

# 2024

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) REPORT

ZHEJIANG NHU COMPANY LTD.



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# **About this Report**



Since its first release of a social responsibility report in 2008, Zhejiang NHU Co., Ltd. ("NHU") has issued such reports for 15 consecutive years. The *Environmental, Social and Governance (ESG) Report 2024 of Zhejiang NHU Co., Ltd.* (the "Report" or "this Report" for short) is the Company's first-ever ESG Report released to the public.

**Organizational Scope** 

This Report encompasses the environmental, social, and corporate governance efforts of NHU and its subsidiaries. For ease of reading, unless otherwise specified, "Zhejiang NHU Co., Ltd." and its subsidiaries are collectively referred to as "Zhejiang NHU", "NHU", "the Company", or "We."



The Report covers the period from January 1, 2024, to December 31, 2024. However, to maintain information continuity and integrity, some content may extend beyond this timeframe.



Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange—Sustainability Report (For Trial Implementation)

Sustainability Reporting Standards by the Global Reporting Initiative (GRI Standards)

The United Nations' 2030 Agenda for Sustainable Development (UN SDGs)

Financial Stability Board's Task Force on Climate Related Financial Disclosures (TCFD) Disclosure Recommendations



All data used in this Report are derived from the Company's internal official documents, internal statistics, and publicly available materials. Key financial performance data are primarily sourced from the *Annual Report 2024 of Zhejiang NHU Co., Ltd.* Unless otherwise stated, all monetary amounts in this Report are in CNY. The Board of Directors assumes responsibility for the authenticity, accuracy, and completeness of the Report's contents.



This Report is available in both Chinese and English versions for readers' reference. In case of any discrepancies, the Chinese version shall prevail. It can be viewed and downloaded on the Company's website (https://www.cnhu.com).



We welcome feedback from all stakeholders. For inquiries or suggestions regarding NHU's sustainable development initiatives or the content of this Report, please contact us through the following channels:

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## Message from the Chairman

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As time progresses, NHU has achieved notable advancements in 2024. Remaining committed to our corporate principles of "Creating Wealth, Elevating Employees, and Benefiting Society", we have strengthened the foundation for ESG development and integrated sustainability into our corporate strategy while pursuing highquality business growth.

#### We continuously pursue superior products to better serve society.

Through intelligent and digital transformation, we have accelerated our smart factory development, evaluated 22 digital and intelligent projects, and optimized resource allocation. We remain committed to innovation-driven development, completing 76 technical transformation projects and the R&D of 14 new products, with a focus on green technology research and low-carbon solutions to enhance production efficiency. We rigorously control product quality, implement information security and quality training for all employees, and reinforce our "customer-centric" philosophy. Guided by technological innovation, empowered by intelligent systems, we remain dedicated to safety and quality, advancing new quality productive forces.

Chairman Hu Baifan Zhejiang NHU Co., Ltd.



# We are committed to sharing development achievements with all stakeholders and fostering a more harmonious society.

Upholding integrity and compliance operations, we continuously enhance our risk management framework, and strengthen business ethics governance. NHU has maintained a 16-year consecutive "A" rating in the Shenzhen Stock Exchange's information disclosure evaluation and was honored among the 2024 Top 30 Best Internal Control Awards for Zhejiang Listed Companies. We prioritize employee development by cultivating an inclusive, diverse, and innovative organizational ecosystem. Annual training expenditures exceeded CNY 7 million, with an average of 42 training hours per employee. Our comprehensive occupational health and safety (OHS) management system achieved 100% work-related injury insurance coverage and maintained zero occupational disease incidence. We extend sustainability practices across the supply chain by optimizing supplier ESG management, achieving 100% execution of *Supplier Integrity Agreements*. We actively support community development initiatives, contribute to building harmonious communities, and increase investments in public welfare and charitable initiatives. While driving our own growth, we remain committed to social responsibility and the creation of enduring value.

#### We are dedicated to leading green and low-carbon development in our industry.

In response to the "Dual Carbon" strategy (carbon peaking and carbon neutrality), we achieved a 7.67% reduction in energy consumption intensity, completed carbon footprint verification for 36 products, and compiled greenhouse gas emission inventories for all subsidiaries. We continuously improve our environmental management systems, fulfilling annual targets including a 5% reduction in COD<sup>1</sup> emissions and a 2% decrease in wastewater discharge per output value of CNY 10,000, while ensuring compliance with pollutant discharge standards. Embracing green operational principles, we explore circular economy models, maintaining a 96.30% water recycling utilization rate. Confronting challenges posed by climate change, resource constraints, and environmental shifts, we actively drive green and low-carbon transformation to advance sustainable development.

In 2025, we will continue to implement ESG principles, execute sustainable development strategies, concentrate on our dual-core strategy of "Chemistry+" and "Bio+," propel industry progress through innovation, enrich lives through chemistry, and generate greater societal value.





# **About NHU**

## **Company Profile**

Zhejiang NHU Co., Ltd. ("NHU" or "the Company"), a subsidiary of NHU Holding Group, was founded in 1999 and listed on the Shenzhen Stock Exchange in 2004 (Stock Code: 002001).

Maintaining a commitment to innovation-driven development and market-oriented growth, the Company specializes in the R&D, production, sales, and servicing of functional chemicals. Through providing integrated solutions spanning nutrition & health, personal & home care, transportation, environmental protection, and energy sectors, we serve customers across 100+ countries and regions. Our premium-quality, healthy, eco-friendly, and low-carbon products continuously improve human wellbeing while generating sustainable value for stakeholders, progressing toward our vision as a global leader in functional chemicals solutions.



#### **Global Footprint**

With a global footprint encompassing sales, R&D, and production operations, the Company has established integrated functional systems covering HR management, financial operations, logistics, IT infrastructure, and administrative support. Our business network currently spans key Asia-Pacific markets, including Singapore, Japan, and Vietnam, and extends to Europe and South America.



NHU Global Layout

#### **Development History**

In 1999	)	NHU was established by Xinchang County Synthetic Chemical Factory as the initiating entity.
In 2003	)	The construction of Shangyu Base commenced.
In 2004	)	NHU became the first company to be listed on the SME board (now the main board) of the Shenzhen Stock Exchange with the stock code of 002001.
In 2006	)	The development of Coenzyme Q10 was successfully completed, marking the Company's entry into the fermentation sector.
In 2008		The construction of Shandong Base commenced.
ln 2013		Zhejiang NHU Special Materials Co., Ltd. was established, signaling NHU's expansion into the new materials sector.
In 2014		The construction of Shandong NHU Amino Acids Co., Ltd. commenced, marking NHU's foray into the amino acid sector.
In 2018		The construction of Heilongjiang Base commenced, laying the foundation for NHU's advancements in bio-fermentation.
ln 2021		The NHU Life and Health Industrial Park was completed, heralding a new journey in human nutrition.
In 2023		Zhenxin Bio was founded in collaboration with Sinopec Zhenhai Refining & Chemical Company, and the construction of the 180,000-ton liquid methionine project started.

## **Corporate Culture**

Cultural Characteristics

Teacher Culture

The Wiser Is the Teacher; the More Capable the Teacher; Act in Modesty; Training for Excellence

The founders of NHU were mainly teachers and students. Ever since its inception, NHU has rooted values of respecting teachers and stressing training. In its course of development, Corporate leaders and staff have embodied educator virtues - self-cultivation through mentorship principles and honoring expertise through the title "Teacher". This Teacher Culture, now an organizational hallmark, continues to propel the Company's sustainable development.



## **Company Honors**

lonor	Awarded by	Winner / Project
The 15th China Listed Companies nvestor Relations Tianma Award or Shareholder Return	Securities Times	Zhejiang NHU Co., Ltd.
2024 China's Top 100 Fine Chemical Companies	China Chemical Industry Information Association; China National Fine Chemical Raw Materials & Intermediates Industry Cooperation Group	Zhejiang NHU Co., Ltd.
2024 Top 20 Innovative Development Enterprises in China's Fine Chemical Industry	China Chemical Industry Information Association; China National Fine Chemical Raw Materials & Intermediates Industry Cooperation Group	Zhejiang NHU Co., Ltd.
2024 Top 20 Green and Low-Carbon Development Enterprises in China's Fine Chemical Industry	China Chemical Industry Information Association; China National Fine Chemical Raw Materials & Intermediates Industry Cooperation Group	Zhejiang NHU Co., Ltd.
nnovative Small and Medium Enterprises in Zhejiang Province	Zhejiang Provincial Department of Economy and Information Technology	Zhejiang NHU Special Materials Co., Ltd.









# **ESG Strategy and Governance**

NHU is committed to establishing itself as a global sustainability benchmark in functional chemicals. We have deeply integrated sustainable development into our business operations and formulated an ESG strategy that aligns with the United Nations Sustainable Development Goals (SDGs). This strategy aims to foster a more sustainable industrial ecosystem, enhance quality of life through innovative fine chemical solutions, and demonstrate Chinese enterprises' contributions to global sustainability.

## **ESG Strategy**

Guided by our corporate mission, "Exploring Chemistry, Improving Life", and our core value of "New, Harmony, and Union", the ESG strategy has been developed in accordance with the UN 2030 Agenda for Sustainable Development and fully integrated into our corporate strategic framework.

Goals



ESG Strategic To establish NHU as a global sustainability benchmark in functional chemicals

Our ESG implementation framework comprises three strategic pillars - "Superior Products", "Harmonious Society" and "Sustainable Environment" - supported by nine concrete initiatives, to achieve the ESG strategic vision and goals of NHU. Through continuous innovation that transcends conventional chemical boundaries, we deliver competitive product and solutions while generating sustainable value for stakeholders. Our efforts address critical challenges in food security, environmental protection, and life quality enhancement, driving balanced and sustainable development for humanity, society, and the planet.



Superior Products         Digital and Intelligent Empowement: Drive smart factory development by upgrading entire operations through digitalization, automation, informatization, networking, and intelligentization       • Build an ESG I         Innovation-driven Development: Drive industrial transformation through product R&D and technological innovation, delivering high-quality products that contribute to a better life       • By 2030, the state         Risk Management: Strengthen risk control frameworks to proactively identify, assess, and address sustainability- related risks and opportunities, ensuring sustainable and resilient operations       • Conduct due d to sustainable         ESG Key Areas       • Conduct a bus years         Harmonious Society       • Conduct a bus years         Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice       • By 2030, the p • Each employee • Annual busine 100%         Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth       • By 2030, the p • Each employee • Annual number         Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable       • By 2028, all st		
Digital and Intelligent Empowerment: Drive smart factory development by upgrading entire operations through digitalization, automation, informatization, networking, and intelligentization       • Build an ESG I • Maintain zero i maintain zero i         Innovation-driven Development: Drive industrial transformation through product R&D and technological innovation, delivering high-quality products that contribute to a better life       • By 2030, the state 15% • By 2030, the state 15% • By 2030, the contribute to a better life         Risk Management: Strengthen risk control frameworks to proactively identify, assess, and address sustainability- related risks and opportunities, ensuring sustainable and resilient operations       • Conduct due d to sustainable • Complete risk and long-term         ESG Key Areas       • Conduct a bus years • Conduct a bus years • Annual busine against corruption and malpractice         Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics against corruption and malpractice       • Conduct a bus years • Annual busine 100%         Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth       • By 2030, the p • Each employee • Annual numbe         Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable       • By 2028, all st	Superior Products	
Innovation-driven Development: Drive industrial transformation through product R&D and technological innovation, delivering high-quality products that contribute to a better life       • By 2030, the statistic By 2030, the control system of the system of t	Digital and Intelligent Empowerment: Drive smart factory development by upgrading entire operations through digitalization, automation, informatization, networking, and intelligentization	<ul> <li>Build an ESG Ir</li> <li>Maintain zero ir</li> </ul>
Risk Management: Strengthen risk control frameworks to proactively identify, assess, and address sustainability-related risks and opportunities, ensuring sustainable and resilient operations <ul> <li>Complete risk and long-term</li> <li>Complete risk and long-term</li> <li>ESG Key Areas</li> </ul> Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice <ul> <li>Conduct a bus years</li> <li>Annual busine 100%</li> </ul> Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth <ul> <li>By 2030, the p</li> <li>Each employee</li> <li>Annual numbe</li> </ul> Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable <ul> <li>By 2028, all st</li> <li>By 2028, all st</li> </ul>	Innovation-driven Development: Drive industrial transformation through product R&D and technological innovation, delivering high-quality products that contribute to a better life	<ul> <li>By 2030, the sa 15%</li> <li>By 2030, the co</li> </ul>
ESG Key Areas         Harmonious Society         Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice       • Conduct a bus years         against corruption and malpractice       • Annual busines 100%         Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth       • By 2030, the p         Shared Success and Prosperity:       Address societal needs and empower partners to drive sustainable       • By 2028, all st	Risk Management: Strengthen risk control frameworks to proactively identify, assess, and address sustainability- related risks and opportunities, ensuring sustainable and resilient operations	<ul> <li>Conduct due dil to sustainable d</li> <li>Complete risk a and long-term s</li> </ul>
ESG Key Areas         Harmonious Society         Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice       • Conduct a bus years         Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth       • By 2030, the p         Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable       • By 2028, all st		
Harmonious Society         Integrity Compliance: Maintain         regulatory-compliant operations, and         uphold the highest business ethics         standards, with zero-tolerance policies         against corruption and malpractice         Employee Well-being: Cultivate         inclusive and "Harmonious" corporate         culture, safeguarding employee health         while enabling professional growth         Shared Success and Prosperity:         Address societal needs and empower         partners to drive sustainable	ESG Key Areas	
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<ul> <li>Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth</li> <li>By 2030, the p</li> <li>Each employee</li> <li>Annual numbe</li> <li>Annual numbe</li> </ul> Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable <ul> <li>By 2030, the p</li> <li>Each employee</li> <li>Each employee</li> <li>By 2028, all st</li> </ul>		
Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable	Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice	<ul> <li>Conduct a busin years</li> <li>Annual busines 100%</li> </ul>
Shared Success and Prosperity: Address societal needs and empower partners to drive sustainable • By 2028, all st	Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice <b>Employee Well-being:</b> Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth	<ul> <li>Conduct a busin years</li> <li>Annual busines 100%</li> <li>By 2030, the prince</li> <li>Each employee</li> <li>Annual number</li> </ul>
development across industries and management a communities	Integrity Compliance: Maintain regulatory-compliant operations, and uphold the highest business ethics standards, with zero-tolerance policies against corruption and malpractice Employee Well-being: Cultivate inclusive and "Harmonious" corporate culture, safeguarding employee health while enabling professional growth	<ul> <li>Conduct a busin years</li> <li>Annual busines 100%</li> <li>By 2030, the prior</li> <li>Each employee</li> <li>Annual number</li> </ul>

#### Goals

nformation System

ncidents of data security and customer privacy breaches

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ales proportion of green and low-carbon products will exceed

overage rate of quality certification system will reach 100%

\_\_\_\_\_

ligence investigations on negative impacts or risks related development every 2 years

and opportunity assessments related to short, medium, sustainable development every 2 years

#### Goals

ness ethics audit of the production legal entity every three

ss ethics and anti-corruption training coverage reaches

roportion of female senior management will reach 20% e has an annual learning time of more than 50 hours of work-related deaths among employees: 0

rategic suppliers will be included in the Company's ESG nd assessment

ESG Key Areas	Goals	
Sustainable Environment		
Low-carbon Transformation: Reduce energy consumption and carbon emissions to achieve a greener energy mix and climate- friendly operations	<ul> <li>Achieve operational carbon neutrality by 2060 (Scope 1+Scope 2)</li> <li>Compared to the 2023 baseline, reduce greenhouse gas (GHG) emissions per unit of revenue 25% by 2030</li> </ul>	
Harmony with Nature: Enhance environmental management systems to minimize pollution, advance biodiversity conservation, and foster human-nature coexistence	<ul> <li>Environmental management system certification maintains a coverage rate of 100%</li> <li>Maintain 0 annual major environmental incidents</li> <li>Compared to the 2023 baseline, reduce COD emission intensity 30% by 2030</li> <li>Compared to the 2023 baseline, reduce industrial waste emission intensity 10% by 2030</li> <li>Compared to the 2023 baseline, reduce hazardous waste generation intensity 10% by 2030</li> </ul>	
Circular Economy: Implement water conservation and recycling programs	Compared to the 2023 baseline, the Company's water recycling utilization	

conservation and recycling programs while promoting closed-loop resource utilization and renewable material adoption to build resource-efficient circular economies

- Compared to the 2023 baseline, the Company's water recycling utilization rate is expected to exceed 95% by 2030
- The purchased renewable raw materials reach 200 tons/year

### **ESG Governance**

To ensure the scientific rigor and rationality of the Company's ESG development processes from an organizational perspective, the Company has established a comprehensive ESG governance structure with clearly defined hierarchies and responsibilities. This framework specifies duties across all organizational levels, departments, and positions to facilitate robust ESG management systems and mechanisms.



