

2024 ESG Report



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01

About Hopax

About Hopax

Established in 1975, HOPAX Co., Ltd. is a global high-tech company with four main business divisions and two health/medical technology companies.

Our Specialized Business Divisions



Specialty Chemicals

Global leader in environmentally-focused textile, paper, leather, and general specialty chemicals. (Taiwan, Indonesia, Changshu)



Fine Chemicals

Solutions for textiles, paints, and adhesives, including biological fermentation and high-performance coatings. (Taiwan, Changshu)



Stick'N

A top 3 global supplier of N-Tape products for disposable hygiene items. (Taiwan, Kunshan)



Agricultural Technology

Develops environmentally friendly crop protection and nutrition using green agriculture and biotechnology. (Taiwan)



HOPAX Bio-medical

Creates antibacterial, household, and personal care products with natural and eco-friendly ingredients. (Taiwan)



SeeCure Taiwan

Focuses on innovative small-molecule oncology drug development, particularly first-of-their-kind cancer treatments. (Taiwan)

Our Sustainability Journey

From its 1975 founding to ambitious 2025 goals, Hopax's journey is marked by continuous innovation and a deep commitment to environmental and social responsibility.

1975: Foundation & Diversification

Founded in chemistry and biotechnology, diversifying into paper chemicals, healthcare, and office supplies.

2018: Sustainable Solutions Growth

Expanded into science-based nutritional supplements and sustainable agricultural solutions.

2025: GHG Inventory & ISO 14064

Aims to complete greenhouse gas inventories and obtain ISO 14064 certification across all plants.

1

2

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2010: Environmental & Health Expansion

Broadened focus to eco-friendly paints and antibacterial products, addressing market needs and environmental concerns.

Core: ESG Integration

Sustainability became central, emphasizing energy conservation, carbon reduction, and waste minimization.

Future: SBTi & Long-term Value

Joining SBTi to drive scientific carbon reduction, creating long-term environmental and societal value.

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Sustainability Goals

Recognized for Sustainability Leadership

Hopax's commitment to sustainability is affirmed through key global recognitions and strategic initiatives for environmental responsibility.



Plan to initiate joining SBTi



The Science Based Targets initiative (SBTi) is jointly formed by the UN Global Compact and the Carbon Disclosure Project (CDP). It is a scientific method based on the global carbon budget scenario aimed at controlling global warming trends within 1.5°C, allowing companies to set reasonable carbon reduction targets that can be certified by third parties.



CDP Climate Change rating "B"



Hopax received a B rating in the 2023 CDP Climate Change questionnaire, ranking among the top 40% of companies in Taiwan for sustainability leadership. CDP's annual disclosure and scoring is a globally recognized indicator of corporate environmental transparency. The 2024 CDP results were released on February 6, 2025, covering over 23,000 companies worldwide.










EcoVadis Silver Medal



Hopax won the EcoVadis 2024 Silver Medal in supply chain sustainability.

EcoVadis assesses 21 CSR-based criteria across four themes: Environment, Labor&Human Rights, Ethics, and Procurement.

Sustainability Goals

Dimension	Short-term (2025)	Mid-term (2026–2028)	Long-term (2029–2050)	Alignment with UN SDGs
 <p>Governance</p>	<ul style="list-style-type: none"> Implement governance plan, annual audit 	<ul style="list-style-type: none"> Refine sustainability targets foster transparency 	<ul style="list-style-type: none"> Strengthen board effectiveness enhance risk management 	
 <p>Suppliers</p>	<ul style="list-style-type: none"> Supplier on-site audits Supplier sustainability risk assessments Supplier code of conduct signing rate 	<ul style="list-style-type: none"> Improving supplier Sustainability Risk Assessment Improving supplier Code of Conduct Signature Rate Supplier Meeting: Successfully Conducted 	<ul style="list-style-type: none"> Sustainable supply chain ongoing carbon reduction 	
 <p>Environment</p>	<ul style="list-style-type: none"> effective environmental and energy management international ESG ratings (CDP/ECOVADIS). 	<ul style="list-style-type: none"> Full regulatory compliance energy/waste reduction ISO carbon certifications SBTi targets, 4.2% annual GHG cut ≥10% green power 	<ul style="list-style-type: none"> Net-zero by 2050 	
 <p>Social</p>	<ul style="list-style-type: none"> Diverse recruitment, learning 100%health/safety training fair wages/insurance 	<ul style="list-style-type: none"> Succession planning, school partnerships, strengthen retention/training 	<ul style="list-style-type: none"> Strong talent brand, expand e-learning, sustained health/safety 	

03

Environment (E)

Our Commitment to TCFD

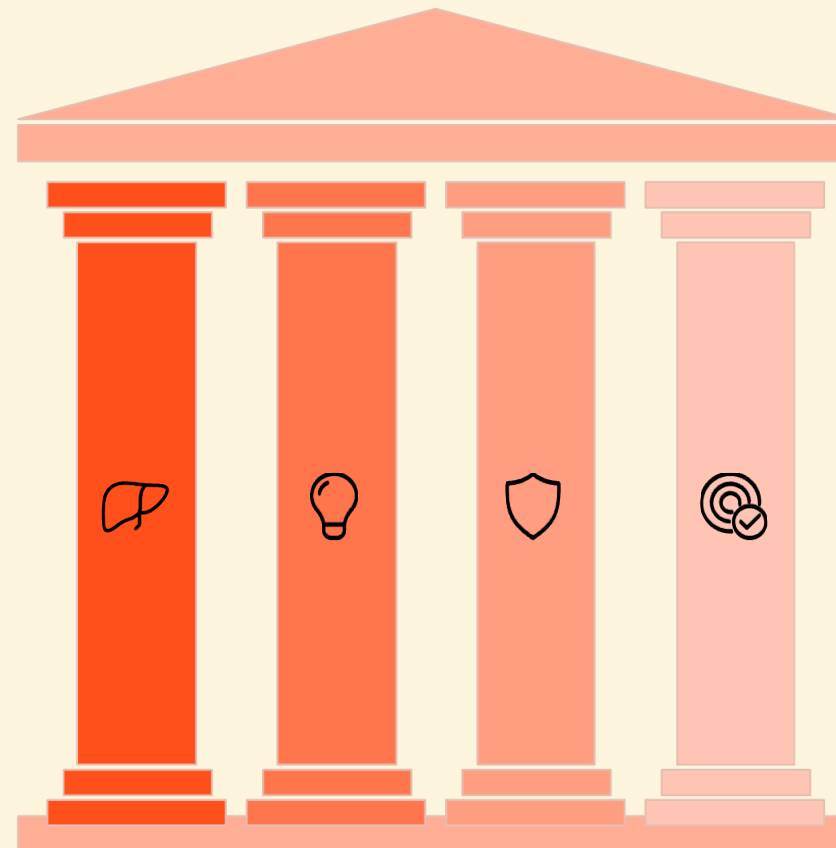
Hopax adopted the Task Force on Climate-related Financial Disclosures (TCFD) recommendations to enhance transparency for stakeholders. This involved analyzing climate risks and opportunities and quantifying their potential financial impacts.

