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Environmental, Social and Governance Report

2023 | Sinochem Holdings

About this Report

Reporter	Sinochem Holdings Corporation Ltd. (“Sinochem Holdings” or the “Company” for short)
Reporting Period	The reporting period is from January 1, 2023 to December 31, 2023, unless otherwise stated. To ensure the completeness of the narrative and the continuity of the information, there may be items in the report that exceed this timeframe.
Report Scope	Unless otherwise specified, the relevant data in the report covers Sinochem Holdings and its wholly-owned and controlling subsidiaries, which are shown in the Table of Company Name Abbreviations in the appendix.
Report Contents	The social responsibility philosophy and commitments of Sinochem Holdings, as well as the Company's specific practices and main achievements in terms of ESG (environmental, social and governance).
References	<p>The State-owned Assets Supervision and Administration Commission of the State Council (SASAC): Guiding Opinions on Central SOEs to Fulfill Their Social Responsibilities with High Standards in the New Era</p> <p>The SASAC: Work Plan for Improving the Quality of Listed Companies Controlled by Central SOEs</p> <p>The General Office of the SASAC: Research Project on the Preparation of ESG Report on Listed Companies Controlled by Central SOEs (Reference Index System for ESG Special Report of Listed Companies Controlled by Central SOEs)</p> <p>Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 5.0)</p> <p>GRI (Global Reporting Initiative) Sustainability Reporting Standards (GRI Standards)</p> <p>Task Force on Climate-related Financial Disclosures (TCFD): Climate-Related Financial Disclosure Report</p> <p>International Organization for Standardization (ISO): ISO 26000 Guidance on Social Responsibility</p> <p>Self-regulatory Guidelines No. 14 for Listed Companies on the Shanghai Stock Exchange - Sustainable Development Report (For Trial Implementation)</p> <p>Self-regulatory Guidelines No.17 for Listed Companies on Shenzhen Stock Exchange - Sustainable Development Report (For Trial Implementation)</p> <p>Guidelines for Continuous Supervision of Listed Companies on the Beijing Stock Exchange No. 11- Sustainable Development Report (For Trial Implementation)</p> <p>The Stock Exchange of Hong Kong Ltd's Environmental, Social and Governance Reporting Guidelines</p>
Disclosure Principles	<p>The disclosure of the report adheres to the following principles:</p> <p>Importance: The report adopts the materiality assessment method. According to the basis of materiality judgment, it selects and displays the materiality matrix through the judgment process, ultimately ensuring the accurate and comprehensive disclosure of ESG information.</p> <p>Quantification: The report conducts quantitative performance management on substantive ESG issues, covering various aspects of environment, society and governance. Specific ESG quantification data and objectives are detailed in each chapter.</p> <p>Balance: The report follows the principle of balance and fairly and objectively reflects the current ESG situation of the Company.</p> <p>Consistency: Unless otherwise specified, the statistical methods for information collection and disclosure in this report are consistent with previous years to ensure comparability of information.</p>
Data Sources	The data sources used in the report include but are not limited to the raw data of the Company's actual operations, the Company's internal statistical data, as well as public data from government departments and third-party institutions, etc. The financial data in this report are presented in RMB. The data in this report are true, valid, and accurate.
Get Access to The Report	The report is published in both Simplified Chinese and English. In case of any ambiguity, the Simplified Chinese version shall prevail. You can log in to the Company's website https://www.sinochem.com/ to browse or download the electronic text of the report to learn more about the Company's ESG efforts.



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Message from the Chairman

Dear friends,

On behalf of the Board of Directors, I sincerely thank you for your continuous care and support for Sinochem Holdings!

Sinochem Holdings is committed to using the power of chemistry to promote the world's vitality and maintaining nature's greenness to embark on a sustainable development path. In the current era of globalization, various countries are facing many common challenges, and building a community with a shared future for mankind and promoting sustainable development are unique missions of this era. ESG, as a value guide for high-quality development of enterprises, has become a consensus for global corporate development. China will comprehensively promote the modernization featuring harmonious coexistence between humans and nature through the construction of a beautiful China, and facilitating the construction of ecological civilization is a profound reflection of the ESG concept practiced by enterprises. In the process of building a world-class chemical conglomerate, Sinochem Holdings has always adhered to the concept of sustainable development, moving forward step by step with a "green" approach.

2023 was Sinochem Holdings' second fully operational year since its establishment. The Company increased efforts to promote ecological civilization construction and its green, low-carbon, sustainable development and industrial structure upgrading in the year. The political construction of the Company was comprehensively strengthened in the year, and the management foundation has been continuously consolidated. The Company has been focusing on improving quality and efficiency, continuously advancing scientific and technological breakthroughs, preventing and resolving major risks, and comprehensively consolidating the foundation of high-quality development.