The Board of Directors serves as the supreme decision-making body for the Company's ESG management, assuming ultimate responsibility for the truthfulness, accuracy, and completeness of ESG-related work and report contents. It oversees the overall ESG strategy and make decisions on material matters. Reporting to the Board of Directors, the Board Strategy Committee performs research and guidance functions for ESG management, conducting deliberation, evaluation, and oversight of significant ESG matters. Its responsibilities encompass: (1) developing strategies and policies; (2) overseeing ESG plan implementation and performance evaluation; (3) identifying risks and opportunities; (4) reviewing the annual *ESG Report* and related disclosures, with reporting obligations to the Board of Directors.

The ESG Management Committee operates under the Board Strategy Committee, tasked with: (1) Establishing the Company's ESG strategic framework, vision, phased development plans, annual targets, and core policies; (2) Evaluating sustainability-related risks/opportunities with regular reporting to the Board Strategy Committee; (3) Examining sustainability policies and critical internal management data; (4) Ensuring ESG compliance across business models and organizational structures; (5) Coordinating ESG task allocation and internal resource mobilization; (6) Examining the annual ESG Report for deliberation, approval, and disclosure by the Board Strategy Committee.

The ESG Management Committee has established an ESG Office, which is responsible for leading and coordinating the ESG Management Committee's functions, overseeing the implementation of tasks and decisions by ESG working groups, and reporting to the ESG Management Committee. The ESG Office performs the following key responsibilities: (1) Regularly tracking external regulations and policy developments, staying informed of changes in legal requirements, regulatory frameworks, and international standards, and conducting periodic reviews of the Company's sustainability policies and initiatives; (2) Coordinating the development of corporate ESG goals and dual materiality evaluations, and analyzing sustainability-related risks and opportunities; (3) Overseeing stakeholder engagement activities, and preparing sustainability reports; (4) Convening at least one annual ESG Management Committee meeting.

The ESG Management Committee establishes two ESG working groups: the Environmental and Sustainability Working Group and the Social Responsibility and Comprehensive Governance Working Group. Aligned with the Company's ESG strategic roadmap, these working groups operate through clearly defined lead departments and collaborating departments that jointly drive the implementation of specific ESG strategic initiatives.

## Stakeholder Engagement

NHU attaches high importance to stakeholders' opinions and suggestions. By establishing diversified communication channels and maintaining regular dialogues, we proactively address inquiries regarding our operational performance and sustainable development. In alignment with our industry characteristics and business nature, we have identified key stakeholder groups including employees, customers, shareholders & investors, government & regulatory bodies, suppliers & business partners, and local communities.

Stakeholders	Areas of Focus	Communication and Response Channels
Customers	<ul> <li>Customer relationship management</li> <li>Product quality and safety</li> <li>Innovation and R&amp;D</li> <li>Information security and privacy protection</li> </ul>	<ul> <li>Official account information disclosure</li> <li>One on one communication channel</li> <li>Factory tour</li> <li>Customer complaint hotline</li> </ul>
Shareholders and Investors	<ul> <li>Compliance operation</li> <li>Corporate governance</li> <li>Risk management</li> <li>Business ethics and anti corruption</li> <li>Return on investment</li> <li>Information transparency</li> <li>Responding to climate change</li> </ul>	<ul> <li>Corporate annual reports and announcements</li> <li>Field trip</li> <li>Official account platform</li> <li>Reception Day event</li> <li>Roadshows and special meetings</li> <li>Investor relations website</li> </ul>
Government and Regulatory Bodies	<ul> <li>Compliance operation</li> <li>Corporate governance</li> <li>Tax payment according to law</li> <li>Business ethics and anti corruption</li> <li>Implementing national strategies</li> <li>Rural revitalization</li> <li>Emission management</li> </ul>	<ul> <li>Responding to government inquiries</li> <li>Participating in government training</li> <li>Regulatory assessment</li> <li>Special meeting</li> </ul>
ເທິງ Employees	<ul> <li>Employee's rights and interests</li> <li>Training and development</li> <li>Occupational health and safety (OHS)</li> <li>Innovation and R&amp;D</li> <li>Intellectual property protection</li> </ul>	<ul> <li>President and General Manager's mailbox</li> <li>Rational suggestions</li> <li>Five mandatory visits and five mandatory conversations</li> <li>Staff and workers' representative congress</li> <li>Symposium &amp; communication</li> <li>Internal reporting and complaint hotline</li> </ul>



NHU strictly adheres to relevant laws, regulations, and disclosure requirements by publishing reports on a regular basis and ensuring timely compliance in material information disclosure. We maintain active two-way communication with investors through both digital and physical channels. In 2024, we implemented the *Investor Relations Management Policy* to further institutionalize investor relations practices. Our comprehensive investor engagement program includes online performance briefings, annual investor conferences, on-site communication, participation in strategy sessions, as well as digital platforms and hotline services. This resulted in a 50% year-on-year growth in participant engagement.



us	Communication and Response Channels
ti corruption ain d privacy	<ul> <li>Supplier conference</li> <li>Supplier training</li> <li>Whistleblowing hotline and email</li> </ul>
ment strategies ity	<ul> <li>Provision of jobs</li> <li>Official account and website</li> <li>Assisting in infrastructure construction</li> <li>Public welfare and charity activities</li> <li>Environmental Open Day</li> </ul>



This resulted in a

50% year-on-year

growth in participant engagement



### Identification and Analysis of Material Topics

In 2024, NHU conducted a dual materiality evaluation for sustainable development through a four-phase process: (1) context analysis & topic identification; (2) dual materiality evaluation; (3) materiality prioritization; and (4) review, analysis and confirmation. This methodology enabled us to systematically assess both the impact materiality and financial materiality of ESG topics to our organization.



Through synthesizing internal and external stakeholder concerns with our industry context and business attributes, we determined 22 high-priority ESG topics. An extensive survey covering corporate leadership directors, supervisors, and senior management, employees, shareholders & investors, customers, government & regulatory bodies, suppliers & partners, and community members yielded approximately 250 valid questionnaires. These responses provided multidimensional evaluations of ESG topics' materiality across environmental management, social responsibility, and economic value creation dimensions.

#### 2024 Matrix of Dual Materiality Topics



# 01 Superior Products

#### **Our Actions**

**Our Performance** 

NHU leverages digital and intelligent empowerment as a fulcrum to build an intelligent system covering the entire value chain of R&D, production, and services. By adopting a dual-track development model that integrates technological breakthroughs with management upgrades, we drive the coordinated optimization of product performance and the reduction of production energy consumption. Through digitalization, intelligence, and continuous innovation, we enhance the price-performance ratio of our products while creating greater value for customers and contributing to a better quality of life. Moving forward, we will deepen the integration of intelligent technologies under the strategic framework of "technological breakthroughs + management upgrades," continuously refine the economic value of our products, provide replicable paradigms for high-quality industrial development, and position superior, high-quality products as a key driver of sustainable societal progress.

Applied for <b>17</b> information technology-related honors	Total valid patents 777 Achieved ISO 56005 Level 4 Certificatio	n







# **Digital and Intelligent Empowerment**

Amid the rapid growth of global digital economy, digital transformation has become imperative for enterprises to achieve highquality development. NHU recognizes the critical role of digital transformation, aligning with national policies to position it as the core engine for our high-quality growth. We are committed to enhancing operational efficiency, optimizing products and services, and innovating business models through digital and intelligent solutions, thereby building core competitiveness and advancing sustainable development.

## **Digital and Intelligent Management System**

NHU places great emphasis on the development of digital and intelligent management systems. It has established a scientific, standardized, and efficient digital and intelligent project management system, providing a solid guarantee for the highquality development of the enterprise. The Company continues to refine its digital and intelligent project methodology based on the enterprise architecture. It has issued the *Digital and Intelligent Project Management Regulations* and the *Intelligent Manufacturing System Manual*. Additionally, it has revised the *Application Architecture Management Rules* and completed the issuance and dissemination of the four architecture systems involved in the enterprise architecture method. Meanwhile, the Company has completed the sorting and establishment of the business architecture for data management, software development, and information security, and has formulated and implemented a promotion plan. This provides a systemic guarantee for the standardized management and efficient implementation of digital and intelligent projects.



NHU Intelligent Quality Control Management Platform

The Company has established an ITPMO (IT Project Management Office) mechanism to conduct full-process monitoring and management of core digital and intelligent projects during the stages of preparation, initiation, implementation, and summary acceptance. In 2024, the Company organized the evaluation of 22 digital and intelligent projects and summarized and developed replicable and promotable models and templates. These include guidelines for smart factory development, large-scale amino acid chemical industry projects, and operation and maintenance mechanisms for smart factories. These efforts provide strong support for the standardized construction and experience promotion of digital and intelligent projects.



The Company places great emphasis on the application for information technology projects, regarding it as an important way to showcase digital and intelligent achievements and enhance brand influence. In 2024, the Company applied for a total of 17 information-related honors, including 1 national-level honor (currently under application) and 14 provincial-level (including association) honors (12 of which have been approved and 2 are under review).

## **Digital and Intelligent Actions**

By constructing smart factories, advancing intelligent operations, and cultivating digital & intelligent talents, we continuously deepen the application of cutting-edge technologies and equipment to boost production efficiency.

#### () Smart Factory

NHU has actively advanced the deployment of smart factories under its digital transformation strategic framework, achieving full integration of core business chains, including production, supply, sales, and finance. This initiative has realized digitalized and refined production management, as well as visualized and intelligent production decision-making. Through these efforts, the Company has developed a replicable chemical smart factory model, providing industry-specific digital transformation best practices. To date, smart factory systems have been operationalized in Shandong NHU Industrial Park, Heilongjiang NHU, Shangyu NHU, and Tianjin, demonstrating significant improvements in production efficiency and management effectiveness. Concurrently, the HSE<sup>2</sup> management system has been implemented, enabling intelligent real-time monitoring of major hazard sources, Gas Detection System (GDS) data, and fire alarm systems, thereby enhancing safety and environmental management capabilities.

After years of practice and accumulation, several factories and workshops of the Company have received honors related to intelligent manufacturing, and its industrial Internet platform has been selected for the provincial Internet platform creation list.







**Smart Factory Development** 

NHU aims to become a benchmark enterprise in comprehensive digital transformation. Through the implementation of intelligent manufacturing systems, the Company enhances automation, informatization, digitalization, and intelligent capabilities across all business divisions / subsidiaries. Centered on production process optimization, business process reengineering, and management model innovation, the Company progressively achieves "visualization, transparency, predictability, and self-adaptation" in production processes. This system meets manufacturing management requirements, including decision-making, planning, execution, analysis, and evaluation, thereby significantly improving management efficiency.

Path

Project

Case

The Company has established an intelligent system that covers production planning, scheduling, operations, energy, material, and quality management. Through multidimensional data analysis, the system extracts production statistics from multi-source data and generates real-time reports to elevate production management standards. To date, 100 management dashboards and statistical reports have been developed, with the automated reporting system systematically delivering operational, supply-chain, and production information.

By implementing the "Integrated Management" concept, the Company achieves vertical control and horizontal information integration to eliminate operational discontinuities and ensure data consistency. Adhering to the "Three Integration Systems" principle, the Company has realized unified management of quality control, decision-execution alignment, and production logistics. This culminates in an intelligent manufacturing control platform that enhances operational efficiency while reducing production costs.

The Company has established end-to-end management from sales order to accounts receivable settlement. This framework drives coordinated production-sales planning and synchronized manufacturing-logistics execution, creating integrated industrial synergies.

#### **Intelligent Operation**

The Company has made sustained progress in the development of its intelligent operation system, achieving significant milestones in data governance, financial management, R&D innovation, manufacturing enhancement, and global expansion. These advancements have laid a robust foundation for boosting operational efficiency, optimizing managerial decision-making, and strengthening core corporate competitiveness.

By centralizing procurement and production data, the Company has eliminated data silos across business units, establishing integrated data connectivity. This infrastructure provides strong support for business analytics, enhancing operational efficiency and facilitating management decision-making. We have implemented paperless electronic record-keeping in R&D laboratories. thereby elevating the scientific rigor and standardization in technological R&D and enabling high-efficiency precision research. The expanded manufacturing platform now features optimized modules for production, energy, and quality management. Key functionalities include full-screen dashboard visualization, accessible via unified portal authentication.

While executing business-enabling system deployments, the Company has accelerated the development of digital infrastructure in its overseas subsidiaries. This initiative has created a replicable global digital deployment framework for international trading entities, extended domestic management systems with localized adaptations, and reinforced the Headquarters' operational oversight-collectively underpinning the corporation's globalization strategy.

Case Intelligent Warehouse System Development

NHU has optimized material storage, utilization, balancing, and statistical operations through its intelligent warehousing management system, which covers the entire process of procurement, sales, transfer, and inventory counting. The system has established warehouse dashboard reports, including inventory reports, storage location utilization rates, and material turnover rates, enabling real-time monitoring of warehouse status and enhancing management efficiency. The system is deeply integrated with business modules such as procurement, sales, logistics, and production. achieving coordination between order warehousing, sales delivery, and production dispatch. It facilitates inter-company material sharing, thereby reducing inventory costs. Through data analysis and process optimization, the Company has significantly enhanced operational efficiency, decreased offline communication by over 30%, and realized digital and intelligent transformation in warehouse management.

#### Cultivation of Digital & Intelligent Talents

NHU always attaches great importance to the cultivation of digital & intelligent talents, continuously strengthening training efforts and gradually establishing a sound talent training system. We have defined competency standards and capability frameworks for core positions across all functional modules. Specifically, we have created over 60 training courses spanning 8 specialities and conducted more than 50 training sessions, systematically enhancing employees' digital intelligence competencies. Furthermore, four benchmarking initiatives between the production bases and the Headquarters were implemented to facilitate cross-organizational knowledge transfer. Targeted development programs for three core positions have been designed and operationalized, ensuring talent pipeline sustainability for key positions.

The Company actively advances smart factory system development, leveraging these systems as strategic platforms for digital & intelligent talent cultivation. In 2024, through digital and intelligent projects across branches, subsidiaries and production bases, we have developed business consultants, development engineers, and graduate trainees, forging the core workforce driving our digital transformation.



## **Data Security and Customer Privacy Protection**

The Company has always regarded data security and customer privacy protection as the lifeline of its development, attaching high importance to relevant system development and management practices. We are committed to providing users with secure and reliable products and services while respecting and protecting their privacy information. We have established a comprehensive information security management system, conducting annual internal reviews of the system and performing complete inspections on 13 major control areas in accordance with ISO 27001. Through cross-inspections between the Headquarters and all production bases, we thoroughly investigate potential security risks, generate audit results, and formulate detailed rectification plans to ensure full implementation of security measures.

In 2024, the Company engaged external professional institutions to conduct attack-and-defense drills that simulate real attack scenarios, testing the effectiveness of the security protection system. Timely rectifications were made based on issues identified during the drills. During major events and holidays, the Company implemented on-duty safeguarding measures, performing penetration tests on application systems to promptly identify and repair security vulnerabilities, ensuring secure and stable system operations. The Company regularly conducts data security and privacy protection training to enhance all employees' security awareness and skills. This year, a total of 76 information security training sessions were conducted, covering 100% of the Company's employees.



# **Innovation-driven Development**

NHU has always prioritized innovation as a strategic focus, driving the Company's high-quality development through technological, product and management innovation. We concentrate on green technology R&D, efficient resource utilization, and low-carbon solutions, emphasizing industry-academia-research collaboration and intellectual property management to enhance operational efficiency through innovation and ensure product quality and safety through compliance.