Governance

Oversight of climate-related risks and strategic decision-making

Risk Management

Identification, assessment and mitigation of climate risks



Strategy

Integration of climate scenarios into business and planning

Metrics & Targets

Targets and KPIs to measure progress and performance

The ESG Promotion Team coordinates TCFD recommendations, implementing management actions, and optimizing procedures for effective risk management and disclosure.

Climate Change Response

HOPAX adopted the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in 2024 to provide transparent climate change response actions. We analyze climate-related financial disclosures, identify risks and opportunities, quantify financial impacts, and disclose our future strategies.

Our ESG promotion team coordinates TCFD implementation, and continuously optimizes procedures for effective risk management.

Type	Dimension	Item	Explanation	Impacted Stakeholders					
				Employees	Shareholders & Investors	Customers	Suppliers	Government Agencies	Others
Physical Risks	Acute	Extreme Weather Events	Typhoons, floods may cause casualties, losses, or disruption; repair/recovery raises costs.	V	V	V	V	V	V
Transition Risks	Policies & Regulations	Carbon Pricing	Carbon taxes/pricing may increase operating costs	V	V	V	V	V	V
	Market	Market Demand Shift	Environmental awareness may reduce sales if products not green; compliant products gain opportunities.	V	V	V	V		
		Raw Material & Energy Costs	Climate risks disrupt supply chains; raw material & energy costs rise.	V	V	V	V		

Types of Risks, Dimensions, Items, Explanations, and Impacted Stakeholders

Type	Dimension	Item	Explanation	Impacted Stakeholders					
				Employees	Shareholders & Investors	Customers	Suppliers	Government Agencies	Others
Opportunities	Energy & Resources	Procurement of Low-Carbon Materials	Use low-carbon materials/renewable energy; attract orders, drive industry development.	V	V	V	V	V	
	Market	Developing New Market Niches	R&D & entry into new markets enhance competitiveness	V	V	V	V	V	
	Motivation	Strengthening Corporate Image and Climate Risk Resilience	Improve sustainability reputation & long-term competitiveness	V	V	V	V		

Types of Opportunities, Dimensions, Items, Explanations, and Impacted Stakeholders

In-Depth Climate Risk & Carbon Analysis

Hopax's comprehensive climate analysis focuses on two critical areas to ensure long-term resilience and compliance.

Flood Risk Assessment

We've analyzed potential flood risks at our Dafa Industrial Park in Kaohsiung, using the IPCC's RCP 8.5 scenario to project mid-century climate impacts and enhance preparedness.

Carbon Pricing Impact

Emissions were evaluated against Taiwan's new NT\$300/ton CO₂ carbon fee. While our Dafa plants are currently below the threshold, we remain committed to reducing our carbon footprint through renewable energy and process optimization.



Climate Management Actions

Hopax implements proactive strategies to mitigate market-related climate risks and capitalize on emerging opportunities.

Transition Risk: Market Demand

Customers are increasingly prioritizing low-carbon products and renewable energy sources, creating a significant market shift.

Impacts:

- Potential for higher energy costs.
- Risk of reduced revenue if products do not meet evolving green expectations.

Actions:

- Focus on Research & Development for green-certified products.
- Implement eco-friendly packaging and increase renewable energy procurement.

Climate Opportunity: Market Expansion

By enhancing existing products and developing new low-carbon offerings, we can significantly expand our market reach.

Impacts:

- Opportunity for increased revenue and profitability.
- Enhanced market access in environmentally conscious sectors.

Policy:

- Establish Key Performance Indicators (KPIs) for green product revenue.
- Actively promote the substitution of traditional products with low-carbon alternatives.

Greenhouse Gas Emissions

Hopax International is committed to achieving net-zero carbon emissions by 2050, integrating sustainable development into our core business strategy through principles of innovation, sharing, and social care.



Innovation

Pioneering eco-friendly solutions.



Sharing

Fostering collaboration.



Social Care

Prioritizing well-being.

This commitment is underpinned by a comprehensive sustainability policy, focusing on robust governance, responsible supplier relations, social responsibility, and diligent environmental stewardship.