Deepen the green and low-carbon transformation, and pursue the path of high-quality development

Ecological civilization is a historical trend in the development of human civilization. Sinochem Holdings has always highlighted ecological civilization construction in its development, and one of its core goals is to build a "green, environmentally friendly and responsible enterprise", continuously promoting the circular development of green chemical industry through practical actions. Sinochem has kept promoting industrial upgrading and the cultivation of strategic emerging industries, focusing on the construction of green and low-carbon projects and carbon emission management in its key enterprises and bases to promote the implementation of carbon peaking action plans. In 2023, the Company completed 124 energy-saving and carbon reduction technical renovation projects, with a year-on-year decrease of 14% in carbon dioxide emissions per 10,000 yuan of output value.

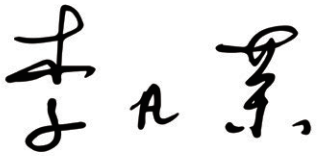
Build a solid process safety defense line and take the path of leveraging high-quality talents to expand corporate business

Safety and talents are important cornerstones for sustainable development of enterprises, which are interdependent and mutually reinforcing, together constituting the key elements of enterprise success. Sinochem Holdings continues to deepen its efforts in ensuring safe production and occupational health, adheres to the talent driven strategy, prioritizes on technological innovation and digital transformation, expands its product and service capabilities in multiple sectors, and builds a sustainable supply chain. In 2023, Sinochem Holdings promoted the "Talent-driven Development Plan" to build a high-level talent team. The Company launched the "Phoenix Plan" to strengthen the recruitment of high-level scientific and technological talents. It also strived to further boost employees' spirit of courage and innovation and reshaped their spiritual temperament, vigorously forged a team of high-quality professional cadres and talents and strengthened their confidence in succeeding in operations.

Strengthen the Company's ESG management and pursue the path of independence and self-reliance in developing advanced technologies

In the context of global economic integration, an enterprise' overall strength in the industrial chain has become an important driver for its high-quality development, and mutual benefit and symbiosis among industry entities has become an important cornerstone for sustainable development of these enterprises. Sinochem Holdings aims to build a world-class chemical conglomerate, and by focusing on its core businesses and advantageous upstream and downstream industrial chains, the Company actively promotes independent innovation and industrial application of key technologies. Moreover, the Company continuously improves the core competitiveness of its products, explores full industry chain service solutions, and continues to engage in extensive cooperation, contributing to the creation of a global sustainable industry ecosystem. As of the end of 2023, the Company owned over 31,000 valid patents, including more than 21,000 invention patents.

Just as the Chinese old saying goes, "When you set your mind to a goal, do not go for what is easy; when you decide to take a task, do not dodge what is difficult." 2024 marks the 75th anniversary of the founding of the People's Republic of China and a crucial year for achieving the goals and tasks of the 14th Five-Year Plan. It is also a year for Sinochem Holdings to fulfill its strategic missions and create a new era of high-quality development for the Company. Sinochem Holdings will follow the general principle of "pursuing progress while ensuring stability, promoting stability through progress, and establishing the new before abolishing the old", continue to promote the construction of the ESG system to help the Company achieve high quality development, and move towards the higher-end of the global value chain. Sinochem Holdings cares about the "national affairs" and shoulders "national responsibilities", constantly boosting morale and uplift spirits, striving to write a new chapter of a world-class chemical conglomerate driven by science and technology, and making new and greater contributions to the construction of a beautiful China and the promotion of Chinese path to modernization.



Chairman of the Board of Sinochem Holdings Corporation Ltd.

Together, for a Brighter Future

Company Profile

Number of employees

220 K

2023 Fortune 500
Chemical Industry list

1st

Sinochem Holdings Corporation Ltd. (Sinochem Holdings) was established through the joint restructuring of Sinochem Group Co., Ltd. and China National Chemical Corporation Ltd. on May 8, 2021. Sinochem Holdings is one of the leading state-owned enterprises under the supervision of the SASAC (State-owned Assets Supervision and Administration Commission of the State Council). It boasts over 220,000 employees globally.