### **R&D** and Innovation

NHU adheres to the development principles of "integration, serialization, and synergy," with "Chemistry+" and "Bio+" as core technology platforms. Guided by market demand, we implement forward-looking R&D strategies and conduct multi-level innovation encompassing fundamental science, "science + technology", and "technology + application". We have established a comprehensive R&D and innovation management framework, formulating regulations such as the *R&D Program Management Regulations* and the *R&D Program Incentive Management Regulations*. The Company has built an organizational structure centered on the Research Institute, supported by R&D centers of business divisions, while strengthening management of external research units, including the Japan R&D Institute and Singapore R&D Institute.

We continuously increase innovation investment and upgrade R&D infrastructure. By aligning academic research with industrial needs, we actively develop specialized common technology platforms in analysis, separation, and catalysis. These efforts accelerate our transformation toward "innovation leadership" and "basic research technologies", laying the foundation for efficient industrial development. Over the past three years, the Company's R&D expenditure has consistently exceeded 5% of total sales revenue.

During the reporting period, NHU has obtained certifications for 9 National High-Tech Enterprises, 1 National "Little Giant" enterprise, 2 National Manufacturing Single Champion products, and 3 Provincial Gazelle Enterprises. The Company has been recognized as: China's Top 100 Fine Chemical Companies, China's Top 100 Listed Companies, Top 10 Companies in the Flavor Sector in China's Light Industry, Top 500 Petroleum and Chemical Enterprises in China, National Key Leading Enterprise in Agricultural Industrialization, and Hidden Champion of Zhejiang Province. Notably, NHU won Recognition Award in the 7th China Grand Awards for Industry.





#### Product R&D Management

In 2024, we optimized the three-tier decision-making process for new products, establishing a decision-making model based on unified principles and quantitative data to achieve hierarchical and categorized product management. This year, we successfully advanced over 10 new products into the R&D phase.

#### **Technology Platform Construction**

Guided by the strategy of "accelerating technology application, deepening technological expertise, and broadening technological scope", we established a professional technology matrix through internal collaboration and external partnerships, achieving significant progress in building both generic and specialized technology platforms. We actively explored digital transformation by engaging advanced R&D digital solution providers to develop and deploy a tailored management system integrating modules for project management, experimental task tracking, analytical management, and resource allocation. This system provides robust support for knowledge accumulation, reuse, and data-driven decision-making in R&D, creating a systematic innovation ecosystem while enhancing the efficiency and precision of R&D management.

#### **Talent Development**

NHU positions talent development as the cornerstone of its innovation ecosystem, driving sustainable growth through effective cultivation mechanisms. The Company maintains a high-caliber R&D team, where 31.81% hold master's degrees and 2.79% hold doctoral degrees. We implement an innovation incentive system featuring milestone-based bonus packages for product development projects and technology initiatives. This results-oriented mechanism proportionally rewards achievements at critical development stages, effectively motivating researchers' creativity while enabling rapid market responsiveness and technological breakthroughs.

The Company actively expands collaborations with renowned domestic and international universities and research institutions, building a diversified industry-academia-research innovation network. We conducted multiple technical exchanges with institutions, including Xiamen University, Lanzhou University, Lanzhou Institute of Chemical Physics (CAS), and the University of Oxford, resulting in 32 substantive collaborations. Long-term partnerships have been established with Zhejiang University, the Chinese Academy of Sciences (CAS), Beijing University of Chemical Technology, Jiangnan University, and the Technical University of Denmark. By funding cutting-edge basic research at universities, NHU integrates its strengths in talent, technology, capital, and platforms to accelerate the industrialization of scientific achievements.

Shandong NHU Vitamins Co., Ltd. has established the Shandong Postdoctoral Innovation Practice Base, certified by the Shandong Provincial Department of Human Resources and Social Security. This marks a key achievement in deepening industry-academia-research integration. This platform serves as a bridge connecting enterprises with universities and research institutes for high-level talent cultivation and technological innovation, significantly enhancing the Company's R&D capabilities while contributing to industry advancement and sustainable development.



#### Product R&D Achievements

Our product R&D has garnered widespread industry recognition, with honors including the National Technology Invention Award, China Patent Gold Award, petrochemical and light industry awards, and the Zhejiang Provincial Technology Invention Award:



In 2024, we achieved breakthrough progress in multiple new product R&D initiatives across business segments, building a robust pipeline of products and technologies for future growth:

#### The Nutraceuticals segment

Several "Bio+" innovations achieved industrialization, with select fermentation products reaching industry-leading yield levels.

#### The Flavors & Fragrances segment

Enhanced industrial chain competitiveness through new products and processes, expanding into emerging sectors including UV protection and moisturization.

#### The Specialty Materials segement

Made strides in differentiated product R&D, with new resin grades entering high-end modification applications.

#### The Active Pharmaceutical Ingredients (API) segment

Multiple products obtained CEP certifications and domestic market authorization approvals.

This year, we completed 76 technical transformation projects. Through green process innovations, product quality enhancements, and circular economy implementations, we revitalized existing product upgrades, ensured consistent production quality, and elevated customer satisfaction.



#### Plant-based Raw Material Product R&D —

NHU has achieved significant breakthroughs in the R&D of plant-based raw materials, successfully creating lignosulfonate-based (plant-based) feed-grade carotenoid products. To address the growing market demand for plant-based feed solutions, the Company established a cross-functional team comprising R&D specialists, engineers, market analysts, and quality control personnel. The team set clear objectives to replace traditional porcine gelatin systems with lignosulfonate-based formulations while accommodating religious dietary requirements (e.g., Halal, Kosher) and animal-origin-related specifications. Through rigorous analysis of global feed regulations, the team ensured full compliance and conducted comprehensive studies on the chemical composition, physicochemical properties, and functional characteristics of lignosulfonate to identify optimal raw materials for feed-grade applications.

The R&D team refined the formulations through experimental optimization, ensuring stability, digestibility, and growthenhancement performance in feed applications. The products passed stability tests during both pilot-scale and mass production, with feeding trials in poultry and aquaculture demonstrating efficacy in growth promotion and carotenoid deposition. Customer validation confirmed superior product quality, establishing a strategic foundation for NHU's expansion in the plant-based feed market.





Nutritional Health Product R&D

Case

Vitamin E, a critical fat-soluble nutrient, exhibits multiple physiological functions, including antioxidant protection, anti-inflammatory activity, and lipid metabolism regulation. It finds extensive applications across the food processing, cosmetics, dietary supplements, pharmaceuticals, and animal nutrition industries. NHU possesses proprietary vitamin E synthesis technology, which has been continuously optimized through technological advancements to enhance product quality, reduce production costs, and sustain our competitive edge in the global vitamin E market.

Regarding feed-grade product nutrition innovation, we have conducted groundbreaking research. Our R&D team systematically investigated the crystallographic forms, particle size distribution, and cis-trans isomer ratios of carotenoids to develop astaxanthin, canthaxanthin, and apo-ester products with superior bioavailability. The Company's nutrition research focuses on critical issues such as protein resource scarcity, developing singlecell protein (SCP) as an alternative high-quality protein source with established partial substitution protocols. Concurrently, studies explore replacing inorganic mineral elements with organic forms to enhance trace element utilization efficiency and reduce environmental emissions.

#### **Intellectual Property Protection**

NHU places a high priority on protecting its trade secrets while fully respecting the legal rights of third parties. To this end, we have established a comprehensive intellectual property (IP) management system to effectively safeguard our innovation achievements. The Company has developed a suite of IP governance documents, including the Intellectual Property Management Framework, Patent Management Regulations, Intellectual Property Emergency Response Plan, and Product Patent Portfolio & Confidentiality Review Procedures. These are complemented by the Trademark Management Regulations to protect trademark rights and maintain brand integrity. As a national leader in IP protection, NHU has achieved ISO 56005 certification for Innovation Management Systems, the international standard for innovation and IP management, thereby systematically enhancing our IP governance capabilities.

NHU ensures that all products and services strictly comply with IP regulations and do not infringe on any third-party rights. We also legally require our business partners to adhere to equivalent IP compliance standards for their products or services.

#### NHU's 2024 Key Intellectual Property Initiatives



Through comprehensive analysis of industrial ecosystems, market trends, and competitive landscapes, we have filed patents in high-efficiency strains and formulation technologies. We have also optimized protection for nylon industry chain projects and established multidimensional patent barriers.

(G2M

基于 ISO 56005 的《创新与知识产权管理能力》

等级证书(4级)

浙江新和成股份有限公司

经评价,已通过并达到了《创新管理 - 知识产权管理指南(ISO 56005: 2020)》及相应的《创新与知

(地址:浙江省新昌县七星街道新昌大道西路41

ZZZRZ

NHU has achieved ISO 56005 Level 4 Certification

识产权管理能力分级评价指标体系》相关能力要求,特发此证书。

发证日期: 2024-11-26

(1)(A)(1)(A): 中旬 (1)(有) 认证有限公司



As of December 31, 2024, NHU maintains 777 valid patents worldwide, providing robust protection for innovation achievements across all core products.

This year, Zhejiang NHU Special Materials Co., Ltd. received both the China Patent Excellence Award and was designated as an Innovative Small and Medium Enterprises in Zhejiang Province. Shandong NHU Pharmaceutical Co., Ltd. became a finalist for the 25th China Patent Excellence Award. To date, the Company has been honored with 2 China Patent Gold Awards, 1 China Patent Silver Award, 3 China Patent Excellence Awards, and 2 Second Prizes in the National Technology Invention Awards.



NHU has implemented a structured IP awareness enhancement program, conducting 9 internal training sessions in 2024 with over 10,000 participant engagements. The curriculum covered essential IP competencies, including patent innovation evaluation, IP risk assessment and mitigation strategies, patent and database utilization, and confidentiality training.

Implementing the ISO 56005 standard with Level 4 certification, we have enhanced lifecycle IP management, spanning pre-development, active R&D, and post-commercialization phases. We have

Collaborating with the legal division, we have updated technology partnership agreements to include explicit IP ownership clauses. We have executed Freedom To Operate (FTO) analyses for strategic projects, established continuous competitive intelligence monitoring, and strengthened internal risk

Partnering with external entities on trade secret protection programs, we have upgraded classified information systems and revised the Technical Data Confidentiality Management Regulations to fortify



Our tiered training framework ensures role-specific development:

#### **Specialized Field Training**

To address the unique requirements of the biological field, we engaged experienced former patent examiners specializing in biological patents to conduct targeted training sessions, ensuring practical integration with actual workflows.

#### **R&D Personnel Training**

To enhance R&D personnel's patent application capabilities, we conducted specialized training on: patent inventiveness assessment and mining; technical disclosure drafting; and patent/literature database utilization. These sessions aimed to improve both the quality and efficiency of patent applications.

#### **Training of the Management**

For the management, we engaged senior experts from certification agencies to deliver specialized training on trade secret protection, strengthening the leadership's confidentiality awareness.

#### **Company-wide Training**

During Intellectual Property Month, we conducted comprehensive IP education covering fundamental IP knowledge and confidentiality awareness training. All employees were required to participate, achieving a near 100% completion rate.

Additionally, for key positions such as IP roles and innovation management roles, we conducted approximately 8 external training sessions to enhance their professional quality and business capabilities. The external training topics included enterprise IP management, patent practice courses, new IP standards, use of innovation methods, application of large models in the biopharmaceutical industry, and data IP.



Training for NHU Management



Participating in the Innovation Method Promotion and Application Training organized by Shaoxing Municipal Authorities

## **Product Quality and Safety**

NHU always regards product quality and safety as the core elements of enterprise development and is committed to providing customers with safe and reliable products.

#### **Quality Management System**

The Company has established a comprehensive and advanced quality management system. The Chief Engineer's Office at the production base oversees product quality and safety, while the Quality Assurance Department formulates quality criteria and conducts random inspections on finished products. Several departments collaborate on process safety management, forming a multi-department coordinated mechanism for quality and safety control. NHU has obtained certifications and maintains compliance with internationally recognized standards, including ISO 9001, ISO 14001, ISO 45001, FAMI-QS, ISO 22000, BRCGS, FSMA, HALAL, NSF, and GMP. The Company has established quality management protocols such as the *Quality Laws and Regulations Identification, Evaluation, and Compliance Monitoring Regulations, Production Process Quality Monitoring Regulations*, and *Hazardous Materials Sales Management Regulations*, covering the entire product lifecycle from R&D, production, and sales to after-sales services. Strict quality control standards have been implemented for each product to ensure consistent quality and reliability. During the reporting period, no major quality-related incidents involving products or services occurred.

#### Product Design and Development

NHU conducts in-depth analysis of customer requirements and performs comprehensive risk assessments. Both customer requirements and quality standards are integrated into product design to proactively mitigate potential quality and safety hazards from the design phase.

#### Product Production

NHU continuously refines production processes through customer requirements alignment and industry benchmarking. It implements globally recognized quality assurance methodologies and process control techniques to optimize production efficiency while maintaining stringent quality standards.

#### Quality Risk Control

By applying quality management tools and risk identification methodologies, we have established a product risk control system. This includes: Regular specialized risk assessments; Identification of critical control points with corresponding mitigation measures; Periodic review and validation processes; Preventive testing for emerging quality and safety issues. The systematic approach ensures consistent product quality and safety compliance.





To strengthen company-wide quality awareness, NHU actively conducts comprehensive quality training programs covering quality-related regulations, quality management system knowledge, and quality risk control requirements. In 2024, through the "Quality Month" initiative, the Company delivered specialized training sessions on HACCP<sup>3</sup> analysis, FMEA<sup>4</sup> methodology implementation, and quality management tool applications. These efforts effectively enhanced personnel capabilities in critical control point management and hazard identification. Concurrently, NHU implemented site management SOP<sup>5</sup>-focused training and standardized technical proficiency competitions to upgrade job-specific competencies. This approach embeds the customer-centric quality philosophy while continuously advancing quality management excellence.





DOE Training<sup>6</sup>



**Quality Training** 

<sup>3</sup> HACCP (Hazard Analysis and Critical Control Point): This is a management system used to ensure food safety. The core principle is to prevent food safety issues by identifying and controlling potential hazards in the food production process.

<sup>4</sup> FMEA (Failure Mode and Effect Analysis): This tool can identify potential failure modes and causes in product and process design, so that personnel can take necessary measures to reduce potential risks.

<sup>5</sup> SOP: Standard Operating Procedure.

<sup>6</sup> DOE: Design of Experiments. This training can help participants learn how to design and implement experiments, analyze and infer the relationships between various experimental factors.

Case Strengthening Quality Management by Zhejiang NHU Special Materials Co., Ltd.

Zhejiang NHU Special Materials Co., Ltd. continuously explores and innovates in quality management. Adhering to a customer-centric quality philosophy, the company has established a comprehensive quality management system centered on its Management Manual. By implementing Total Quality Management (TQM), quality management practices are integrated throughout the entire product lifecycle.

- Conduct regular ISO 9001 compliance training to strengthen team competencies.
- Establish a Quality Control (QC) plan to monitor the production process in real-time.
- Optimize quality information management systems to boost cross-functional collaboration.

NHU has set non-negotiable quality thresholds and compliance baselines to reinforce operational rigor within its Quality Management System (QMS). By establishing SOPs and risk prevention mechanism, the enterprise ensures process stability across operations. Through systematic and refined quality management, the company has enhanced its product quality and customer satisfaction, thereby facilitating sustainable development.

#### Product Recall

NHU has developed a food additive Recall Control Procedures in compliance with HACCP principles. ISO 22000. BRCGS<sup>7</sup> standards, and China's Food Recall Management Regulations. These procedures establish defined response workflows for safety incidents, enhancing operational resilience during emergencies while mitigating stakeholder losses. All branches, subsidiaries and business divisions implement the recall mechanisms through periodic simulation exercises, ensuring crisis management readiness. In 2024, NHU maintained zero product recalls attributable to quality deficiencies.



NHU maintained



product recalls

attributable to quality deficiencies

<sup>&</sup>lt;sup>7</sup> BRCGS Standard: BRCGS certification (British Retail Consortium Global Standards) is a global food safety standard originally developed and published by the British Retail Consortium in 1998, aimed at ensuring the safety and quality of the production and supply chain of food and other consumer goods. BRCGS certification is an internationally recognized food safety and quality mark, applicable to fields such as food, beverages, and personal care products.

# 02 **Harmonious Society**

#### **Our Actions**

On the path to sustainable development, NHU fosters internal cohesion by upholding integrity and self-discipline through standardized operations. This has earned the Company widespread respect and steadfast support from employees. Externally, NHU expands its social responsibility footprint by empowering industrial development through the delivery of high-quality services and products, thereby contributing to a more harmonious social ecosystem. While driving our own growth, we remain committed to social responsibility through active participation in public welfare and charity programs, collectively shaping a sustainable future.