Carbon Neutrality Commitment

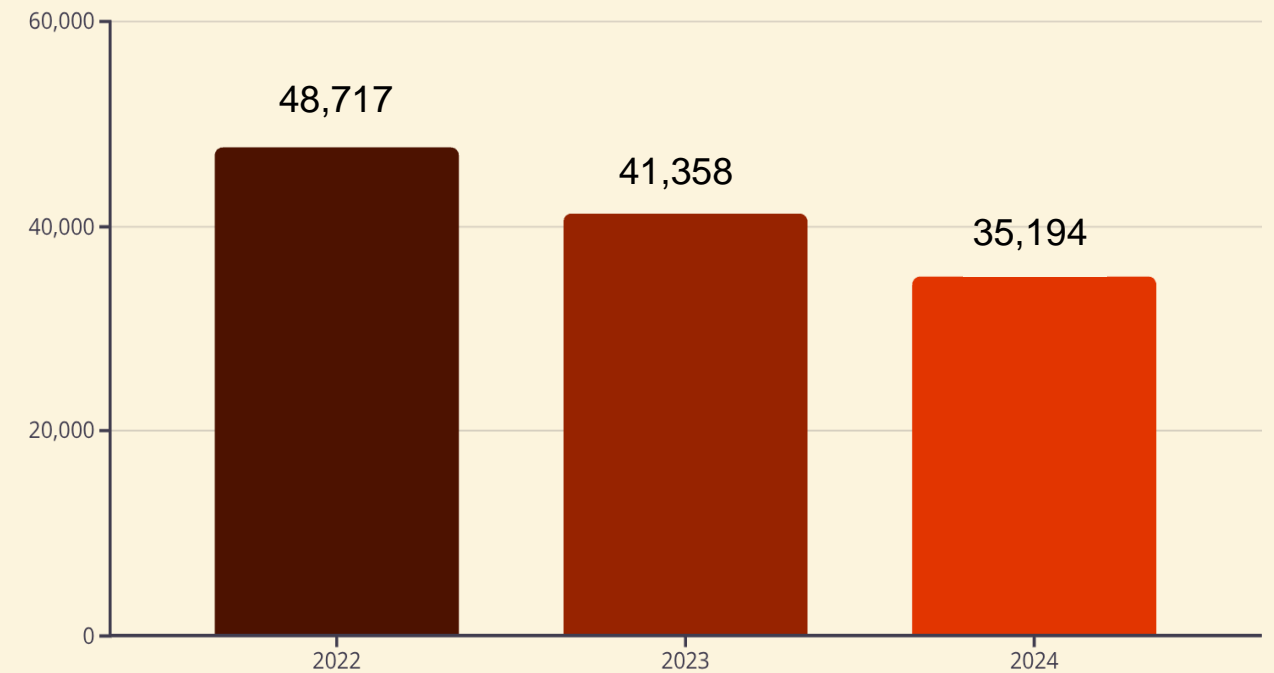
Building on our commitments, the Hopax Group's production sites in Taiwan, mainland China, and Indonesia have shown significant progress in greenhouse gas (GHG) emission reduction.

- **2024 Reduction:** Compared to 2023, we achieved a further 14.9% reduction in GHG emissions, equating to 6,164.23 tons.
- **Overall Progress:** From our 2022 baseline, our total carbon reduction by 2024 stands at 12,522.51 tons of CO2 equivalent, representing an impressive 26.24% reduction rate.

These reductions are the result of our dedicated energy conservation and carbon reduction policies, pragmatically executed across all group units.

Our efforts demonstrate a clear and consistent year-over-year improvement.

- 2024 Hopax GHG emission



- ✔ **Environmental Impact:** The carbon reduction achieved by the Hopax Group in 2023 and 2024 is equivalent to the carbon sequestration of **1,252.25 hectares of forest annually**, highlighting the substantial environmental benefits of our initiatives.

Energy Management

Hopax is committed to energy efficiency and environmental footprint reduction. Our energy management system, initiated in 2022, systematically monitors energy consumption across all operations.

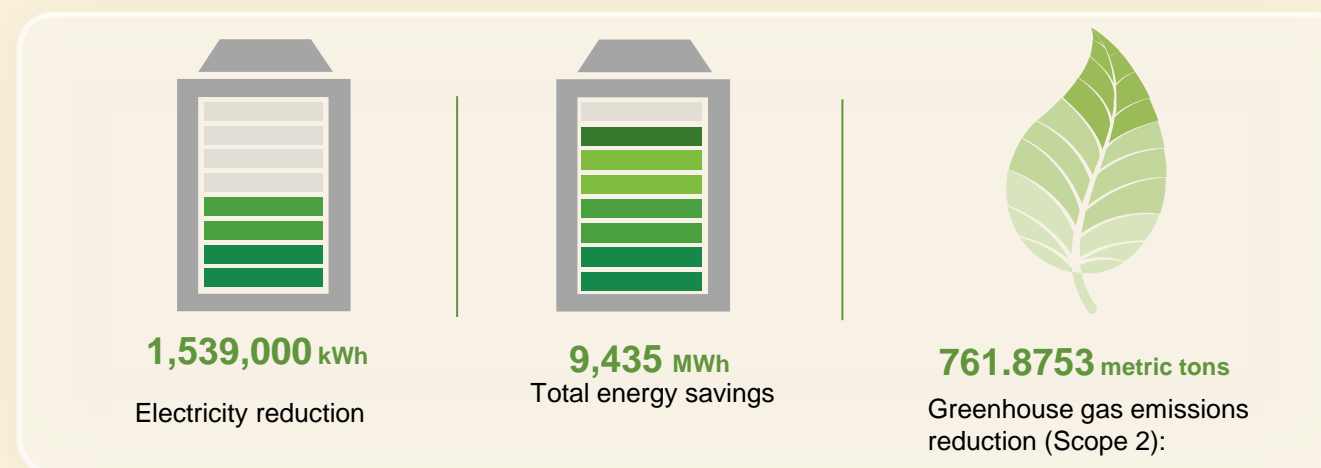
Our ISO 50001:2018 Framework

We adopted the ISO 50001:2018 Energy Management System group-wide in 2023 to ensure optimal energy use. This framework includes:

- Establishing scientific energy baselines and performance indicators.
- Regular reviews of energy-saving projects.
- Continuous improvement through internal and external assessments.

Our proactive approach consistently reduces energy use intensity, reflecting our commitment to sustainable practices.

Key Achievements in 2024



Water Resource Management

At Hopax International's Dafa plant, we prioritize water stewardship due to our reliance on limited groundwater and tap water resources. Our strategy ensures efficient and sustainable water use.

Water-Saving Infrastructure

We've installed water-saving devices in offices to minimize consumption.

Process Water Optimization

Manufacturing processes continuously recycle water for circular use.

