						
< 30	184 (37.3%)	30 (41.7%)	172 (31.3%)	22 (27.1%)	152 (29.8%)	36 (51.4%)
31~45	131 (8.2%)	17 (10.3%)	99 (6.7%)	25 (15.2%)	123 (9.1%)	18 (11.5%)
46~60	10 (1.0%)	10 (4.1%)	17 (1.7%)	5 (2.2%)	16 (1.5%)	2 (0.8%)
> 60	5 (3.0%)	1 (11.1%)	7 (4.4%)	1 (7.1%)	4 (1.9%)	0 (0%)
Subtotal	330 (10.1%)	58 (11.9%)	295 (9.2%)	53 (10.8%)	295 (9.4%)	56 (11.5%)

Note: Taiwan area, calculation: new employees of an age group/ the total number of employees of the same age group

New Employees (by Region)

Item	2022		2023		2024	
						
North	208	37	175	49	152	45
Central	81	9	64	2	82	5
South	41	12	56	2	61	6
East	0	0	0	0	0	0
Subtotal	330	58	295	53	295	56

Note: Taiwan area

Resigned Employees (by Age)

Item	2022		2023		2024	
						
< 30	111 (22.5%)	23 (31.9%)	119 (21.7%)	12 (14.8%)	98 (19.2%)	20 (28.6%)
31~45	104 (6.5%)	15 (9.1%)	131 (8.8%)	22 (13.4%)	129 (9.6%)	18 (11.5%)
46~60	50 (5.0%)	2 (0.8%)	55 (5.4%)	13 (5.6%)	73 (6.8%)	6 (2.5%)
> 60	38 (23.0%)	2 (22.2%)	49 (31.4%)	5 (35.7%)	44 (20.9%)	2 (11.1%)
Subtotal	303 (9.3%)	42 (8.6%)	354 (11.0%)	52 (10.6%)	344 (11.0%)	46 (9.4%)

Note: Taiwan area, calculation: resigned employees of an age group/ the total number of employees of the same age group (including retirees)

Resigned Employees (by Region)

Item	2022		2023		2024	
						
North	180	32	220	41	187	32
Central	88	8	89	8	123	10
South	35	2	45	3	34	4
East	0	0	0	0	0	0
Subtotal	303	42	354	52	344	46

Note: Taiwan area

Average Wage of New Employees VS Local Minimum Wage

Item	Taiwan		China		Vietnam	
						
2022	133%	137%	100%~155%	100%~155%	109%~143%	109%~143%
2023	128%	126%	100%~156%	119%~156%	128%~159%	128%~159%
2024	124%	121%	110%~368%	100%~426%	150%~313%	155%~315%

Note 1: Calculation: (Minimum compensation for non-supervisor new employees/Statutory minimum wage) x 100%

Note 2: The above amount includes all fixed compensations, excluding non-fixed salary including OT pay, standby allowance for emergency repair, shift allowance, and variable performance bonuses.

Note 3: The 2024 statutory minimum wage in Taiwan was NTD 27,470 each month.

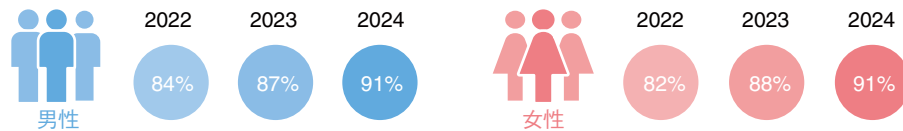
Note 4: The statutory minimum wage in China and Vietnam is different by region. In China, the statutory minimum wage is CNY 1,810~CNY 2,590. In Vietnam, it is VND 3,450,000~VND 4,960,000. The calculations thus fall within 100~426% for China and 150~315% in Vietnam.