Our Performance



Total employee training E 478,910 hours





# **Compliance Governance**

NHU strictly adheres to corporate governance laws and regulations, as well as the provisions of the *Articles of Association*. The Company has established a comprehensive governance framework, including *Rules of Procedure for the General Meeting of Shareholders*, *Rules of Procedure for the Board of Directors*, *Rules of Procedure for the Supervisory Board*, and *Working Guidelines for the General Manager*. These documents clearly delineate the responsibilities of the General Meeting of Shareholders, Board of Directors, Supervisory Board, Chairman, and President, ensuring a standardized and efficient governance structure.

The Board of Directors upholds the principles of independence and diversity of expertise, with members possessing professional knowledge in chemical engineering, accounting, and legal affairs to ensure informed and effective decision-making. In 2024, NHU's Board of Directors comprised 11 directors, including 4 independent directors and 7 non-independent directors. Throughout the year, the Company held 8 Board meetings, 4 Supervisory Board meetings, and 3 General Meeting of Shareholders, refining management procedures for critical matters through these governance mechanisms.



#### **Compliance Management**

In 2024, under the oversight of the Board of Directors, the Supervisory Board, and the General Meeting of Shareholders, the Company implemented the requirements of the newly amended *Company Law of the People's Republic of China* and revised internal governance documents, including the *Internal Control System*. For high-risk areas identified in operational activities - such as holding subsidiary governance, related-party transactions, fundraising management, external investments, and information disclosure - the Company has established dedicated management mechanisms. These include multi-tier approval processes and cross-functional review mechanisms to mitigate risks and ensure robust internal control effectiveness.

#### () Internal Audit

The Company maintains an independent internal audit function staffed by full-time auditors. This function encompasses financial audits, business ethics compliance audits, post-employment accountability audits, and economic responsibility audits. The Audit Committee oversees all audit procedures, while the Chief Audit Executive reports directly to the Board of Directors, thereby safeguarding the impartiality, objectivity, and autonomy of audit operations.

#### ( Information Disclosure

The Company has established a strict information disclosure regulatory framework, including the *Information Disclosure Management Regulations, Insider Registry Management System*, and *Annual Report Material Misstatement Accountability Procedures*. These documents establish comprehensive standards governing the fundamental principles, content requirements, division of responsibilities among departments, documentation review and release processes, as well as accountability mechanisms. The Company has maintained a "A" rating in the Shenzhen Stock Exchange's information disclosure evaluations for 16 consecutive years.



"🛕" rating in the

Shenzhen Stock Exchange's information disclosure evaluations for 16 consecutive years

#### **Risk Governance**

The Company continuously enhances its risk management framework to ensure operational stability. During the reporting period, we further optimized risk identification and mitigation framework by refining the risk register, with new additions including information security, HSE risks, personnel risk inventory, and legal risks inventory for bidding and tendering processes. To address overseas secondment risks, we updated the *Overseas Short-term Assignment Safety Guidelines* based on operational needs and host country risk profiles. The implementation of electronic signature systems was accelerated through revised *Digital Seal Management Protocols*, strengthening controls over authorization risks.

The Company implements targeted risk management training programs, including compliance training for directors, supervisors and senior management under the revised *Company Law of the People's Republic of China*. Recognized for outstanding risk governance capabilities, NHU was honored among the "2024 Top 30 Best Internal Control Awards for Zhejiang Listed Companies".

#### **Business Ethics**

NHU strictly complies with applicable laws, regulations and business ethics standards in conducting operations. We develop and maintain business relationships exclusively with partners committed to principles of integrity, probity and fair practice, the Company has established comprehensive governance documents including the *Business Ethics Governance Procedures, the Management Discipline Regulations*, and *Notice on Implementing Integrity Management Requirements*, which explicitly address anti-bribery, anti-corruption and fair competition provisions while institutionalizing ethical compliance initiatives. The Board of Directors bears ultimate responsibility for leading, overseeing and decision-making in business ethics governance.

During the reporting period, we conducted systematic integrity risk assessments for high-risk positions with decision-making authority over human resources, financial allocations and material procurement. The identified control enhancements have been incorporated into our 2025 Internal Control Optimization Roadmap to establish a closed-loop management system.

The Company maintains an absolute zero-tolerance stance against corrupt practices. To strengthen anti-fraud safeguards, we have enhanced whistleblowing mechanisms and mandated heightened scrutiny of potential misconduct during internal audits. All personnel including directors, supervisors, senior management and employees completed mandatory anti-corruption training, with 900+ newly onboarded and transferred staff signing *Integrity Commitment Letters* in 2024.

NHU extends its integrity principles to supplier relationships through mandatory integrity clauses in procurement contracts. The newly revised Supplier Integrity Agreement Template (2024 Edition) establishes standardizes compliance requirements for all contractual engagements. No corruption-related litigation cases occurred during the reporting period.





NHU was honored among the "2024



Best Internal Control Awards for Zhejiang Listed Companies"

Indicator		Data in 2024	Unit
The Management's Signing Rate of the Integrity Agreements		100	%
Employee's Signing Rate of the Integrity Agreements		100	%
Coverage Rate of Anti-corruption Training		100	%
	Directors	11	Person
Number of Anti-corruption Training Participants	Supervisors	5	Person
	Senior Management	4	Person
	Employees	11,365	Person

#### **Fair Competition**

The Company upholds fair competition principles in strict compliance with applicable laws and regulations including the *Anti-Monopoly Law of the People's Republic of China* and the *Anti-Unfair Competition Law of the People's Republic of China*. We have established *Competition Compliance Management Regulations* to proactively reject unethical or unlawful business practices, ensuring all operations maintain fairness and integrity while effectively mitigating antitrust risks. A systematic approach has been implemented to regularly consolidate competition-related regulatory updates and precedent cases into our *Competition Compliance Handbook: Case Studies & Regulatory Guidelines.* Furthermore, the Company integrates competition compliance risk inspections into project audit activities, producing standardized audit reports that: evaluate competition compliance risk controls; and standardize ongoing compliance monitoring procedures.

#### Case

Anti-monopoly Self-assessment by the Active Pharmaceutical Ingredient (API) Division \_\_\_\_\_

Coverage Rate of Anti-

corruption Training

100%

M =\_

The Company has proactively advanced anti-monopoly compliance initiatives within its API Division. A dedicated risk assessment was conducted in response to the *Anti-Monopoly Guidelines for the Pharmaceutical Sector (Draft for Comment)*, culminating in the issuance of the *API Division Self-Inspection Risk Assessment Report Based on the Draft Pharmaceutical Guidelines*. Furthermore, two specialized training sessions entitled *Interpretation of Fundamental Anti-Monopoly Legal Framework* and *Guidance on Anti-Monopoly Compliance in the Pharmaceutical Sector* were conducted. These measures have enabled the API Division to enhance the comprehensiveness of its compliance risk assessment framework, thereby effectively mitigating potential regulatory violations.

#### Whistleblowing Handling Procedure

NHU has established the *Management Discipline Regulations* and the *Employee Reward and Punishment Management Measures* to standardize the conduct of management and employees. A formal whistleblowing process has been implemented, with dedicated integrity supervision hotlines, reporting email, and President/General Manager's mailboxes to provide multiple reporting channels. The aim is to correct misconduct promptly, with the purpose of rehabilitating and educating the management. At the same time, we actively safeguard whistleblowers' legitimate rights and interests, strictly protecting their personal information and the content of their reports, while providing timely feedback on investigation outcomes—fostering a clean and upright work environment.

The whistleblowing handling
Whistleblowing Acceptance
<ul> <li>After receiving a whistleblowing matter, the integrity de Discipline Inspection and Supervision Department within</li> </ul>
Whistleblowing Investigation
<ul> <li>Establish an investigation team comprising two or mo a team leader, analyze the circumstances, and form interviews with relevant personnel, and prepare an i follows the Company's rules as well as national laws ar</li> </ul>
Handling Decision
<ul> <li>Decision Execution: The case shall be handled accordin supervisory recommendation, interview, yellow card w the employment contract.</li> </ul>
<ul> <li>Pending Verification: The clues show a certain degree deferred due to objective constraints until conditions be</li> </ul>
• Wrap up: The clues are verified to be unsubstantiated,
<ul> <li>Transfer to Judicial Authorities: If serious illegal fa prosecution, the case will be transferred to judicial authority</li> </ul>

#### ng process is as follows

department of each unit shall report the information to the ithin 5 working days for unified registration and circulation.

more members based on case requirements, designate ormulate an investigation plan; collect evidence, conduct an investigation report. The investigation process strictly s and regulations to ensure fairness and accuracy.

ording to the *Management Discipline Regulations*, including d warning, demotion/removal (dismissal), or termination of

egree of verifiability, but verification must be temporarily become favorable for proper verification.

ed, or verification is possible.

Il facts are found upon verification subject to criminal uthorities.



# **Employee Well-being**

Guided by a human-centric development philosophy, the Company has established an employee governance framework centered on talent potential optimization and holistic well-being enhancement. Through integrated empowerment mechanisms, we facilitate employee professional advancement while safeguarding physical and psychological health. Our diversity & inclusion strategy fosters a collaborative innovation ecosystem where organizational agility synergizes with humanistic values, driving symbiotic value co-creation between the enterprise and its employees.

## **Compliance Employment and Human Rights Protection**

NHU strictly complies with the Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China to regulate employee recruitment and employment management. We have established internal regulations including the Anti-Discrimination, Anti-Harassment and Anti-Abuse Management Regulations and the Prohibition of Forced Labor Management Regulations, firmly opposing human rights violations such as child labor, forced labor, and discriminatory practices. In the reporting year, NHU maintained a clean record with 0 incidents of child labor, workplace harassment, discrimination, or labor disputes.

NHU is dedicated to fostering a diverse and inclusive workplace through institutionalized mechanisms and systematic implementation of our *Anti-Discrimination, Anti-Harassment and Anti-Abuse Policy*. The principle of equity is embedded throughout the employee lifecycle from talent acquisition to development, retention, and succession planning - ensuring equal opportunities and value co-creation across all departments in job placement, performance appraisal, promotion recommendations, and incentive allocation. We rigorously uphold gender equality in recruitment practices, fully complying with national regulations to prohibit any form of discrimination based on gender or marital status, while providing female employees with equitable career advancement opportunities.



Number of Employees by Gender

Number of Employees by Age



Indicator	Data in 2024	Unit
Total Number of Employees	11,369	Person
Total Number of Disabled Employees Employed	34	Person
Total Number of Employed Veterans	210	Person
Number of New Employees	778	Person
Employee Turnover Rate	5.07	%

## **Compensation and Benefits**

NHU adheres to the principles of fairness and value co-creation, establishing a remuneration system based on job value evaluation to ensure gender pay equity and provide market-competitive compensation and benefits. In compliance with national statutory requirements, the Company contributes to social insurance and housing provident fund for all employees. Additionally, through performance evaluation and incentive mechanisms, we align employees' contributions with their career development. Guided by the "contributor-centric" philosophy, NHU implements initiatives such as management innovation awards and project achievement awards, enabling core employees to share corporate growth dividends while fostering organizational vitality and innovation.

Adhering to the principle of "Harmony," NHU regards employees as the foundation of corporate development. We attentively address the needs of every employee, offering comprehensive support in work, life, mindset, and health. Care initiatives such as regular health checkups, recuperation leave, and hospitalization mutual aid have been implemented. Facilities including gyms, libraries, basketball courts, and decompression rooms are provided to promote physical and mental well-being, further enhancing the employee benefits system. We strive to create an inclusive and harmonious workplace for female employees by offering not only standard health checkups but also exclusive benefits such as antenatal leave, maternity leave, and lactation leave, fully demonstrating respect and support for women in the workplace.

To accelerate employee development, NHU has established a mentorship platform between junior and senior staff under the guidance of the "Teacher Culture" philosophy, facilitating experience sharing and personalized career roadmaps to help young professionals achieve rapid career progression. Additionally, the Company focuses on building team cohesion by creating a variety of employee clubs based on individual interests and hobbies. It also carefully plans sports and cultural activities, as well as distributes benefits during important moments such as employee birthdays, festivals, and corporate anniversaries. These initiatives cultivate a sense of belonging and organizational identity, ultimately driving synergistic growth between individuals and the enterprise.



#### **Employee Communication**

NHU respects and values the opinions and suggestions of every employee, establishing diversified and multi-tiered communication channels and platforms. Through thorough implementation of the "Five Mandatory Visits and Five Mandatory Conversations" mechanism, we effectively monitor employees' psychological status and professional/personal needs, ensuring timely identification and resolution of issues. The Company maintains a dedicated General Manager's Mailbox that encourages both named and anonymous feedback, complaints, and suggestions, with strict confidentiality protections for whistleblowers to foster a secure and transparent communication environment. In 2024, NHU conducted a five-month staff canteen satisfaction survey, implementing dynamic management improvements based on monthly feedback that resulted in progressively enhanced satisfaction levels.

We conduct regular employee symposiums and Staff and Workers' Representative Congresses to create open and inclusive dialogue platforms. These platforms enable employees to share professional experiences, developmental challenges, and improvement proposals, serving dual purposes of informing management decision-making and strengthening cultural alignment and organizational commitment. In compliance with legal requirements, NHU has established a Labor Dispute Mediation Committee comprising employee representatives, administrative personnel, and trade union delegates. Operating under principles of fairness and impartiality, the committee ensures prompt resolution of workplace disputes at early stages, thereby safeguarding employee rights while supporting sustainable corporate development.

	<ul> <li>1. Mandatory visits are required for employee life events including marriage, bereavement and childbirth (covering childbirth for female employees, marriage ceremonies, and bereavement of employees or their immediate family members (spouse, children, parents, or spouse's parents));</li> </ul>
Mandatory	• 2. Mandatory visits are required for employees hospitalized due to illness or accidental injuries;
Visits	<ul> <li>3. Mandatory visits are required when employees experience exceptional hardships (defined as major natural disasters or family emergencies);</li> </ul>
	<ul> <li>4. Mandatory visits are required for severe domestic disputes (including domestic violence, divorce proceedings, or failure to fulfill child-rearing/elder-care obligations);</li> </ul>
	<ul> <li>5. Mandatory visits are required for seconded employees supporting project construction (as defined in the Seconded Personnel Management Regulations).</li> </ul>

**Five Mandatory** 

Conversations

## 

- 1. Mandatory conversations are required during employee onboarding, position transfers, or employment separation;
- 2. Mandatory conversations are required for workplace conflicts, emotional distress, or mental health concerns;
- 3. Mandatory conversations are required for employees receiving S, C, or D ratings in the annual performance evaluation:
- 4. Mandatory conversations are required for employees subject to disciplinary actions due to violations of laws, regulations, or company policies;
- 5. Regular conversations are mandated with core personnel (including frontline supervisors) and above, mission-critical positions, graduate employees, PhD researchers, and management trainees).

**Employee Care** 

NHU regards talent as the primary resource, and consistently implements the "Teacher Culture" to advance a culture of care. The Company consistently prioritizes employees' physical/mental well-being and professional development. Through regularly organized cultural and recreational activities including storytelling sessions, team-building events, and recreational sports competitions, we help employees alleviate work-related stress while enhancing workplace satisfaction and organizational commitment, thereby fostering a supportive and collaborative work environment. To accommodate diverse employee interests, NHU has established officially registered clubs for yoga, football, basketball, traditional lacquer fan crafting, baking, and other hobbies, enabling staff to cultivate personal interests beyond work responsibilities and maintain healthy work-life integration. The Company has also developed comprehensive welfare facilities across its production bases, including standardized basketball courts, fully-equipped fitness centers, and the NHU Town community complex, providing employees with comfortable and accessible spaces for both professional and leisure activities.

NHU has established a structured employee care mechanism, providing professional services such as mental and physical health consultation, legal aid, children's school enrollment support, and green channels for medical treatment, effectively helping employees solve problems in both work and life.

#### Case — NHU Fun & Spirit: Team Games Showcasing Talent –

On November 8, 2024, NHU successfully conducted its Annual Staff Sports Festival, engaging nearly 200 participants from cross-functional departments. The event featured four team-based recreational competitions where employees demonstrated exceptional collaborative spirit and organizational cohesion. This initiative not only created valuable opportunities for physical engagement and interpersonal connection but also embodied the corporate morale of "Dynamic Vitality and Progressive Excellence," thereby reinforcing organizational alignment and cultural cohesion.