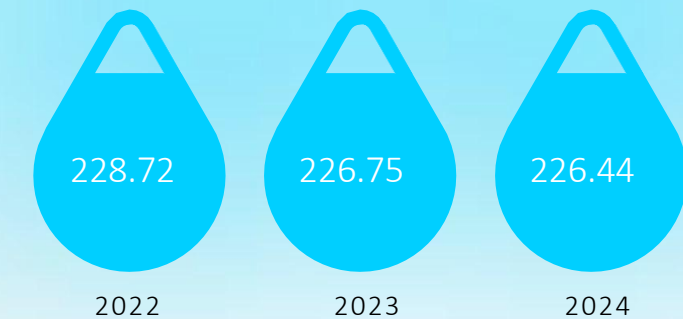
Employee Engagement

We foster water conservation through promotion and training for all employees.

These measures enhance water utilization efficiency and support long-term environmental sustainability.

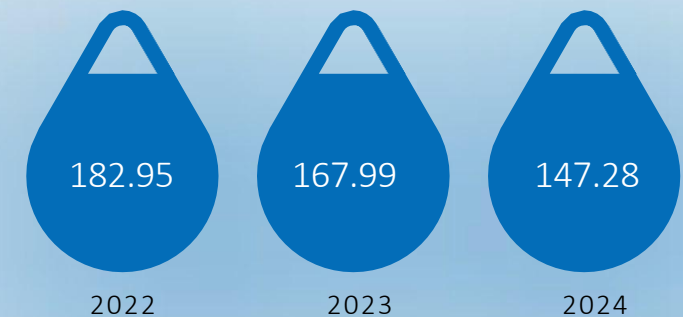
Water Withdrawal in the Past 3 Years

Unit: Water Withdrawal (million liters)



Total Wastewater Discharge in the Past 3 Years

Unit: Wastewater Discharge (million liters)



Air Quality Management

Hopax minimizes air emissions through robust strategies, focusing on continuous improvement and regulatory alignment.



Emission Reduction

Achieved a 5% emission reduction in our Dafa plant (2022-2024) through proactive VOC management.



Process Innovations

Transitioned to water-based adhesives and implemented solvent recycling, planning further aqueous process upgrades.

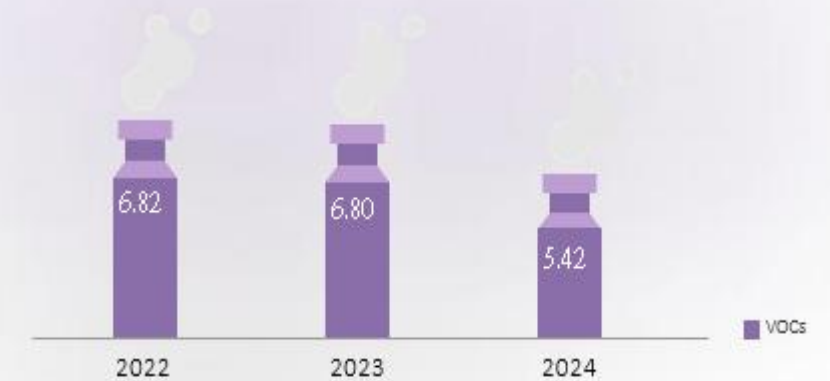


Advanced Control

Invested in state-of-the-art air pollution control equipment, aligning with national air quality policies.

In 2024, we achieved zero use or emissions of ozone-depleting substances (ODS).

Air Pollution Emissions from Dafa Plant I Unit: Tons/Year



Air Pollution Emissions from Dafa Plant II Unit: Tons/Year



Waste Management

Hopax implements a comprehensive waste management strategy focused on green design and source reduction.

1

Regulatory Compliance

Achieved full compliance with waste handling regulations at our Dafa plant in 2024.

2

Recycling Initiatives

Active recycling of pallets, plastic drums, and raw materials.