Minimum Starting Salary for New Hires with a Bachelor's Degree or Higher VS Local Minimum Wage

Year	2022		2023		2024	
	Bachelor	Master	Bachelor	Master	Bachelor	Master
Statutory minimum Wage	1.00	1.00	1.00	1.00	1.00	1.00
	\$25,250		\$26,400		\$27,470	
	1.33	1.45	1.27	1.39	1.36	1.54
	1.33	1.52	1.27	1.47	1.30	1.51

Note: Taiwan Area

Percentage of Employees Regularly Receiving Performance Reviews



Note 1: Taiwan Area

Note 2: Employees exempt from regular performance reviews: senior executives, new hires with less than one year of service, foreign employees, contract hourly employees, and employees returning from unpaid leave for less than 6 months.

Annual Evaluation Results

Year / Grade						
	2022	2023	2024	2022	2023	2024
Excellent	1.6%	1.3%	1.1%	1.0%	0.7%	1.4%
Good	61.8%	63.0%	62.4%	67.5%	68.2%	70.2%
Others	36.6%	35.7%	36.5%	31.5%	31.1%	28.4%

Note 1: Taiwan Area

Note 2: Employees exempt from regular performance reviews: senior executives, new hires with less than one year of service, foreign employees, contract hourly employees, and employees returning from unpaid leave for less than 6 months.

Salary Ratio (by Gender)

Year	2022		2023		2024	
General Employees	0.99	1	0.99	1	0.99	1
Junior Supervisors	1.03	1	1.03	1	1.08	1
Intermediate Management	1.00	1	1.11	1	1.00	1
Senior Management	0.96	1	0.80	1	1.04	1

Note: Taiwan Area

Healthy Workplace Information Tables

Occupational Accident Statistics (in Taiwan)

All Employees		2022		2023		2024	
Item							
GRI	The rate of fatalities as a result of work-related injury (%)	0.16	0	0	0	0	0
	The rate of high-consequence work-related injuries (%)	0.00	0	0	0	0	0
Occupational Accident Statistics	Disabling Frequency Rate (FR)	1.42	1.07	0.80	0	2.20	1.01
	Disabling Severity Rate (SR)	54	1	15	0	154	139
	Frequency-Severity Indicator (FSI)	0.28	0.03	0.11	0	0.58	0.37
	Hours worked	6,452,421	737,111	6,200,131	956,792	6,354,590	987,856
Type (Disability Injuries)	Pinch hazard	3	0	1	0	5	0
	Get hit	1	1	0	0	3	0
	Crash	0	0	0	0	2	0
	Fall	0	0	2	0	2	1
	Cut	0	0	1	0	1	0
	Plunge	3	0	1	0	0	0
	Trample	1	0	0	0	0	0
	Total (Case)	8	1	5	0	13	1

Note:

- Non-staff whose work and/or workplace is under CLC control are not included in the statistics.
- The rate of fatalities as a result of work-related injury = Fatalities as a result of work-related injury / Hours worked x 1,000,000
- The rate of high-consequence work-related injuries = Number of high-consequence work-related injuries / Hours worked x 1,000,000
- FR=Number of disabling injuries / Total hours worked x 1,000,000
- SR=Number of workdays lost due to disabling injuries / Total hours worked x 1,000,000

Independent Warranty Statement



Independent Assurance Statement

CHENG LOONG CORPORATION's 2024 SUSTAINABILITY REPORT

AFNOR GROUP was established in 1926. We are the National Standardization Body of France, a permanent council member in ISO and one of the leading certification bodies in the world. This assurance work was carried out by AFNOR ASIA LTD., a subsidiary of AFNOR GROUP. All the members of the verification team have professional backgrounds and have accepted AA1000 AS, AFAQ 26000, ISO 9001, ISO 14001, ISO 14064, ISO 45001, ISO 50001, and other sustainability-related international standard trainings. All assigned verifiers have been approved as the lead auditors or verifiers. AFNOR ASIA LTD. and CHENG LOONG CORPORATION are independent entities. Except for the contents described in this independent assurance statement, AFNOR ASIA LTD. is not involved in the preparation process of the Sustainability Report of CHENG LOONG CORPORATION.

RESPONSIBILITIES

CHENG LOONG CORPORATION (hereinafter referred to as CLC) is responsible for reporting its economic, environmental, and social operating activities and performance in Taiwan and some overseas operating locations in its sustainability report (hereinafter referred to as "the Report") in accordance with the declared sustainability reporting standards.