#### Hearts Aligned: NHU's Warm Connection Between Employees and Organization Case

Throughout 2024, the Labor Union of NHU Shandong Production Base coordinated with subsidiaries to execute targeted employee assistance programs. These initiatives provided support to nine employees experiencing temporary hardships through personalized visits and financial aid totaling CNY 117,000. Aligned with our corporate social responsibility commitments, the company maintains structured protocols for needs assessment and timely intervention, demonstrating organizational empathy through concrete actions and sustained engagement.

#### Staff Training and Development

NHU places great emphasis on employee training and development, having established a comprehensive career-cycle training system that provides diverse and multi-tiered learning platforms with tailored growth pathways. Through innovative initiatives including campus recruitment programs, talent subsidy policy implementation, and a doctoral talent database development, we strategically attract and nurture high-caliber professionals. This enables them to maximize career potential and achieve personal value, fostering a mutually beneficial synergy between individual growth and organizational advancement.



#### **Employee Promotion**

NHU has developed a scientific and well-structured employee career development system, focusing not only on enhancing the capabilities of current employees but also on cultivating backup talents. The Company offers a dual-track career progression system (management and professional sequence), providing diversified development options. Promotional assessments for both tracks strictly adhere to performance-driven and competency-based principles, ensuring equitable and transparent selection processes. Additionally, NHU facilitates internal mobility opportunities with corresponding training support, enabling employees to chart optimal career paths aligned with personal aptitudes and organizational needs.



Additionally, in the cultivation of management trainees and Future Stars, the Company launched the 2024 NHU Future Stars/ New Horizon Development Program in July 2024. Implementation effectiveness is monitored through monthly feedback sessions to ensure continuous optimization and precise execution.



NHU Dual-track Career Progression System

#### **Staff Training**

NHU has established a comprehensive career-long training system covering multiple dimensions including new employee onboarding training, position-specific skill enhancement, technical expertise development, and management capacity building. The Company develops annual training programs that systematically quide the implementation of structured learning initiatives. Employing a blended learning approach that combines online and offline formats with internal faculty and external specialists, the organization ensures industry-relevant and future-oriented training content. Through meticulously designed curricula encompassing corporate culture. professional ethics, technical expertise, and managerial competencies, the programs holistically enhance employees' comprehensive quality and operational capabilities.

Anchored in three flagship programs - Yuan Hang, Qi Cheng and Yang Fan - the Company implements a tiered talent development framework combining theoretical instruction, practical project work, and mentorship systems. For technical expertise, certification programs such as Equipment Technology Expert Certification and Workshop Management Leadership Program have been established to cultivate technical specialists and modernize workshop management, driving the organization's strategic transformation toward vouthful dynamism and professional excellence.

Capitalizing on digital learning advancements. NHU provides global-standard courses and industry-leading knowledge through its XiaoXin Digital Academy platform, empowering employees to expand professional horizons and strengthen competitive edge. The Company actively encourages employee participation in external training and degree advancement programs, while regularly hosting premium academic conferences to provide enriched learning resources and growth opportunities, fostering synergy between personal development and organizational objectives.

In 2024, NHU's annual training investment totaled CNY 7.06 million, with cumulative training hours reaching 478,910 across the workforce. This equates to an average of 42.12 training hours per employee and achieved 100% training participation rate throughout the organization.



NHU conducted structured onboarding programs including the "Mentorship Journey" bootcamp for new graduate hires. Through blended learning approaches encompassing online learning, face-to-face classroom, physical training, personal development activities and collaborative workshops, new employees gained comprehensive understanding of corporate culture, rules and regulations, industry knowledge, and career development pathways. These initiatives effectively fostered professional ethics, enhanced essential workplace skills, and strengthened alignment with NHU's distinctive "Teacher Culture". facilitating successful transition from academic environments to corporate professionalism.



<sup>&</sup>quot;Mentorship Journey" Bootcamp for NHU New Graduate Hires



NHU's annual training investment totaled CNY





New Employee Onboarding Training



Personal Growth Activities for NHU New Graduate Hires

#### **Occupational Health and Safety (OHS)**

NHU strictly complies with OHS laws and regulations, including the *Work Safety Law of the People's Republic of China*, the *Occupational Disease Prevention and Control Law of the People's Republic of China*, the *Fire Protection Law of the People's Republic of China*, and the *Regulations on the Safety Management of Hazardous Chemicals*. We actively benchmark against industry best practices such as the *Guidelines for Chemical Process Safety Management* (AQ/T 3034) and the *Guidelines for Inherent Safety Assessment of Chemical Processes* (T/CCSAS 044) to establish a comprehensive OHS management system.

The Company has developed and implemented comprehensive internal regulations including the HSE Risk Management Regulations, Work Safety Information Management Regulations, Process Hazard Analysis Management Regulations, Accident and Incident Management Regulations, Factory Change Management Regulations, Contractor HSE Management Regulations, HSE Training Management Rules, Occupational Disease Prevention and Control Measures, Management Regulations for Identification and Monitoring of Occupational Disease Hazards, and Occupational Health Surveillance and Records Management Measures. These collectively form an HSE management system that comprehensively covers all aspects of OHS management. We provide work-related injury insurance for all employees and have invested CNY 1,226,300 in purchasing work safety liability insurance for high-risk positions, achieving nearly 100% coverage.

Driving Force	
Cultural Concept (HSE Policy, and Golden Rule) HSE Policy, and Golden Rule)	tion of all staff, and
Management ScopeCore Elements: Laws, regulations and standards, ins risk management, changes, management systems(16 core elements, and 63 sub-elements)Sub-elements: Compliance management, work safet operating procedures, alarm management	
Management SystemManagement Regulations: HSE Risk Mana Management Regulations for Withdrawal at Management rules: Management Rules for Rules for Normative Documents on HSE	gement Regulations, nd Use of Safety-related Funds HSE Projects, Management
Executive Standards/Guidelines Best Management Practices (Guid Promoting the Elements of Accider Tools and methods: ACT, JHA, isol	elines): Guidelines for it and Incident Management ation plan, quantitative review,

#### **HSE Management System Hierarchy Chart**

The Company has established a dual mechanism for management performance evaluation and incentive compensation specifically for OHS responsibilities, ensuring effective implementation, efficient operation, and continuous optimization of the HSE management system. HSE performance metrics include both outcome-based and process-based indicators: Outcome-based indicators: thousand-person injury rate, total direct economic losses from accidents, number of fire/explosion incidents with losses exceeding CNY 10,000, and new occupational disease cases. Process-based indicators: safety leadership engagement, quantitative audit scores for work permits, alarm rate, and on-time completion rate of HSE training programs. Through scientifically designed management metrics, the management can accurately identify systemic weaknesses, clarify improvement priorities, and drive comprehensive enhancement of OHS performance.

The company adopts a risk management-centered approach, with Responsible Care as the guiding principle and safety leadership/safety culture as the foundation, to comprehensively implement the HSE management system. Starting with inherent safety strategies such as minimization, substitution, moderation, and simplification, we continuously improve HSE performance to safeguard the health and well-being of employees, customers, and stakeholders, ultimately reducing or eliminating adverse environmental and OHS impacts during production while enhancing stakeholder satisfaction.

#### **Work Safety**

NHU regards work safety as a precondition of corporate operations. The Company not only maintains rigorous internal safety management but also extends compliance requirements to suppliers and contractors. We have formulated the *Contractor HSE Management Regulations* and *HSE Management Regulations for Related Parties*, clearly requiring contractors to adhere to work safety standards and implement operational safety protocols throughout project execution.



The Company conducts regular emergency drill exercises, exceeding regulatory requirements by mandating: monthly emergency skill training or drills for each shift; quarterly onsite emergency handling procedures exercises for each workshop section; In 2024, we enhanced 97 specialized emergency response plans and 302 on-site emergency handling procedures, achieving 100% drill completion rate.

#### () Chemical Safety

NHU deeply recognizes the unique characteristics of the chemical manufacturing industry and its potential environmental and social impacts. The Company has actively participated in formulating the national standard *Safety Management Code for Fine Chemical Enterprises*, sharing its practical experience in the fine chemical field to advance industry safety standards. To enhance chemical safety management, NHU has established the *Chemical Substance Management Regulations*, implementing full-process and lifecycle management of chemicals in production and usage. The Company systematically identifies potential risks of different chemicals and implements targeted control measures to minimize the incidence and consequences of accidents.

• Conduct compliance verification of contractor qualifications and personnel certifications, maintain valid documentation with explicit accountability for record integrity.

 HSE agreements are executed with contractors, with mandatory pre-entry safety training for all personnel and documented safety inspections of construction tools/equipment. Before any operational activity, safety condition confirmation, risk notification, and technical safety briefings must be conducted.

 Multi-tier supervision is performed by guardians, contract holders, and HSE personnel, covering: contractor pre-entry safety training compliance, risk and technical safety communication effectiveness, tool/equipment safety, regulation/procedure adherence, safety measure completeness, and contractor behavioral compliance. Identified issues require immediate rectification with feedback loops to contractors and contract holders.

Enhanced



emergency response

302 on-site emergency handling procedures NHU actively promote standardized chemical management in its headquarters and subsidiaries regular chemical inventories are conducted to maintain comprehensive internal management records for hazardous substances. NHU requires personnel handling hazardous chemical production, usage, and emergency response to complete mandatory job-specific safety training, ensuring requisite safety knowledge and operational competencies. The Company has established a Safety and Environmental Research Institute and formulated the Reaction Safety Risk Assessment Management Regulations, responsible for testing chemical reaction heat, thermal stability, and flammability/explosivity data, as well as conducting reaction safety risk assessments. In 2024, the institute achieved: 3 process hazard level downgrades and 8 optimizations of combustion/explosionrelated processes. Currently, the institute has obtained CNAS<sup>8</sup> accreditation, further enhancing the Company's expertise and credibility in chemical safety management.

NHU annually commissions accredited occupational health service providers to conduct comprehensive workplace hazard monitoring, supplemented by internal inspections. By establishing a monitoring results database and utilizing data analytics with early-warning systems, the Company optimizes worksite conditions and conducts preemptive maintenance on deteriorating occupational hazard control facilities. In 2024, NHU and all subsidiaries obtained ISO 45001 OHS Management System certifications.

#### **OHS** Training

NHU places high priority on employee competency development and skills enhancement. Guided by the talent development process of "cultivation, certification, deployment, and management", the Company has established an internal HSE trainer development program to advance the professionalization and capacity building of HSE personnel. In 2024, NHU implemented systematic OHS training through blended learning approaches, effectively elevating employees' HSE proficiency and practical competencies.



2024 NHU HSE Internal Trainer Training **Opening Ceremony** 

#### Online Knowledge Sharing

The Company developed 89 training modules including: Three Simultaneousness Management Process for Construction Project Safety, Three Simultaneousness Management Process for Construction Project Environmental Protection, Three Simultaneousness Management Process for Construction Project Occupational Health, HSE Training Management System and Work Safety Cost Management. These courses with instructional videos were uploaded to the official XiaoXin Platform, providing flexible learning resources to help employees master core OHS management competencies.

#### **Offline Training**

NHU organized diversified practical activities including: firefighting skills competitions, hazard identification contests, safety knowledge guizzes, emergency response drills, and on-site emergency handling procedures exercises. These initiatives significantly improved employees' accident prevention capabilities and emergency response readiness.



Firefighting Skills Competitions

In 2024, NHU delivered 209 OHS training sessions achieving 100% employee coverage rate, substantially strengthening company-wide safety awareness and operational preparedness.

Delivered OHS training sessions



<sup>8</sup> CNAS accreditation refers to the certification system administered by the China National Accreditation Service for Conformity Assessment, demonstrating that certified bodies, laboratories, or inspection agencies meet international standards in technical competence and impartiality.

Case Occupational Health Training for Enhanced Accident Risk Response Capability

On 10 April 2024, Shangyu NHU conducted occupational health training for 122 employees. The session covered: relevant occupational health regulations, occupational hazard identification, occupational hygiene management systems, and proper use and maintenance of personal protective equipment. Post-training assessments demonstrated 100% pass rate among frontline workshop staff, successfully achieving training objectives. This initiative enhanced employees' awareness of occupational health importance and improved risk identification/response capabilities.



#### Indicator

Proportion of Employees Covered by OHS Training

Investment Amount of Work-related Injury Insurance

Personnel Coverage Rate of Work-related Injury Insurance

Investment Amount of Work Safety Insurance

# **Shared Success and Prosperity**

NHU consistently upholds the principle of "shared success and prosperity," creating long-term value for customers, partners, communities, and society. The Company has established a comprehensive customer service management framework that drives collaborative implementation of sustainable development goals across the supply chain, actively supports community development initiatives, and contributes to building harmonious communities.

#### **Customer Services**

NHU maintains a steadfast commitment to customer-centric service principles, dedicated to delivering efficient, professional, and sustainable service solutions. Through systematized customer service management, structured complaint handling mechanisms, customer satisfaction survey, and digital transformation of sales operations, the Company has achieved holistic improvements in service quality, resulting in enhanced customer satisfaction and loyalty.

Occupational Health Training by Shangyu NHU

Data in 2024	Unit
100	%
825.11	CNY 10,000
100	%
122.63	CNY 10,000

#### **Customer Service Management**

To standardize customer management processes, NHU has established the *Customer Management Regulation*, which: clearly defines departmental responsibilities, workflows, and management criteria for customer management; ensures the completeness and accuracy of customer archive information; systematically enhances overall service quality. The company has concurrently optimized sales workflows through its *Sales Management Regulation*. In brand management, NHU enforces the *Product Brand Management Regulations* to standardize corporate brand identity, thereby improving brand distinctiveness and market competitiveness. Regular brand competency training programs are conducted to deepen employee understanding of brand values and ensure effective brand strategy execution.

To guarantee after-sales service quality, NHU has instituted the *Delivery & Returns Management Regulations*, establishing standardized domestic and international logistics processes that ensure timely, accurate, and efficient delivery operations. The Company proactively addresses ESG-related customer requirements by integrating sustainability into service delivery. Zhejiang NHU Special Materials Co., Ltd. has provided some customers with *PPS Product Carbon Footprint Declarations* and obtained ISCC PLUS certification in January 2025. Shandong NHU Industrial Park conducted full life cycle assessment (LCA<sup>9</sup>) for VE powder and VB6 products, generating relevant carbon audit certificates and reports to deliver transparent, verifiable environmental footprint data to customers.

#### Case

#### - Development of Customized Feed-Grade Vitamin Preparations

NHU delivers customized product solutions to customers. To address specific requirements for feed-grade vitamin preparations, the Company has established a cross-functional team comprising professionals from sales, R&D, and marketing. This team conducted extensive consultations with customers to comprehensively understand their expectations regarding product performance, quality criteria, and regulatory compliance.

To ensure compliance with customer market requirements, the team performed comprehensive analysis of local feed additive markets, including market size evaluation, competitive landscape assessment, and trend analysis. Concurrently, regulatory affairs and technical specialists conducted in-depth reviews of local feed additive regulations encompassing product quality criteria, vitamin type/level restrictions, and labeling/documentation specifications to guarantee full regulatory compliance. The procurement team secured reliable suppliers of vitamin raw materials to ensure consistent material quality. Based on customer requirements and regulatory mandates, the R&D department developed optimized formulations for feed-grade vitamin preparations. Rigorous testing of pilot-scale and production-scale samples demonstrated excellent vitamin stability under demanding feed processing conditions, including high-temperature, high-humidity, and extrusion environments. The product has received strong customer endorsement for successfully meeting specialized market requirements.

#### — Customized Production of Vitamin C

In vitamin C production, NHU has implemented an integrated customization system spanning "demand analysis - process engineering - production delivery". To address differentiated requirements from food and nutraceutical customers regarding particle size, whiteness, and stability parameters, the Company leverages customization demands as drivers for technological advancement. Through physicochemical characterization of reference samples coupled with application scenario simulations, NHU has established correlation models between vitamin C quality parameters and end-use performance, enabling the development of tailored production systems.

<sup>9</sup> LCA: Life Cycle Assessment, a systematic tool evaluating the environmental impact of products/services across their entire lifecycle—from raw material extraction to final disposal.