3

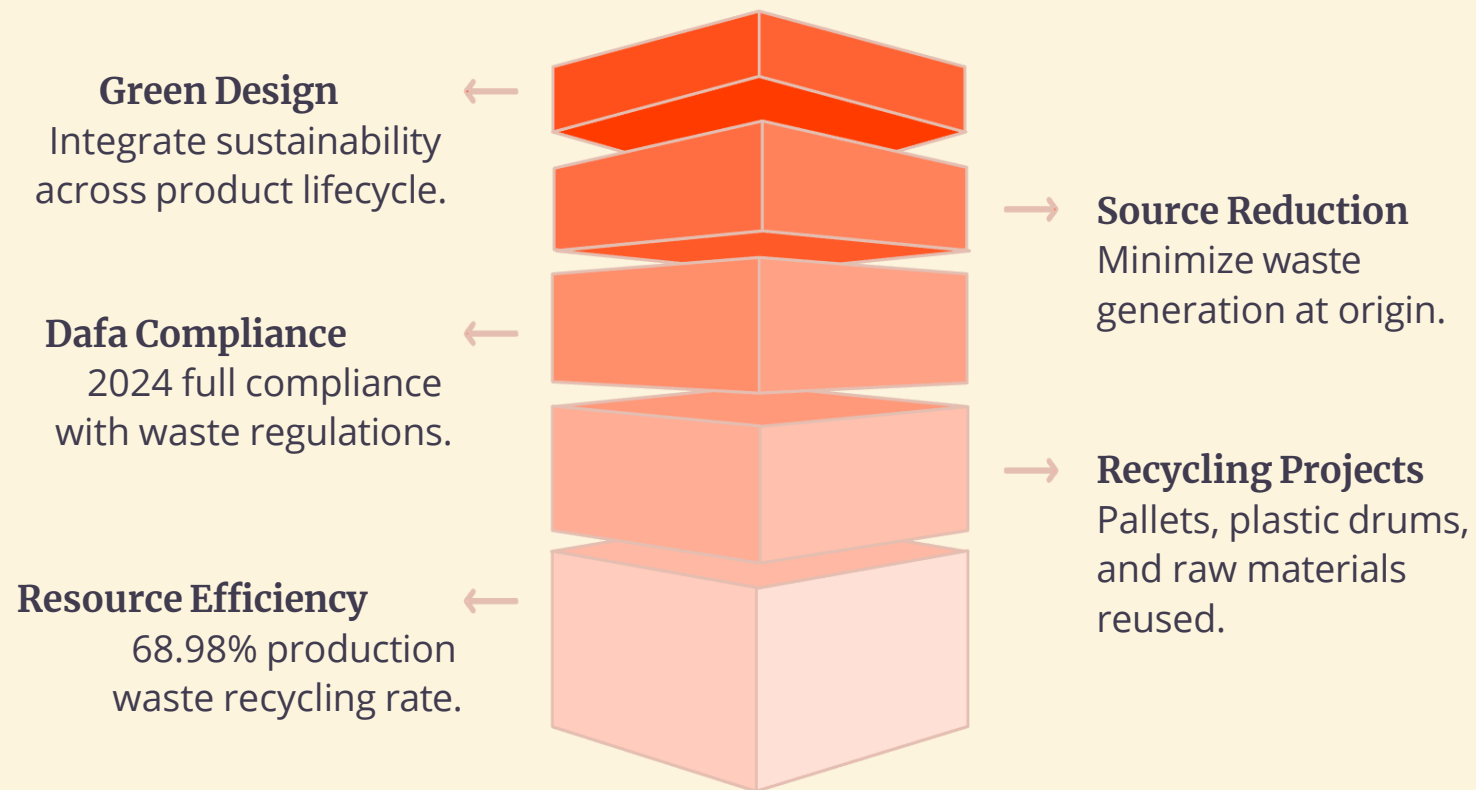
High Recycling Rate

The Dafa plant achieved an impressive 68.98% recycling rate for production waste in 2024.

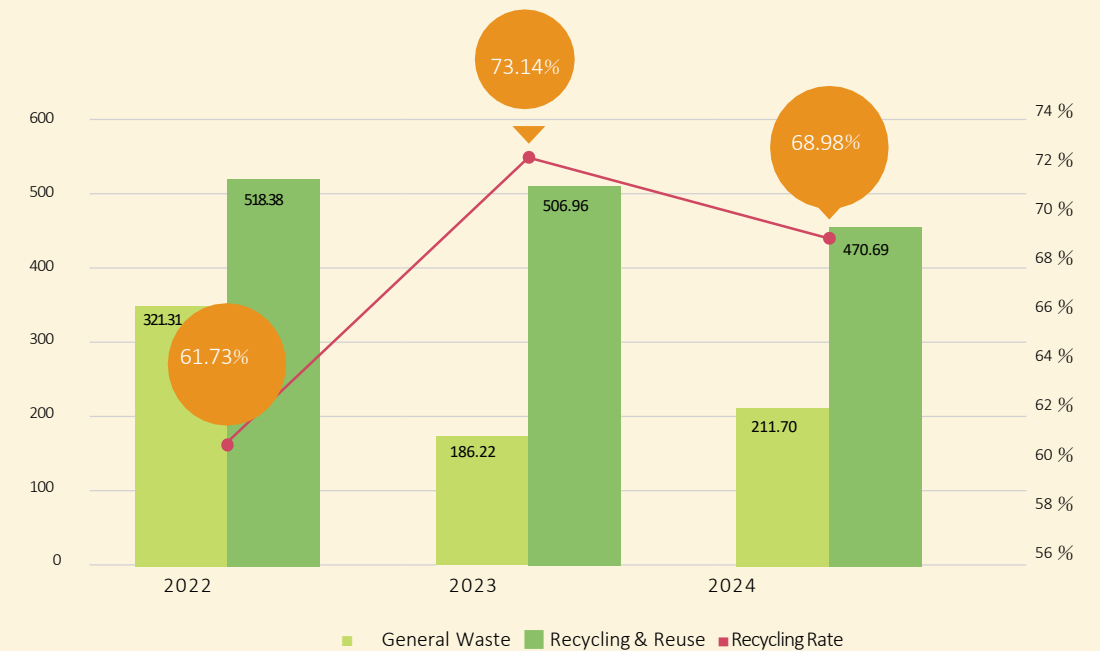
These efforts demonstrate our commitment to resource efficiency and circular waste management.

Waste Management

Hopax's comprehensive waste management strategy emphasizes green design and source reduction. In 2024, our Dafa plant achieved full regulatory compliance and an impressive 68.98% recycling rate for production waste, demonstrating our commitment to resource efficiency and circular waste management.



Waste Treatment Status at Dafa Plant Area



04

Social (S)

Sustainable Supply Chain

Hopax International is dedicated to fostering a sustainable supply chain through rigorous, annual supplier evaluations. Since 2022, we've enhanced our assessment approach to deeply integrate ESG principles.

Quality

Ensuring high standards across all delivered goods and services.

Delivery Time

Evaluating punctuality and reliability in meeting delivery schedules.

ESG Responsibility

Prioritizing environmental, social, and governance practices.

Our updated online questionnaire emphasizes green supply practices, encompassing specific criteria for sustainable operations:



Green Policies

Commitment to environmental stewardship.



Green Design

Developing eco-friendly products.



Green Manufacturing

Sustainable production processes.