With operations in eight business sectors covering life science, materials science, petrochemicals, environmental science, rubber & tire, machinery & equipment, city operation, and industrial finance, Sinochem Holdings has become one of the world's leading chemical conglomerates, **ranking 38th in the 2023 Fortune 500 list, and 1st in the chemicals industry.** It has 16 listed domestic and overseas companies, i.e. Sinochem International (600500.SH), Haohua Technology (600378.SH), Luxi Chemical (000830.SZ), Cangzhou Dahua (600230.SH), Shenyang Chemical (000698.SZ), Yangnong Chemical (600486.SH), Adama A / B(000553.SZ / 200553.SZ), Win-All High-Tech Seed (300087.SZ), Sinofert (0297.HK), Adisseo (600299.SH), Aeolus (600469.SH), KraussMaffei (600579.SH), China Jinmao (00817.HK), Jinmao Services (00816.HK), Elkem (ELK.OL), and Pirelli (PIRC.MI). Sinochem Holdings owns production bases and R&D facilities in more than 150 countries and regions around the world with a fully-developed marketing network.

Looking ahead, Sinochem Holdings will strive to develop itself into a world-leading chemical conglomerate and constantly improve its sustainable development capabilities to create maximum value for the society, its clients, shareholders and employees and to contribute to social progress as well as the development of the chemical industry.



Development Goals

Sinochem Holdings aims to effectively fulfill its responsibility to undertake “the national strategic mission in the field of comprehensive chemical industry”, and is striving to build a world-class chemical conglomerate.

"Three Five-Year Plans" & "Three-Step Strategy"

Step 1 2025

Catch up with and even surpass industry benchmarks in terms of profitability

Step 2 2030

Catch up with and even surpass industry benchmarks in terms of asset returns

Step 3 2035

The Company's main indicators and comprehensive strength shall reach the world-class level

Development Strategy

Sinochem Holdings will continue to carry out the "123 Industrial Development" strategy, which includes closely adhering to one strategic positioning, shouldering two major industrial missions, and implementing three major transformations and upgrades.

1 Strategic Positioning

A world-leading chemical conglomerate

2 Industrial Missions

Promote the high-quality development of agriculture
Accelerate the strengthening of the new chemical materials industry

3 Transformations & Upgrades

Product layout:	Upgrade from single products to a complete industrial chain
Serve customers:	Upgrade from providing products to providing comprehensive solutions
Digital empowerment:	Upgrade from a traditional enterprise to a digital and intelligent enterprise

Sinochem Holdings has included "accelerating the construction of a modern industrial system" in its 14th Five-Year Plan. The Company will focus on life science and materials science, with a priority on building 10 competitive industrial chains, including seed industry, plant protection, animal nutrition, fluorine materials, and silicones. It will actively cultivate and develop 9 potential industrial chains, including lithium battery materials, electronic chemicals, and civil aviation materials. The Company will leverage China's super-large market, vigorously enhance the management of its overseas enterprises, and improve its abilities in global operations.

ESG Honors

In 2023, the Company and its subsidiaries won multiple honors in the ESG field.

Award Winners	Issuing Authority	Awards and Honors
Sinochem Holdings	World Brand Lab	Ranked 7th in China's Top 500 Most Valuable Brands in 2023
Syngenta Group	Science	Best employer in the agricultural field
	UNFCCC Conference of the Parties 28 (COP28)	Included in the 2023 Business Climate Action Cases
ADAMA	MAALA	Highest ranking of “Platinum Plus.”
Elkem	CEFIC	2023 European Responsible Care Award
	EcoVadis	Platinum rating
	Ringier Trade Media	2023 Ringier Technology Innovation Awards
	CDP (Carbon Disclosure Project)	The environmental transparency and performance in addressing climate change, protecting forests, and water security have achieved A-, A, and A- respectively
Adisseo	EcoVadis	Silver rating
Sinochem International	Social Responsibility Bureau of the SASAC	Included in the "Central SOEs ESG · Pioneer 100 Index"
	S&P Global	Included in the Sustainability Yearbook 2023 (China Edition)
Sonnics	EcoVadis	Platinum rating
Pirelli	CDP	Included in CDP's 2023 Climate A List
China Jinmao	Social Responsibility Bureau of the SASAC	Included in “Central Enterprises ESG-Pioneer 100 Index”
China Haohua	Central Enterprises ESG Alliance	Selected as an excellent case by Central Enterprises ESG Alliance



Communication with Stakeholders

Sinochem Holdings attaches great importance to the demands and expectations of all stakeholders. By establishing open communication channels, the Company seeks to engage with and listen to the opinions and suggestions of its stakeholders in order to promote continuous improvement of its ESG management so as to expand the convergence of interests and jointly achieve the goal of sustainable development.