#### **Customer Complaint Management**

For customer complaint management, NHU has instituted the *Customer Information Feedback Management Regulations* along with related governance documents that define standardized complaint handling processes:



In 2024, the Company received a total of 15 complaints regarding products and services, with a complaint handling rate of 100%.

#### Customer Satisfaction Survey

To further enhance product and service quality, the Company has established the *Customer Satisfaction Survey Management Regulations*, administered by the Marketing Management Department and implemented by the Quality Assurance Departments across business divisions, branches and subsidiaries. In 2024, the Company conducted comprehensive customer satisfaction surveys encompassing product performance, brand perception, and service delivery, achieving an annual Customer Satisfaction Index (CSI) of 92.64. For identified areas of dissatisfaction, the Company has developed improvement recommendations and action plans to drive continuous optimization of the quality management system.

#### Intelligent Sales

Tracking

To establish precise customer profiles and deliver enhanced service experiences, the Company is accelerating its intelligent sales transformation. In 2024, the Company fully implemented intelligent sales systems and established non-intelligent factory production-sales modules to achieve operational synergy. Concurrently, we have consolidated global customer resources through standardized information management and service process optimization, delivering more efficient and accessible service solutions for overseas customers.

Through systematic customer service management, streamlined complaint handling mechanisms, comprehensive satisfaction survey, and intelligent sales transformation, we have established transparent and sustainable service frameworks that strengthen long-term customer relationships.

The sales department communicates with customers to understand their needs and provides initial handling

The sales department fills out the *Customer Information Feedback Form* and initiates the complaint feedback and return/exchange process within the system; The quality assurance department investigates the reasons and prepares a report; The sales department provides feedback to the customers. For complaints from "major customers", the sales manager of the business division must be notified in order to

The sales department tracks the entire process from initial complaint acceptance, handling, feedback, and complainant's satisfaction to ensure customer satisfaction.



## **Empowering Industrial Development**

NHU has consistently prioritized promoting sustainable advancement in global industries through global expansion strategies, industry-academia-research collaboration, and technological innovation. This approach empowers the entire industry chain and injects renewed vitality into industrial development. Guided by the core philosophy of "market-driven demand and integrated collaboration," NHU has established a technological innovation system characterized by enterprise leadership, market orientation, and industry-academia-research partnerships, collaborating with global partners to accelerate industrial upgrading and low-carbon development. Regarding global operations, the Company strengthens its multinational footprint through strategic overseas investments and overseas R&D center establishments, fostering synergistic partnerships to bolster sustainable industry development.

#### Assistance to Upstream and Downstream Enterprises

Through technology sharing and collaborative R&D models, NHU actively empowers capacity building across the industrial chain to accelerate sustainable development and innovation-led upgrading. Our approach encompasses: (1) Upstream Empowerment: Deploying technical teams and sharing quality management expertise to enhance suppliers' manufacturing processes and product quality. (2) Downstream Collaboration: Co-developing market-driven solutions by integrating our material science capabilities with customers' application scenarios through joint R&D initiatives.

By cultivating an open and collaborative industrial chain ecosystem, NHU achieves high-quality development while generating multiplier value for upstream and downstream partners, collectively advancing industrial competitiveness.

Improving Product Quality for a Specific Fragrance Ingredient Supplier

To address persistent quality challenges in a specific fragrance ingredient, NHU deployed a dedicated technical team to conduct on-site capacity building at the supplier's facility. Through systematic process optimization including reaction parameter refinement and purification technology enhancement, the six-month collaborative intervention successfully elevated the compliance rate of critical quality parameters, establishing a robust foundation for high-performance fragrance product development.

#### Industry Standard Setting

NHU recognizes that standardization constitutes the fundamental pillar for the healthy and orderly development of industries. Through technological innovation and industrial implementation, we proactively share our expertise and achievements to advance industry standardization. To date, NHU has chaired or participated in formulating 34 national standards, 10 industry standards, and 35 association standards, spanning multiple sectors including chemical industry, pharmaceuticals, and food manufacturing, providing crucial support for technological advancement and product quality enhancement across these industries.

Committed to an open cooperation philosophy of shared success and prosperity, NHU synergizes with cross-industry partners to co-advance technological progress and sustainable development.



#### Industry Empowerment and Ecological Co-construction

Through technological innovation and resource sharing initiatives. NHU empowers partners throughout the industrial value chain, facilitating comprehensive industry advancement. The Company actively engages in industry standard development, disseminates best practices, and promotes green transformation across sectors. Through global cooperation and industryacademia-research synergies, we deliver high-quality products and solutions to international customers, contributing to the establishment of robust and sustainable industrial ecosystems. During the reporting period, NHU organized 23 expert symposiums featuring distinguished specialists, participated in 44 industry conferences and exhibitions, completed 36 technology and equipment integration projects, and conducted in-depth evaluations of 144 product technologies, 56 enterprises, and 8 industrial sectors. To accelerate the internationalization of R&D and production capabilities, we continuously monitor global technological trends and expand international collaboration channels, thereby solidifying the foundation for our global strategic deployment.



#### Fostering Global Partnerships: NHU's Strategic Participation in CPHI Korea Case

NHU actively participates in global industry exchanges and is committed to advancing technological progress and sustainable development within the pharmaceutical sector. In 2024, the Company made its debut at CPHI Korea, the international pharmaceutical ingredient exhibition hosted at Seoul's COEX Convention & Exhibition Center. NHU showcased its core pharmaceutical-grade products including Vitamin C, Vitamin E, Vitamin B6, Moxifloxacin Hydrochloride, and Ibuprofen, along with nutritional health solutions such as food-grade Vitamin C and Coenzyme Q10. The Company's high-quality products and innovative solutions garnered substantial attention and received unanimous acclaim from both domestic and international attendees.

This participation not only elevated NHU's brand recognition in the global pharmaceutical ingredients market but also established effective communication channels with international customers and partners. Through in-depth discussions with industry experts and global buyers, NHU gained valuable insights into emerging market demands and industry trends, which will inform future product R&D and market expansion strategies. The Company also demonstrated its innovative capabilities in sustainable pharmaceutical ingredients and nutritional health solutions, reinforcing its commitment to industry-wide sustainable development.



In 2024, NHU successfully hosted the "2024 Petrochemical Industry Innovation Summit: Exemplary Enterprises Exchange" in Xinchang, Zhejiang, organized under the auspices of China Petroleum and Chemical Industry Federation (CPCIF). The summit convened industry leaders to explore collaborative innovation pathways and share best practices in sustainable development.

Mr. Hu Baishan, Vice Chairman and President of NHU, presented an overview of the Company's business development and innovation achievements in his speech. He sincerely expressed the hope to establish closer ties with enterprise representatives and expert professors, to jointly explore cooperation opportunities, share resources, share risks, and pursue mutual development.

As an innovation-driven enterprise, NHU remains steadfast in its dual-core strategy of "Chemistry+" and "Bio+". Guided by the principles of integrated development and product diversification, the Company focuses on three strategic pillars: life sciences, new energy, and green and low-carbon technologies. NHU continues to strengthen industry-academia-research collaboration while maintaining global perspectives in technical planning and innovation ecosystem development.



Speech by Mr. Hu Baishan, Vice Chairman and President of NHU

se — NHU Showcases Sustainable Solutions at International Green Chemistry Conference ————

NHU played a significant role as a principal sponsor of the 10th IUPAC International Conference on Green Chemistry, held under the theme "Advancing Carbon Neutrality through Sustainable Chemistry" at the Beijing International Convention Center. Co-organized by the Chinese Chemical Society, the Institute of Chemistry at the Chinese Academy of Sciences, and the Interdivisional Committee on Green Chemistry for Sustainable Development under the International Union of Pure and Applied Chemistry (IUPAC), the event attracted global scientific leaders.

At the conference, NHU's exhibition booth served as a hub for knowledge exchange, drawing specialists, researchers, academics, and industry professionals. NHU demonstrated its capabilities, shared the latest scientific achievements, and gained fresh inspiration and new knowledge from global experts. Moving forward, NHU will continue upholding the philosophy of open cooperation, actively collaborating with global industry partners and experts to jointly explore cutting-edge scientific technologies, promote the development of green chemistry, and contribute NHU's solutions to sustainable development goals.



Honorary Dean of NHU Research Institute Presents NHU's Green Chemistry Innovations

#### **Responsible Supply Chain**

NHU is committed to establishing a responsible and sustainable supply chain system. Through stringent supplier qualification, auditing, and risk management mechanisms, we ensure compliance with quality, environmental, and social responsibility requirements while enhancing supply chain sustainability.

#### () Supplier Management Mechanism

NHU has established a rigorous supplier qualification and screening system in strict compliance with internal policies such as the *Supplier Management Regulations* under the Purchasing Department. This system mandates comprehensive assessments of suppliers' operational status, certifications, and management systems covering quality, environmental protection, and occupational safety. Adhering to the principles of fairness and equity, NHU evaluates all suppliers against uniform criteria regardless of their size, thereby ensuring transparency and impartiality in supplier selection. Based on material risk classification (Category A/B/C), NHU implements a multi-stage evaluation process including pilot testing, mass production trials, and on-site audits. This ensures both material quality and suppliers' production & quality control capabilities align with the company's internal control standards. Suppliers admitted into the qualified vendor system are required to execute binding agreements including the *Environmental and Occupational Health & Safety Commitment, Code of Ethical Business Conduct*, and *Integrity and Fair Competition Agreement*, thereby reinforcing their social responsibility obligations. NHU requires suppliers to strictly adhere to environmental regulations, safeguard employees' OHS, and uphold ethical business practices. This collaborative approach fosters a fair, transparent, and sustainable supply chain ecosystem. During the reporting period, there were no incidents of delayed payments to small and medium-sized enterprises.

#### Indicator

Total Number of Suppliers

Suppliers' Signing Rate of Integrity Agreements

#### Supplier Performance Evaluation

Annually in December, NHU conducts comprehensive performance evaluations for all suppliers. Evaluations for raw materials and auxiliaries suppliers are jointly performed by production workshops, quality assurance departments across production bases, warehouse operations teams, and the purchasing department. Equipment suppliers are assessed by the equipment management division in collaboration with the purchasing department. The rating system categorizes suppliers into four tiers: Excellent, Good, General, and Unsatisfactory. Subsequent risk assessments and procurement decisions are formulated based on these evaluation outcomes.

#### Daily Audit of Suppliers

All production bases and business divisions implement batch-by-batch incoming inspection for raw materials and auxiliaries, with strict quality compliance verification prior to warehouse acceptance and production usage. Each base's Quality Assurance Department establishes annual supplier audit plans aligned with operational requirements. Primary raw material suppliers undergo on-site audits every three years, while secondary suppliers complete desk audits through standardized questionnaires every six years.

#### **Output** Supplier Training

NHU prioritizes supply chain quality management. Focusing on critical areas such as product quality, technical standards, and environmental requirements, the Company provides customized professional training and technical guidance to suppliers as needed, supporting them in enhancing production capabilities and management competencies. The Company is committed to establishing collaborative partnerships with suppliers. Through knowledge sharing and capacity building, it drives the enhancement of overall supply chain competitiveness.

Our production bases and business divisions conduct periodic on-site training workshops to ensure supplier alignment with evolving quality criteria, operational protocols, and industry standards. Training modules encompass technical specifications, quality testing parameters, environmental regulations, and work safety standards, enabling comprehensive optimization of suppliers' quality management, work safety, and sustainability performance.

Case

Data in 2024	Unit
4,192	Nos.
100	%

#### **Object Supply Chain Risk Management**

NHU conducts thorough risk assessments for new suppliers, evaluating critical factors including production capacity, production processes, equipment and facilities, guality control, geographic location, transportation methods, and delivery timelines. The Company requires suppliers to submit environmental impact assessments (EIA) and safety assessment reports to evaluate their environmental and safety risks. Approved suppliers must complete the standardized Supplier Risk Assessment Form, followed by systematic evaluation through on-site audits and documentation reviews addressing quality, commercial, financial, EHS, and delivery risks.

According to the risk level, the Company implements differentiated control: High-risk suppliers are subject to semi-annual onsite audits or documentary reviews, medium-risk suppliers to annual evaluations, and low-risk suppliers undergo reviews when circumstances require. Should irremediable risks be identified during evaluation, the Company will promptly terminate business engagements to safeguard supply chain integrity and operational continuity.

NHU is committed to building a sustainable supply chain ecosystem, targeting 100% ESG integration with strategic suppliers by 2025. Our enhanced supplier screening process now incorporates ESG due diligence, systematically evaluating suppliers' sustainability performance across environmental, social, and governance practices. This holistic approach drives collective progress toward sustainable supply chain development.

## Public Welfare and Charity Undertakings

NHU steadfastly upholds its core mission of "Creating Wealth, Elevating Employees, and Benefiting Society". While pursuing high-quality development, the Company actively participates in public welfare initiatives. Through concrete actions including educational donations, healthcare burden reduction programs, and rural revitalization efforts, NHU earnestly fulfills its corporate social responsibilities. We not only focus on operational performance but also commit to generating long-term societal value. In 2024, our public welfare and charity contributions totaled approximately CNY 2.56 million. Additionally, the foundation has allocated approximately CNY 300,000 to rural revitalization initiatives, injecting new vitality into social development.



The Company's products are exported to over 100 countries and regions worldwide, spanning Southeast Asia, South Asia, the Middle East, Africa, Central Asia, Russia, and other markets along the Belt and Road Initiative. Within this extensive operational footprint, we prioritize both product/service quality enhancement and active community engagement. Through educational support, livelihood improvement programs, and community development initiatives, NHU implements global public welfare and charity activities that contribute to building a harmonious and sustainable society.



# 03

# **Sustainable Environment**

**Our Actions** 

Facing the challenges of climate change, resource depletion, and environmental degradation, NHU actively aligns with China's national strategy of "carbon neutrality" and "carbon peaking." We engage extensively in global climate change action initiatives, comprehensively advance the efficient utilization of energy and resources, and strive to establish an eco-friendly enterprise.

Our Performance





## **Low-carbon Transformation**

Guided by our low-carbon development principles of "Green Transition, Energy Efficiency Enhancement, Smart Management, and Continuous Improvement", NHU drives the transition of the energy structure and reduction of GHG emissions. We rigorously implement low-carbon and clean production practices while reducing the carbon emissions.

### **Responding to Climate Change**

NHU consistently considers climate change response as a corporate imperative. We prioritize climate-related topics at the strategic level, and systematically enhance our climate risk management mechanisms. In this reporting year, we conducted climate risk and opportunity assessments in alignment with the TCFD framework. These findings inform our climate change strategy development and goal-setting process, enabling more effective climate change risk mitigation.

#### **Governance**

We have established a climate-related governance mechanism that clearly defines the principal and supporting departments for climate change topics. The Company proactively identifies climate risks and opportunities, develops mitigation strategies, and implements product carbon footprint management. We are committed to enhancing carbon emission performance across the entire value chain and reducing climate change impact. Furthermore, we have institutionalized GHG reduction through the formulation of regulatory documents, including the *Carbon Management Manual, Energy Conservation and Carbon Reduction Management Regulations, Carbon Emission Monitoring Regulations*, and *Carbon Information Disclosure Guidelines*.

The Company has implemented a five-tier climate change governance structure comprising the Board of Directors, Strategy Committee, ESG Management Committee, ESG Office, and ESG working groups. When formulating major strategic plans and reviewing risks and opportunities, the Board of Directors and the Strategy Committee comprehensively consider climate-related risks to ensure full integration of climate strategy and risk management into business development. The ESG Management Committee, operating under the Strategy Committee, assumes direct responsibility for climate-related affairs. Its responsibilities include evaluating climate change risks/opportunities, overseeing strategy implementation, and providing regular reporting to the Board of Directors.

The ESG Office executes resolutions from the Board of Directors, Strategy Committee, and ESG Management Committee. It conducts periodic climate risk/opportunity assessments, monitors implementation progress of climate initiatives, ensures achievement of climate-related goals, and reports regularly to the ESG Management Committee. The ESG working groups drive implementation of specific climate change related tasks, systematically collect operational data, and submit progress reports to the ESG Office. To strengthen carbon management, we have established a dedicated Carbon Management Task Force under the ESG working groups. This specialized unit develops carbon management systems, conducts carbon footprint verification, and ensures data accuracy and integrity throughout emission reporting processes.