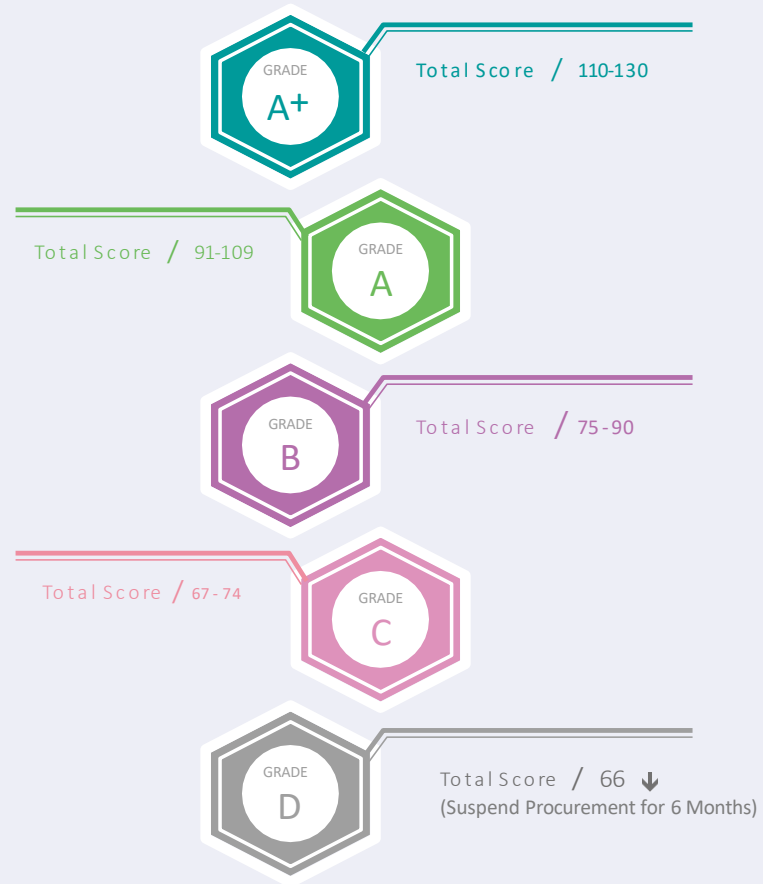
Green Environmental Protection

Focus on recycling and waste reduction.

This initiative not only conveys Hopax's commitment but also empowers our suppliers to elevate their ESG performance.

Supplier Evaluation ESG Responsible Supply Chain

Suppliers undergo a comprehensive evaluation, integrating ESG, quality, and delivery scores to determine their overall classification into 5 grades.



2022–2024 Supplier Evaluation Results

Level	Number of Companies in 2022	Number of Companies in 2023	Number of Companies in 2024
A+	9	14	14
A	62	36	51
B	94	110	97
C	38	35	31
total	203	195	193



Green Supply Chain Excellence

Hopax demonstrates environmental leadership through comprehensive sustainability initiatives that span our entire supply chain operations. Since 2019, we've implemented rigorous green procurement guidelines, recently expanding to include FSC and PEFC certified items in 2024.

93.71%

Local Procurement

Supporting local industries while significantly reducing transportation-related environmental impacts

80.95%

Supplier Code of Conduct

Most of critical suppliers signed in 2024, enhancing supply chain sustainability.

193

Supplier evaluations

All supplier evaluations passed in 2024

Through these strategic initiatives, Hopax contributes to global conservation while fostering a more sustainable business ecosystem.

Product Quality & Assurance

Our unwavering commitment ensures every Hopax offering meets the highest international standards.

Fine Chemicals Division

Serving pharmaceutical, cosmetic, and electroplating sectors, we prioritize timely delivery and a "quality as a habit" culture.

- **ISO-9001 Certified:** Maintained since 1998.
- **EXCiPACT GMP Certified:** (July 2024) for biological buffers.
- **Documentation:** Including REACH SVHC reports and SDS.

Stick’N Division





As one of two companies globally producing both chemicals and convenience notes, we ensure comprehensive in-house quality control.

- **End-to-End Quality:** In-house production guarantees stable output.
- **Precision Adhesion:** Online viscosity monitoring ensures consistent performance.
- **Appearance & Functionality:** AOI and staff training ensure visual and functional excellence.



Human Rights

At Hopax International, we uphold human rights, adhering to global standards like the UN Universal Declaration of Human Rights, the UN Global Compact, and the Responsible Business Alliance Code of Conduct, while fully complying with local labor laws. This commitment extends to all our business partners, guiding our efforts toward a fairer, more sustainable future.


Domain	UN Global Compact Principles	Related Implementation Measures
 Human Rights	Support and respect human rights	Established Sexual Harassment & Gender Discrimination Prevention Plan; employee training to protect stakeholder rights.
	ensure no complicity in abuses	
 Labor	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Established labor–management meetings and communication channels, ensuring smooth communication between labor and management, and actively optimizing labor welfare and rights-related measures.
	The elimination of all forms of forced and compulsory labor.	Prohibit forced labor and underage labor, and require suppliers and contractors to comply with relevant regulations.
	The effective abolition of child labor.	
 Environment	The elimination of discrimination in respect of employment and occupation.	Strengthened internal education and training on anti-discrimination to ensure equal and friendly workplaces.
	Businesses should support a precautionary approach to environmental challenges.	Comply with the Labor Standards Act and EHS (Environment, Health, and Safety) regulations; establish an energy management mechanism; promote energy conservation and carbon reduction; reduce pollution emissions.
	Take proactive actions to promote and strengthen corporate environmental responsibility.	Actively promote environmental responsibility, implement industrial waste reduction, energy conservation, resource recycling, and comply with environmental protection laws.
 Anti-Corruption	Encourage the development and diffusion of environmentally friendly technologies.	Develop green processes and promote source reduction to minimize waste and energy consumption.
	Businesses should work against corruption in all its forms, including extortion and bribery.	Implement integrity management and establish an anti-bribery management mechanism.

Taiwan Hopax Chemicals Mfg. Co., Ltd. – Human Rights Policy

Taiwan Hopax Chemicals Mfg. Co., Ltd. in order to implement human rights protections and fulfill corporate social responsibility requirements, adheres to internationally recognized human rights standards, such as the International Bill of Human Rights, and strictly complies with labor regulations at all its operational locations. We treat and respect our current employees with dignity, and we encourage our business partners to support our social responsibility policies and to jointly fulfill social responsibilities.

Execution Guidelines:

- Provide all employees with a healthy and safe working environment.
- Prohibit discriminatory behavior to ensure equal employment opportunities.
- Prohibit any form of forced labor.
- Prohibit the employment of child labor.
- Assist employees in maintaining physical and mental health and a work-life balance.
- Respect employees' freedom of association and the right to collective bargaining.