AFNOR ASIA LTD. (hereinafter referred to as AFNOR ASIA) is responsible for providing an independent assurance statement to CLC and its stakeholders in accordance with the described scope and method. This statement is for CLC use only and is not responsible for any other purpose.

SCOPE AND CRITERIA

The assurance scope of the agreement between CLC and AFNOR ASIA includes:

- The scope of assurance operation is consistent with the scope disclosed in the CHENG LOONG CORPORATION 2024 sustainability report.
- AFNOR ASIA performs assurance operation according to the type 1 assurance of the AA1000 assurance standard (v3), reviewing and evaluating CLC's compliance with the AA1000 AccountAbility Principles (2018).
- The assurance operation includes reviewing and evaluating CLC's relevant processes, systems and controls and available performance information, as well as compliance with the following reporting criteria:
 - GRI Standards





METHODOLOGY

- The Report is reported in accordance with the GRI Standards, and the content of the Report is reviewed for compliance with the GRI Guidelines for general disclosure and specific topic disclosure.
- The verification team interviewed relevant personnel to confirm the communication and response mechanism for stakeholders and the decision-making process for material topics, but did not directly contact external stakeholders.
- All documents, data and information related to the preparation of the Report were verified by the verification team through interviews with relevant personnel.
- The process of reviewing organizational outputs, collecting and managing qualitative and quantitative data disclosed in reports based on a sampling plan.
- By interviewing the responsible personnel of each group, examining and reviewing the relevant documents, materials and information, the verification team evaluated the reasonableness of the sources of supporting materials and evidence for the contents of the Report.

CONCLUSION

◆ **AA1000 Accountability Principles**

Inclusivity

CLC has identified stakeholders and maintained communication channels for stakeholders to participate in different important topics, understand the important information that stakeholders are concerned about, and solicit feedback from all parties on the company's sustainable development expectations. The Report has reported and disclosed economic, environmental, social and governance information sufficient to support the company's strategy, objectives, standards and performance.

Materiality

CLC has published relevant information on sustainable development issues to enable stakeholders to judge the company's governance and performance. The company plans, develops and implements a material topics decision-making mechanism to focus on material topics related to sustainable development.

Responsiveness

CLC develops and implements a stakeholder response mechanism through communication channels, clearly declares various relevant policies, regulations, codes, assessment targets, etc., and regularly communicates and engagement with stakeholders, striving to implement and monitor management policies and performance targets that meet stakeholders' expectations.





Impact

CLC has taken measures to monitor and measure the risks and opportunities for the significant impacts of various sustainable development actions it has taken. It has identified various risks and opportunities and formulated action plans to effectively manage, continuously improve, communicate responsibilities and demonstrate sustainable performance.

◆ **Global Reporting Initiative Sustainability Reporting Standards**

Based on the results of the review, it is confirmed that the general disclosures, specific topic disclosures, and material topics management disclosures in the Report have complied with the requirements of the GRI Standards. In the future, the organization can expand its reporting on material topics in the report to other regional locations to present complete reporting information, fully present the sustainability context and promote better sustainability performance.

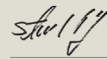
ASSURANCE OPINION

AFNOR ASIA has developed a complete sustainability reporting assurance standard based on the verification guidelines of the AA1000 Assurance Standard (v3) and the GRI Standards. Based on the sufficient evidence provided by CLC and the facts seen during on-site verification, we adhere to the principle of fairness and issue a statement on the global sustainability reporting standards followed by the organization. In our opinion, the information and data presented in the Report by CLC provides a fair and balanced representation. We believe the focuses on economic, social, and environmental matters in CLC in 2024 are well represented.

ASSURANCE LEVEL

In accordance with the AA1000 Assurance Standard (v3), we verified this assurance statement corresponding to a moderate level. The scope and methods are as described in this statement.

For and on behalf of AFNOR :




Steven Huang
The Director for Certification and Assessment
May.14.2025

Verification team: Chi Huang Chen (Lead Verifier) · Zheng-Hao Jhan (Verifier)

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