#### Climate Strategy

NHU closely tracks global climate policy dynamics and action initiatives. By aligning corporate operations with mainstream climate scenario analysis frameworks, the Company systematically identifies, assesses, and responds to climate change risks and opportunities. Deeply embedding climate governance into strategic planning, NHU continuously strengthens its climate resilience while advancing the climate change response capabilities of its supply chain partners. In alignment with strategic development goals, operational characteristics, and value chain impacts, we have established a comprehensive mechanism for identifying climate risks and opportunities. This includes in-depth analysis of material climate change risks along with potential opportunities, coupled with financial impact assessments to inform scientific decision-making for sustainable development.

## () Identification and Management of Climate Risks and Opportunities

Through a comprehensive assessment of climate risks, we have not only identified climate-related risks and opportunities but also systematically identified, prioritized, and managed both physical and transition risks that may affect corporate assets. This process has enabled the formulation of targeted response measures.

We have established clear timeframes for climate-related risks and opportunities: defining 1–2 years as short-term, 3–5 years as medium-term, and over 5 years as long-term. The key climate-related risks and opportunities identified are as follows:

#### **Physical Risks and Counter-measures**

Risk Category		Potential Impact	Response Measures	Timeframe
Acute	Typhoon & Rainstorm	Coastal production bases may face operational stoppages due to extreme weather (e.g., typhoons, rainstorms), affecting the timely delivery of time-sensitive products.	Implement typhoon- resistant upgrades at coastal production bases to enhance climate resilience.	Short-term
Risks	Floods & Waterlogging	Low-lying factory areas are vulnerable to floods and waterlogging. Water ingress into workshops and prolonged commissioning periods may result in economic losses.	Establish a climate early- warning system and monitor real-time drainage infrastructure.	Short-term
	Sustained High Temperatures	Prolonged high temperatures may raise workshop cooling costs, increase refrigeration energy consumption, and impact the stability of biological products.	Develop heat-resistant technologies and optimize refrigeration systems.	Long-term
Chronic Risks	Arid Climate & Water Scarcity	High water intensity in chemical production could escalate costs during prolonged droughts.	Construct emergency water storage facilities, reduce per- unit water usage through R&D, and improve water recycling rates.	Mid-term
	Sea-Level Rise	Rising sea levels may increase insurance costs for coastal infrastructure and threaten work safety and stability.	Strategically plan new factory sites and adopt a "1+N" distributed warehousing model.	Long-term

#### **Transition Risks and Countermeasures**

Risk Category		Potential Impact	Response Measures	Timeframe
	Environmental Regulation Upgrades	Stricter emission requirements from evolving international and domestic environmental regulations may necessitate continuous investment in environmental facility upgrades.	Continuously optimize environmental protection infrastructure to ensure timely regulatory compliance.	Mid-term
Policy and Legal Risks	International Green Trade Barriers	Policies such as the EU Carbon Border Adjustment Mechanism (CBAM) may indirectly impact export product competitiveness.	Enhance carbon emission data management, optimize energy management systems, conduct carbon tariff stress tests, and develop advanced market pricing strategies.	Mid-term
	Carbon Pricing and Taxation	Rising carbon costs across the industrial chain may increase operational costs for chemical enterprises.	Employ innovative financial instruments and actively participate in carbon markets.	Mid-term
Technical Risks	Low-carbon Technology Transition Pressure	Green technology R&D has become a critical competitive factor, while traditional processes may face obsolescence risks.	Increase R&D investment, and drive innovation in energy- efficient processes and carbon management technologies.	Long-term
Market Risks	Market Demand Transformation	Downstream customers and consumers increasingly demand products with stronger green credentials.	Conduct climate resilience assessments and carbon emission management for key raw material suppliers.	Short-term
Reputation Risks	Growing Environmental Awareness	Inadequate carbon reduction efforts may damage corporate reputation.	Strengthen environmental infrastructure to ensure regulatory compliance and prevent environmental incidents.	Long-term

#### **Climate Change Opportunities**

Opportunity	Transformation Strategy	Timeframe
Product	Green Technology Product Development: Leverage technological expertise to accelerate development of bio-based materials, biodegradable materials, and related products.	
	Clean Energy Utilization: Promote large-scale adoption of clean energy sources including biomass energy, optimize energy mix, and reduce product carbon footprint.	
Market	International Market Expansion: Mitigate embodied carbon emissions in exported products and reduce potential carbon tariff impacts through supply chain decarbonization.	Mid-term
Carbon Trading	Carbon Asset Development & Trading: Identify viable emission reduction opportunities for carbon asset development, generating additional revenue through carbon asset creation and carbon market participation.	Long-term

#### Risk Management

NHU has integrated climate change risks into its strategic risk management framework, with regular reporting to the Board of Directors. The Company actively tracks developments in China's Dual Carbon Policy and global sustainable supply chain standards to promptly identify regulatory changes, climate-related risks, and opportunities relevant to corporate growth.

Aligned with the TCFD framework, NHU has embedded climate governance within its Enterprise Risk Management (ERM) system. By establishing a Climate Risk & Opportunity Management Regulations, the Company follows a four-phase closed-loop management system: Risk Identification - Quantitative Assessment - Strategic Response - Performance Monitoring.



#### Indicators and Goals

This year, we have advanced the verification of GHG emissions and enhanced carbon emission data management systems, laying a solid foundation for future carbon reduction efforts.

#### **Corporate Level**

Completed Scope 1 and Scope 2 GHG emissions inventories for all subsidiaries in 2024; Achieved a Rating B in the CDP Climate Change Questionnaire submission.

#### **Climate Risk Identification Process**

Identify physical risks (including high temperatures, extreme cold, long-term precipitation, extreme snowfall, floods, wildfires, etc.) and transformation risks (including policies and laws, technology, markets, reputation, etc.) that may affect the production, operation, and commercial goals of NHU, understand the potential causes and consequences of risks, and form a list of climate risks and

Measure the physical risks of climate change to NHU with "fixed assets" and "income" as key indicators, and rank them according to the risk levels of "extremely low, low, moderate, high, and extremely high"; Make qualitative analysis of transformation risks and evaluate the potential impact of future policy,

Monitor the development trends of climate-related regulations, policies, markets, etc., regularly evaluate the impact of physical and transformation risks, and implement climate risk response measures to

The management regularly oversees the effectiveness of climate risk response measures and the progress

#### Product Level

Conducted carbon footprint verification for 36 products (ISO 14067:2018 certified); Performed LCA data accounting for 32 product specifications across 14 major categories.

NHU has incorporated climate-related risks into its strategic risk management framework, accounting for operational characteristics, asset distribution, and potential climate impacts. The Company continuously monitors key climate indicators— particularly GHG emissions and intensity—and systematically quantifies carbon data to proactively identify and mitigate emission challenges.

Indicator	Data in 2024	Unit
Scope 1 GHG emissions	765,023.45	Ton of carbon dioxide equivalent
Scope 2 GHG emissions	2,018,419.37	Ton of carbon dioxide equivalent
Total GHG emissions <sup>10</sup>	2,783,422.82	Ton of carbon dioxide equivalent
GHG emission intensity	2.02	Ton of carbon dioxide equivalent/ton of production

Based on operational realities and aligned with climate strategies, NHU has established the following quantitative climate goals to advance low-carbon development. The Company will implement regular carbon inventory audits, systematically track goal progress, and execute tailored mitigation measures.

• Compared to the 2023 baseline, decrease the carbon emission intensity per unit of products **25%** by 2030.

## **Energy Utilization**

NHU continuously optimizes its energy management system to enhance energy efficiency and increase clean energy adoption. We have established a four-tier energy management structure. This structure ensures the effective implementation of energy conservation initiatives. The President holds ultimate accountability for energy management, while the Vice President (in charge of operations) oversees and coordinates energy management efforts, and supervise the implementation of the energy management system. The Production & Operations Department leads the implementation of strategic energy plans and policy decisions.

We have established an energy management system documentation, including the *Energy Management Manual, Energy Management Regulations*, and *Energy Conservation Protocols*. These establish clear accountability matrices, define energy related goals and performance metrics, and institute audit mechanisms to ensure standardized and efficient energy utilization, thereby enhancing sustainable production capacity. Regular energy conservation training programs engage employees, transforming compliance into proactive participation across all operational processes. This year, NHU accelerated the standardization of energy management across its facilities, with Shandong NHU Vitamins Co., Ltd. being recognized as a 2023 Energy Conservation Exemplary Enterprise by the Weifang Municipal Government.

We implement annual energy consumption targets with regularly progress reviews to ensure tangible outcomes.

2024 Energy Consumption Target	Target Achievement Status	2025 Energy Consumption Target
Compared with the previous year, the energy consumption per output value of CNY 10,000 will decrease by no less than 5%.	Achieved	Compared with the previous year, the energy consumption per output value of CNY 10,000 will decrease by no less than 5%.

#### **Energy Efficiency Improvement**

NHU is committed to achieving efficient utilization of energy and resources. As a strategic priority, the Company has implemented energy digital transformation and is advancing the Smart Energy Control Platform to enable intelligent and refined energy management. This platform facilitates real-time monitoring and analysis of energy consumption data, optimizes energy allocation strategies, and significantly enhances energy efficiency. Additionally, the Company has established a comprehensive energy consumption indicator management system for production processes. Through digital technologies, it precisely controls key energy consumption nodes to ensure continuous optimization of all energy performance metrics.



<sup>10</sup> GHG emissions are calculated in strict compliance with ISO 14064-1:2018 Greenhouse Gases - Part 1: Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals.

#### **(D)** Expanded Utilization of Renewable Energy

NHU is advancing clean energy integration, achieving 45.58 million kWh of clean electricity utilization in 2024 (including green power certificate purchases), substantially decreasing traditional energy dependence. Our photovoltaic power generation projects across production bases have installed 11.73 MW of solar capacity, delivering 26,000 tons of annual carbon reductions.



In clean transportation, NHU actively adopts green logistics methods such as belt conveying systems and electric truck transportation, which have substantially increased the proportion of clean energy in inbound and outbound logistics. These initiatives enhance energy efficiency and reduce carbon emissions throughout the transportation process.

Within the biofermentation sector, NHU utilizes renewable corn as a raw material to produce target molecules through advanced microbial fermentation technology. By leveraging cell metabolism-based production, the Company drives the strategic transition from fossil fuels to renewable energy sources.

NHU utilized

standard cubic meters

Achieving an annual

carbon reduction of

18.000 tons

(SCM) of biogas

Additionally, NHU innovatively recycles biogas from wastewater treatment stations to replace traditional fossil fuels. Through the integrated utilization of biogas in production processes and eco-friendly combustion systems, the Company has reduced the consumption of coal powder and natural gas. In 2024, NHU utilized 11.40 million standard cubic meters (SCM) of biogas, achieving an annual carbon reduction of 18,000 tons.

The Company plans to expand investments in clean energy infrastructure and optimize the energy structure across its operations.

In 2024, NHU achieved a 7.67% reduction in energy consumption intensity compared to the previous year, reflecting significant energy-saving progress.

Indicator	Data in 2024	Unit
Total Energy Consumption <sup>11</sup>	809,200	Ton of standard coal
Direct Energy Consumption	560,600	Ton of standard coal
Indirect Energy Consumption	248,600	Ton of standard coal



<sup>11</sup> The standard used for calculating energy consumption is the General Rules for Calculation of Comprehensive Energy Consumption (GB/T2589-2020).

# Harmony with Nature

NHU strictly complies with environmental protection laws and regulations in all jurisdictions where we operate, including the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention* and *Control of Atmospheric Pollution*, and the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution*, and the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste*. We implement rigorous environmental management throughout production and operations, promote green office initiatives, and continuously strengthen environmental awareness among all employees.

## **Environmental Management**

NHU recognizes the Board of Directors' pivotal role in environmental management, and has clearly defined environmental responsibilities across all management levels and departments. By integrating the ISO 14001 Environmental Management System and operational realities, the Company has established a HSE management framework. This framework has been institutionalized through the NHU *HSE Management Manual*, which contains 20 environmental management documents covering policy formulation, target setting, regulatory compliance, operational procedures, and emergency response protocols. Specific emergency plans including the *Emergency Response Plan for Environmental Incidents* and the *Special Emergency Plan for Hazardous Waste Incidents* have been developed to enhance incident response capabilities and maintain an accident-free record. The Company conducts annual internal environmental audits to verify effective implementation of its environmental management systems.

The Company has prepared *Environmental Risk Assessment Report* and *Environmental Emergency Resource Investigation Report* to promptly identify and rectify potential environmental non-compliances, continuously enhancing pollution monitoring and emergency response capabilities. This ensures rapid, accurate reactions during environmental emergencies to minimize ecological impact. During the reporting period, all NHU production bases maintained ISO 14001 certification, with zero major environmental incidents or penalties.

NHU establishes annual environmental management targets with progress tracking mechanisms, incorporating environmental performance into all employees' compensation metrics to ensure effective implementation. In 2024, the Company successfully achieved all its environmental targets, realizing a 6% year-on-year reduction in COD and an 8% decrease in wastewater discharge per output value of CNY 10,000 compared to the previous year.

2024 Environmental Management Targets	Target Achievement Status	2025 Environmental Management Targets
Compared with the previous year, the COD per output value of CNY 10,000 will decrease by ≥ 5%.	Achieved	The COD per output value of CNY 10,000 will decrease by 5%, compared with 2024.
Compared with the previous year, the wastewater amount per output value of CNY 10,000 will decrease by $\ge 2\%$ .	Achieved	The wastewater amount per output value of CNY 10,000 will decrease by 2%, compared with 2024.
All wastewater and waste gases were discharged in compliance with standards, and hazardous waste are disposed of legally.	Achieved	All wastewater and waste gases were discharged in compliance with standards, and hazardous waste are disposed of legally.

NHU has established a comprehensive HSE training system by formulating and implementing the *HSE Training Management Rules* to ensure that the environmental awareness and skills of all staff members meet the job requirements. In 2024, the Company achieved 100% coverage through systematic environmental training programs for all staff. For new employees, the Company implements an "Environmental Access" mechanism, requiring completion of mandatory environmental training hours and passing competency assessments before obtaining formal job qualification. Prior to equipment maintenance, the Company conducts specialized environmental training for contracted maintenance personnel, mandating strict adherence to corporate environmental management requirements during maintenance activities. The Company routinely supervises and inspects the implementation of environmental protection measures at maintenance sites.

## **Clean Production**

NHU has continuously enhanced its clean production management system. In 2024, the Company revised and issued the Solid Waste Management Regulations to comprehensively advance the "reduction, valorization, and harmless disposal" of solid waste. Through collaborative R&D and the introduction of internationally advanced three-waste disposal technologies and equipment, NHU has progressively increased waste valorization efficiency, establishing a solid foundation for developing ecofriendly factories. Adhering to the full-process clean production principle of "source reduction, process control, and end-of-pipe treatment," the Company strengthens fundamental process research and optimizes production workflows to minimize waste generation and discharge. Leveraging vertical integration advantages across its value chain, NHU actively develops green process technologies that enable circular utilization of intermediates, catalysts, and by-products. This has resulted in significant reductions in wastewater, waste gas emissions, solid waste discharge, and production-related pollutant emissions.



#### **Pollution Prevention at Source**

Conduct research on clean production projects such as fly ash optimization and salt-containing wastewater dezincification to reduce the pressure on end treatment.

#### **Process Control**

Establish a quantifiable multi-dimensional environmental evaluation plan in terms of wastewater, waste gas, solid waste, and environmental hazard identification.



#### End-of-pipe Treatment

Explore paths for hazardous waste disposal and achieve zero storage in solid waste warehouses.

Renovate the pre-treatment system of the sewage station to enhance the sewage treatment capacity.

NHU proactively adopts new materials, process, technologies and equipment to improve operational efficiency of equipment. The Company prioritizes energy-efficient equipment selection, process optimization, and environmental technologies to reduce both energy consumption and environmental pollution. Through comprehensive energy integration strategies encompassing heat coupling and steam-water balance optimization, NHU actively employs advanced control technologies, utilizing intelligent control systems and sensor technologies to monitor the operating conditions and energy consumption of equipment in real time. By conducting intelligent adjustments and optimized control, we enhance the automation rate of equipment, thereby reducing energy consumption and improving operational efficiency.

#### ( Waste Gas Management

NHU attaches great importance to waste gas treatment, especially in the management of unorganized waste gas in the factory areas. It has implemented efficient and sustainable solutions to advance the construction of "odor-free factories".