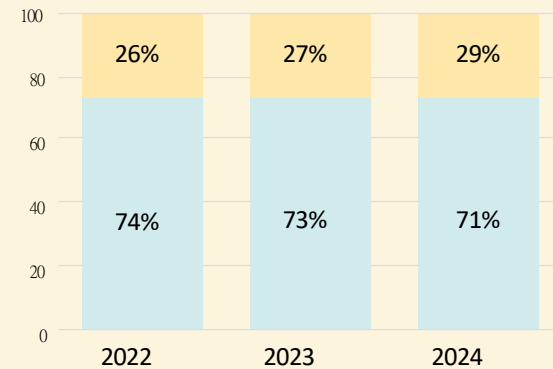

Dr. TSUNG-TIEN KUO
Chairman of the Board
2022/11

Gender equality

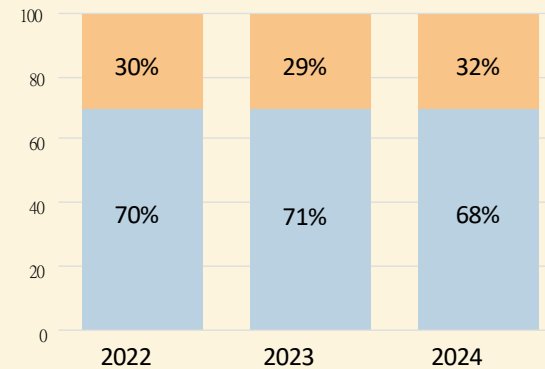
Hopax works hard to create a fair and welcoming workplace. We have strong policies against discrimination and practices that support our employees. We use private ways for employees to talk to us, which helps us prevent discrimination and harassment at work. We had no reported cases of this in 2024, including those related to indigenous rights.

We give a lot of support to our foreign workers, offering documents in their language and help with daily life. This meant they had no complaints in 2024. These efforts show Hopax's commitment to making a diverse, equal, and respectful place where everyone's rights and worth are respected.

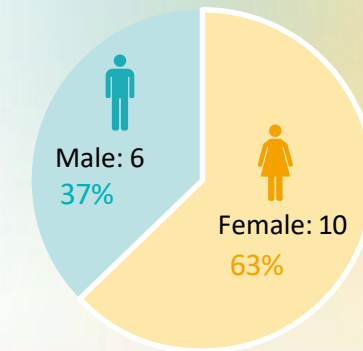
Male-Female Employee Ratio



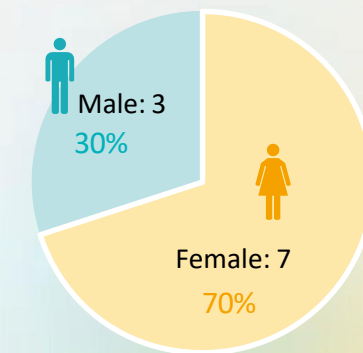
Male-Female Manager Ratio



Male-Female Ratio of Parental Leave Applications (2022-2024)



Male-Female Ratio of Parental Leave Returns (2022-2024)



Friendly Workplace

Hopax fosters a friendly, safe, and continuously evolving workplace through comprehensive training and development.



Continuous Learning & Safety

We prioritize employee health, safety, and professional growth.

- Environmental Safety: 3,191 hours of annual courses.
- General Knowledge: 2,422 hours in AI, team building, and problem analysis.
- Training also covers legal compliance, quality, and management.



Talent Development Workshops

We equip supervisors with crucial skills for team building and daily challenges.

- Daily Work Management: Enhancing efficiency and organization.
- Constructive Dialogue: Mastering communication for team direction.
- Expert instructors provide case analyses and practical experience.

Work-Life Balance

Hopax International values employee work-life balance, offering engaging activities to alleviate stress and support family care, which boosts productivity and fosters harmonious family lives.



Hopax Chemistry Camp

Engaging activities fostering learning, bonding, and family time for employees and their children.



Employee Sports Clubs

Promoting physical well-being and team spirit through sports, encouraging health and camaraderie.



Family-Friendly Initiatives

Programs and policies supporting family care, improving employee relationships, and enhancing team cohesion.

Social Engagement

Hopax International's social engagement is built on core values of care, cooperation, and team learning. We actively support vulnerable local groups and encourage employee participation in charitable activities, fostering sustainable community roots.



Beach Cleanup Initiative

On World Earth Day, 530 volunteers from 22 companies joined to remove 2,061 KG of garbage, primarily glass and plastic, from a local beach. This effort highlights our commitment to environmental protection.



Supporting Tribal Communities

For the sixth consecutive year, Hopax delivered 372 gift boxes to Hualien-Taitung tribes. This initiative, in collaboration with local foundations, continues to spread love and support to children and elders.

05

Governance (G)

Occupational Safety

Hopax prioritizes workplace health and safety through its ISO 45001 Occupational Health and Safety Management System, implemented across all subsidiaries and subjected to annual third-party audits. This reflects our dedication to risk prevention and continuous improvement in safety standards.

In 2024, the Dafa plant significantly enhanced its safety training program, with over 60% increases in courses, hours, and participant numbers, maintaining a 100% implementation rate. We also actively engage in local industrial safety initiatives and joint defense activities in the Dafa Industrial Park, strengthening regional safety capacity and fostering a strong culture of workplace safety.



Emergency Response Mechanisms

In-plant, we prioritize personnel safety and swift incident mitigation through immediate assessment and emergency response activations. For off-site transportation, we ensure supplier compliance and enhance safety management through risk analysis, inspections, training, and regular drills for drivers and dispatchers.

- **Off-site Emergency Response Process**

1

Report Incidents

Report issues to internal and external authorities within 30 minutes.

2

Evacuate & Get Help

Evacuate personnel and secure external support (medical, fire, rescue).

3

Get Response Team Ready

Establish command center; deploy response team on-site within 2 hours.

4

Get Outside Help

Coordinate with external organizations for additional support.

5

Find & Control Dangers

Identify, assess, and control hazards via emergency protocols.

6

Mark Off Danger Areas

Designate Warning, Clean-up, and Safe Zones.

7

After-Event Cleanup & Check

Clean up, check on health, and find out what happened.

8

After-Event Cleanup & Check

Clean up, check on health, and find out what happened.

Corporate Governance

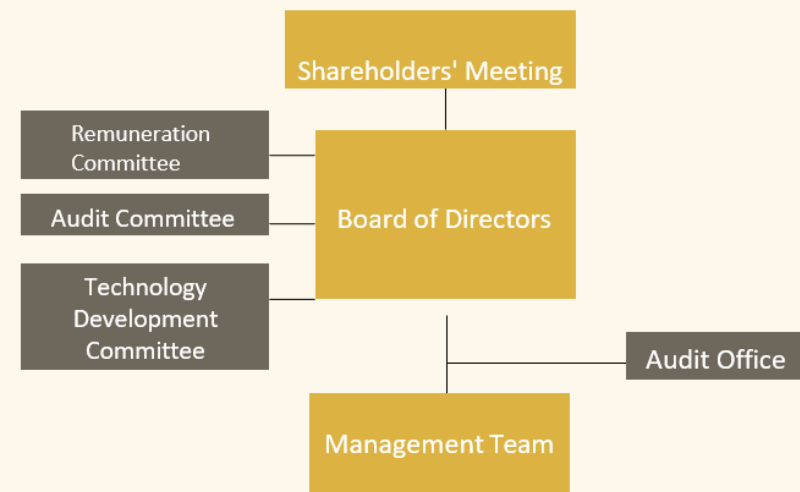
Hopax values operational transparency and shareholder rights, believing a strong Board of Directors is crucial for effective corporate governance and guiding sustainability management. Our Board guides strategy, oversees management, and implements governance, prioritizing diversity in nominations to ensure independent oversight.

Board Performance Evaluation

Annual evaluations are conducted for the board, functional committees, and individual members.

In 2024, all evaluations were "Exceeding Standards."

Corporate Governance Structure



Director & Manager Compensation

Compensation for directors and executives is based on industry benchmarks and performance. An independent Compensation Committee ensures fair and competitive remuneration.



Ethical & Risk Management

Ethical Management

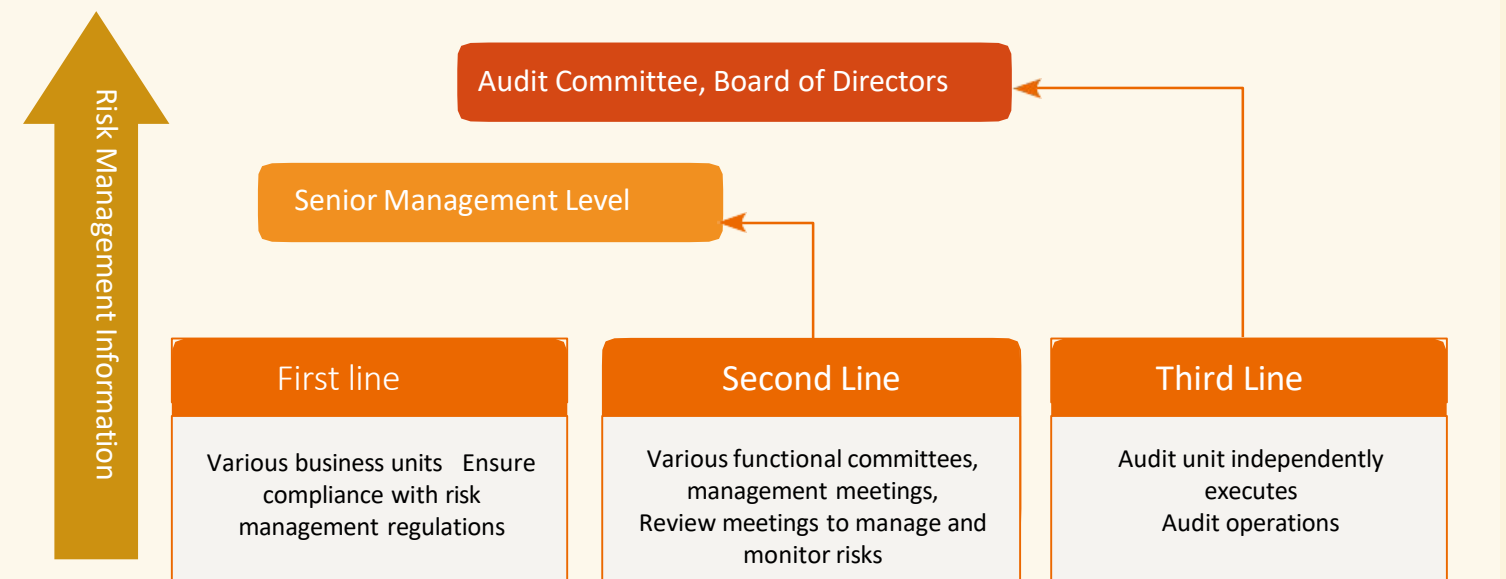
Hopax upholds strong ethical business practices through comprehensive education and compliance. From 2022-2024, Dafa Plants reported no ethical or legal violations. In 2024, 731 employees participated in training, fostering an ethical culture reinforced by Integrity Declarations from key personnel.

Number of complaints regarding unethical conduct, corruption, or illegal activities in the past three years: 0

Risk Management

Hopax implements a comprehensive risk management system with multi-level control and rigorous internal oversight, ensuring operational effectiveness and regulatory compliance. The Board guides strategy, supervises management, and exercises prudent duty of care for sound company operation.

Risk Warning Process



Information Security

Hopax International ensures robust information security across all systems and data, focusing on confidentiality, integrity, and availability to safeguard critical information and systems.



Confidentiality

Protecting sensitive information from unauthorized access, ensuring privacy and data security.



Integrity

Maintaining the accuracy and completeness of data, preventing unauthorized modification.



Availability

Ensuring information and systems are accessible and operational to authorized users when needed.

We further strengthen data protection through a document encryption project, utilizing advanced technology to secure all sensitive documents. We also prioritize information security awareness through ongoing employee education and integration into internal control operations, fostering a strong security culture across all departments.



HOPAX (including Dafa Plant I and Dafa Plant II) reported no incidents of information security breaches, data leaks, theft, or loss of customer data from 2022 to 2024.



GRI Standards Content Index

Number	Disclosure Topic
GRI 2-1	Organizational Profile
GRI 2-9	Governance Structure and Composition
GRI 2-18	Performance Evaluation of the Highest Governance Body
GRI 403-1	Occupational Health and Safety Management System

HOPAX



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