Heilongjiang NHU Waste Gas Management

Heilongjiang NHU Biotechnology Co., Ltd. ("Heilongjiang NHU") has implemented a systematic management framework encompassing source reduction, process control, and end-of-pipe treatment. The implementation of unorganized waste gas collection and treatment from anaerobic tanks, coupled with the incineration of collected gases, has fundamentally resolved odor issues in the surrounding areas and ensured compliant exhaust emissions.

#### **Waste Management**

NHU has achieved notable progress in waste valorization. By implementing comprehensive measures through new technologies and scientific management systems, the Company has systematically advanced waste reduction, valorization, and harmless disposal. For general solid waste, NHU has established recycling mechanisms and external collaboration systems to achieve zero-landfill disposal. Notably, several production bases of NHU have attained 100% comprehensive utilization of general solid waste. In alignment with Zhejiang Province's "Near-Zero Landfill" Three-Year Campaign for Hazardous Waste Management, Zhejiang NHU Pharmaceutical Co., Ltd. has pioneered a fly ash valorization initiative. This innovation has reduced hazardous waste landfill volume by 31.80% year-on-year in 2024, substantially mitigating environmental impacts.

The Company has set the goal of "reducing hazardous waste generation intensity 10% by 2030 against the 2023 baseline," and are committed to continuously minimizing hazardous waste emissions to mitigate environmental pollution.



#### **Ecological and Biodiversity Conservation**

NHU has demonstrated exceptional performance in ecological conservation and biodiversity protection, maintaining zero incidents of soil contamination, ecosystem disruption, or animal testing throughout the reporting period. For new construction projects, the Company proactively sources cost-effective earthwork and slag resources, achieving 100% on-site backfilling for some factory areas. This circular approach optimizes resource efficiency while minimizing natural resource consumption.

Indicator	Data in 2024	Unit
Total Amount of Harmless Waste	229,292.18	Ton
Quantity of Harmless Waste Recycling	218,137.77	Ton
Total Amount of Hazardous Waste	109,122.16	Ton
Landfill Rate of Hazardous Waste	4.06	%



### **Green Office**

NHU actively implements green office practices by optimizing the management of air conditioning, lighting, water systems, and other facilities while cultivating employee awareness of resource conservation. Additionally, the Company has adopted paperless office initiatives through digital and intelligent platforms to reduce paper consumption, enhance operational efficiency, minimize resource waste, and establish a high-efficiency, low-carbon green office ecosystem. NHU encourages employees to adopt green commuting practices by installing EV charging stations across its industrial parks. The Company has developed photovoltaic (PV) projects on vacant land, parking sheds, and office building rooftops, utilizing green power for lighting. In 2024, the Shandong NHU Pharmaceutical Base PV-integrated parking facility was commissioned, generating approximately 1.60 million kWh of electricity annually and achieving an annual carbon emission reduction of approximately 890 tons.

In logistics, NHU is pioneering a green transformation by deploying new energy vehicles (NEVs), optimizing logistics route planning, and utilizing less-than-container-load (LCL) consolidation to reduce shipment frequency and enhance logistics efficiency.

# **Circular Economy**

NHU adheres to a green operation philosophy and fully implements the circular economy model. We enhance the utilization of renewable resources and advance the deep integration of chemical products with biotechnology, contributing to industry progress and ecological sustainability.

## **Management of Water Resources**

NHU maintains a rigorous water resource management framework, with the President bearing ultimate accountability. The ESG Management Committee oversees water management strategies and performance metrics, while each production base establishes annual water conservation targets aligned with operational requirements and conducts regular progress reviews. The Company has implemented a tiered water recycling system, achieving efficient water resource utilization through technological innovation, process optimization, and refined management. In 2024, NHU successfully submitted its response to the CDP Water Security Questionnaire and received a rating B-.



Shangyu NHU exemplifies environmental responsibility through its innovative water recycling practices. By implementing a full-process management strategy that encompasses "source reduction, process control, and endof-pipe treatment," the Company systematically enhances water efficiency. Guided by its "service + supervision" environmental management philosophy, Shangyu NHU has conducted clean production initiatives, including COD reduction in wastewater and the separation of metal ions in workshop wastewater. These measures effectively alleviate end-of-pipe treatment pressures. Additionally, Shangyu NHU has upgraded the pretreatment system at its existing wastewater plant, significantly improving wastewater quality stability and treatment capacity.

Concurrently, Shangyu NHU has pioneered new chemical technologies and processes, streamlining the co-production process for vitamin series products. This innovation, which was awarded the Second Prize of the National Technology Invention Award, achieves an annual wastewater reduction of over 50,000 tons.

Reduce the consumption of chilled water and circulating water as well as the amount of wastewater generated through

Advance technologies including water reclamation, rainwater reuse, and electrodialysis reversal (EDR) water treatment

Introduce sophisticated treatment equipment from abroad to reduce the generation of industrial wastewater: Optimize water-saving management and circulating water systems and strengthen water quality monitoring for optimal

Shandong NHU enhances water efficiency and reduces wastewater discharge through technological innovation and resource optimization. In 2024, the company conducted general solid waste identification and recycled the aqueous solutions generated in the production process, reducing COD discharge by 17 tons and salt emissions by 25.50 tons. Full project implementation is projected to decrease annual wastewater discharge by 8,000 tons.

The company implements closed-loop water management through boiler blowdown water recycling. After temperature reduction treatment, the boiler blowdown water is diverted to the common rainwater recycling system. Following purification by water treatment equipment, the reclaimed water is repurposed for industrial applications. Furthermore, existing filtration infrastructure has been optimized to utilize treated rainwater as supplementary industrial water, thereby enhancing comprehensive water utilization efficiency.

Indicator	Data in 2024	Unit
Water Recycling Utilization Rate	96.30	%



#### **Circular Economy Development**

We actively implement circular economy principles through systematic innovations in packaging material management, establishing a comprehensive green packaging lifecycle management system. The Company has set an annual procurement target of 200 tons of renewable raw materials to drive sustainable industry development.



Case

# Appendixes

## Appendix I: Key Performance Table

Aspect	Торіс	Indicator	Unit	Data in 2024
	Economic	Operating revenue	CNY (hundred million)	216.09
Governance Performance	Performance	Total assets	CNY (hundred million)	429.89
	Corporate Governance	Number of directors	Person	11
		Nitrogen oxide (NO <sub>x</sub> ) emissions	Ton	261.52
		Ozone depleting substances (ODS) emissions	Ton	4.94
	Emissions	Sulfur oxides (SO <sub>x</sub> ) emissions	Ton	60.66
		Volatile organic compounds (VOCs) emissions	Ton	85.73
		Particulate matter emissions	Ton	19.05
		Total amount of general solid waste	Ton	229,292.18
		Intensity of general solid waste	Ton/ton of production	0.17
	vvasie	Total amount of hazardous waste	Ton	109,122.16
		Intensity of hazardous waste	Ton/ton of production	0.08
Environmental Performance		Total GHG emissions (Scope 1 and Scope 2)	Ton of carbon dioxide equivalent	2,783,442.82
		- Scope 1 GHG emissions	Ton of carbon dioxide equivalent	765,023.45
		- Scope 2 GHG emissions	Ton of carbon dioxide equivalent	2,018,419.37
	Greenhouse Gas (GHG)	GHG emission intensity (Scope 1 and Scope 2)	Ton of carbon dioxide equivalent/ ton of production	2.02
		- Scope 1 GHG emission intensity	Ton of carbon dioxide equivalent/ ton of production	0.55
		- Scope 2 GHG emission intensity	Ton of carbon dioxide equivalent/ ton of production	1.46

Aspect	Торіс	Indicator	Unit	Data in 2024
		Total energy consumption	Ton of standard coal	809,200
		- Direct energy consumption	Ton of standard coal	560,600
		- Indirect energy consumption	Ton of standard coal	248,600
		Coal consumption	Ton	781,000
		Natural gas consumption	10,000 standard cubic meters	4,708
		Gasoline consumption	Liter	0
		Diesel consumption	Liter	110,947
		Energy consumption intensity	Ton of standard coal/ ton of production	0.59
		Proportion of decrease in energy consumption intensity compared to the previous fiscal year	%	7.67
		Electricity consumption	Ten thousand kWh	150,600
		Electricity intensity	KWh/ton of production	1,091
	Litilization of	Purchased electricity	Ten thousand kWh	136,420
Environmental	Resources	Photovoltaic power generation	Ten thousand kWh	1,034
Performance		Proportion of clean energy consumption	%	2.06
		Consumption of renewable resources	Ton of standard coal	16,671
		- Total amount of solar energy used by the Company	Ton of standard coal	1,271
		- Total amount of green energy purchased by the Company	Ton of standard coal	4,331
		- Total amount of biomass energy used by the company	Ton of standard coal	11,069
		Proportion of renewable resources <sup>12</sup>	%	2.06
		- Proportion of solar energy used by the Company	%	0.16
		- Proportion of green energy purchased by the Company	%	0.54
		- Proportion of biomass energy used by the Company	%	1.37
	Management	Total water intake	Ton	15,732,000
	Resources	Fresh water intake	Ton	15,732,000

<sup>12</sup> Proportion of renewable resources=Consumption of renewable resources/Total energy consumption\*100%

Aspect	Торіс		ndicator	Unit	Data in 2024
		Total water consump	tion	Ton	15,732,000
		Fresh water consum	Fresh water consumption		15,732,000
		Water consumption intensity		Ton/ton of production	11.40
		Water reuse		Ton	409,200,000
		Water recycling utiliz	ation rate	%	96.30
	Management of Water	Discharge amount o	f industrial wastewater	Ton	7,783,289.53
	Resources	Discharge intensity o	of industrial wastewater	Ton/ton of production	5.64
		COD emissions		Ton	1,636.40
Environmental		Ammonia nitrogen e	missions	Ton	34.15
Performance		Total phosphorus emissions		Ton	21.16
		Total nitrogen emissions		Ton	93.97
		Packaging material consumption		Ton	27,432
		- Wood/paper fiber consumption		Ton	16,301
	Packaging	- Metal consumption		Ton	7,014
	Materials	- Plastic consumption		Ton	4,117
		Intensity of packaging materials used		Ton/ton of production	0.02
		Amount of recycled packaging materials		Ton	4.50
		Total number of employees		Person	11,369
			Senior management	Person	4
		Number of	Middle management	Person	372
Social Performance	Employee Employment	employees by level	General management	Person	750
			Ordinary employees	Person	10,243
		Number of	Male	Person	9,125
		gender	Female	Person	2,244

Aspect	Торіс		Indicator	Unit	Data in 2024
		Proportion of womer	n in senior management	%	25
			Under 30 years old	Person	4,742
		Number of employees by age	30-50 years old	Person	6,092
	Employee Employment		Over 50 years old	Person	535
		Total number of disa	bled employees employed	Person	34
		Total number of emp	oloyed veterans	Person	210
		Number of new emp	loyees	Person	778
		Employee turnover r	ate	%	5.07
		Employee turnover	Male	%	4.71
	Employee	rate by gender	Female	%	6.52
	Turnover		Under 30 years old	%	8.99
		Employee turnover rate by age	30-50 years old	%	2.04
Social			Over 50 years old	%	1.09
Performance	Employee's Rights and Interests	Percentage of labor contract coverage		%	100
		Percentage of employees with social insurance		%	100
		Physical examination rate of employees		%	100
		OHS examination rate of employees		%	100
		Number of work-related deaths		Person	0
		Proportion of factories certified by ISO 45001 OHS Management System		%	100
	Occupational Health	Investment amount insurance	Investment amount of work-related injury insurance		825.11
	(OHS)	Personnel coverage insurance	Personnel coverage rate of work-related injury insurance		100
		Investment amount of work safety insurance		CNY 10,000	122.63
		Number of OHS trai	ning sessions conducted	Times	209
		Proportion of employ training	roportion of employees covered by OHS aining		100

Aspect	Торіс	Indic	ator	Unit	Data in 2024
		Training participation rat	е	%	100
		Number of training sess	ions conducted	Times	4,166
		Proportion of trained	Male	%	80.26
		employees by gender	Female	%	19.74
	C+-#	Total training hours by	Male	Hour	370,878
	Training and	gender	Female	Hour	108,032
	Development	Total training hours for e	mployees	Hour	478,910
		Average training hours p	per employee	Hour	42.12
		Average training hours	Male	Hour	40.64
		gender	Female	Hour	48.14
		Annual training expendit	ure amount	CNY 10,000	706
Social Performance Data Security and Privacy Protection	Product Quality and	Percentage of products recalls attributable to quality deficiencies in the total number of sold or delivered products		%	0
	Service	Complaint handling rate regarding products and services		%	100
	Data Security	Number of information security training sessions conducted		Times	76
	Protection	Proportion of employees covered by information security training		%	100
		R&D investment (funds related to technological innovation)		CNY (hundred million)	10.36
			Total number	Person	2,867
		Rad lealli	Proportion	%	25.22
		Number of valid patents		Nos.	777
	Product R&D	Number of invention patents applied to the main business		Nos.	405
		Number of invention patent applications		Nos.	114
		Number of authorized in	vention patents	Nos.	76
		Number of trademark rig	lhts	Nos.	463
		Number of copyrights		Nos.	274

Aspect	Торіс	Indic	ator	Unit	Data in 2024
Produc	Product R&D	Number of products with certificates	a carbon footprint	Nos.	14
		Total number of supplier	S	Nos.	4,192
			Mainland China	Nos.	4,153
	Supply Chain	Number of suppliers by region	Hong Kong, Macau and Taiwan	Nos.	2
Management		Overseas	Nos.	37	
		Suppliers' signing rate of	f Integrity Agreements	%	100
		Amount of delayed payn medium-sized enterprise	nents to small and es	CNY 10,000	0
			Directors	Person Times	83
		Anti-corruption training	Supervisors	Person Times	310
		attendances	Senior management	Person Times	762
			Employees	Person Times	10,485
		Number of anti- corruption training participants	Directors	Person	11
Social			Supervisors	Person	5
Anti- corruption			Senior management	Person	4
		Employees	Person	11,365	
	corruption	Proportion of anti- corruption training	Directors	%	0.10
			Supervisors	%	0.04
			Senior management	%	0.04
			Employees	%	99.82
		The management's signing rate of the Integrity Agreements		%	100
		Employees' signing rate of the Integrity Agreements		%	100
		Number of corruption lawsuits filed or concluded		Nos.	0
		Total investment in rural	revitalization	CNY 10,000	30
	Public Welfare and Charity	Investment in public wel undertakings	fare and charity	CNY 10,000	256
	Undertakings	Number of people partic activities	ipating in volunteer	Person	646

## Appendix II: Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange—Sustainability Report (For Trial Implementation)

Dimension	No.	Торіс	Clause	Chapter of the Report
Environmental	1	Climate response	Articles 21 to 28	Responding to Climate Change
	2	Pollutant discharge	Article 30	Clean Production
	3	Waste disposal	Article 31	Clean Production
	4	Ecological and biodiversity protection	Article 32	Clean Production
	5	Environmental compliance management	Article 33	Environmental Management
	6	Energy utilization	Article 35	Energy Utilization
	7	Water resources utilization	Article 36	Management of Water Resources
	8	Circular economy	Article 37	Green Office Circular Economy Development
Community	9	Rural revitalization	Article 39	Public Welfare and Charity Undertakings
	10	Social contributions	Article 40	Public Welfare and Charity Undertakings
	11	Innovation	Article 42	Digital and Intelligent Management System Digital and Intelligent Actions R&D and Innovation Intellectual Property Protection
	12	Ethics of science and technology	Article 43	N/A

Dimension	No.	Торіс	Clause	Chapter of the Report
Community	13	Supply chain security	Article 45	Responsible Supply Chain
	14	Equal treatment of SMEs	Article 46	Responsible Supply Chain
	15	Product and service safety and quality	Article 47	Product Quality and Safety Customer Services Empowering Industrial Development
	16	Data Security and Customer Privacy	Article 48	Data Security and Customer Privacy Protection
	17	Employees	Article 50	Employee Well-being
Sustainability- related governance	18	Due diligence	Article 52	Compliance Management
	19	Stakeholder engagement	Article 53	Stakeholder Engagement
	20	Anti-commercial bribery and anti-corruption	Article 55	Business Ethics
	21	Fair competition	Article 56	Business Ethics