Stakeholders	Major Expectations	Communication Channels	Our Actions
Government and Regulatory Agencies	Serving national development strategy	Government affairs consultation and discussion	Implementing national development strategy
	Comply with laws and regulations	Government meetings	Honest operation, compliant governance, and lawful taxation
	Pay taxes	Supervision and inspection	Continuously improving independent innovation capabilities
	Supervision and review	Announcements and reports	Accelerate the construction of green enterprises
		News platforms, etc.	Regular communication with relevant regulatory authorities
Shareholders And Investors of Listed Companies Under Sinochem Holdings	Stable governance and operational risk control	Government affairs consultation and discussion	Stable operation and standardized corporate governance
	Satisfactory ROI	Government meetings	Regularly convene shareholder meetings to safeguard the rights and interests of small and medium-sized shareholders
	Smooth communication channels	Supervision and inspection	Continuously strengthen investor relationship management and information disclosure
		Announcements and reports	Strengthen the governance and supervision of overseas enterprises
		News platforms, etc.	Accelerate the integration of ESG into corporate strategy
Employees	Employee rights protection	Employee representative conference	Fair and just employment policies
	Health and safety	Employee satisfaction questionnaire	Sound compensation incentive mechanism
	Employee care	Employee training and assistance	Inclusive and open corporate culture
	Compensation and benefits guarantee	Employee whistle-blowing mechanism	Thoughtful humanistic care
			FORUS system ensuring the health and safety of employees
Consumers/ Customers	Consumer rights protection	Customer service and guarantee mechanism	Quality management system
	Product quality and safety	Customer satisfaction survey	Strictly control product safety and quality
		Product after-sales hotline	Inclusive and open corporate cultureEstablish sound and efficient communication channels for complaint and feedback
		Public email addresses, etc.	Strict user privacy protection
Supply Chain and Partners	Good faith in honoring agreement	Supplier evaluation	Improve procurement management system
	Win-win cooperation	Supplier communication meeting	Build a unified digital procurement platform
	Business ethics and anti-corruption	Supplier investigation, visit and review	Establish good cooperative relationships
			Strengthen business ethics training and anti-corruption management
Local Communities	Public welfare charity and community development	Community support and guidance	Rural revitalization
	Community health and environmental protection	Community services	Poverty relief and education aid
		Community donations	Charitable donations
		Volunteer activities	Strengthen community environmental protection and pollution control
Industry Associations	Industry demonstration role	Large- scale exchange conferences and industry forums	Participate in industry standard development activities
		Industry training	Strengthen energy conservation and emission reduction management
			Accelerate the construction of green factories
			Promote cooperation and exchanges
Universities and Research Institutions	Industry- university- research institution cooperation	On site visits and research	Accelerate the transformation of technological innovation achievements
	Innovative research and development	Cooperation agreement	Establish “strategic partnerships for talent supply and demand between universities and enterprises”
		Talent cultivation	

Materiality Analysis

Materiality Assessment Process

■ Issue Collection

Sinochem Holdings collects key environmental, social and governance related issues by following its strategic focus, industry priorities as well as policy and regulatory requirements, referencing to domestic and foreign ESG standards as well as the ESG content frameworks of advocacy organizations and associations, and benchmarking international excellent ESG practice cases.

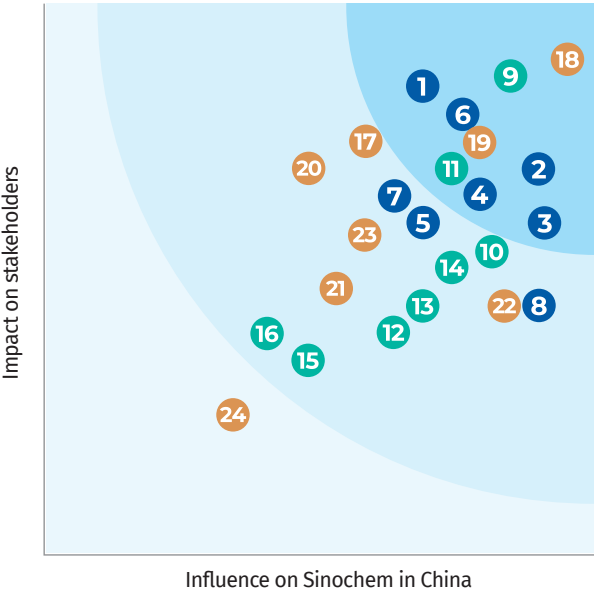
■ Research & Evaluation

Sinochem Holdings fully considers the opinions of various stakeholders, including government, clients, employees, suppliers, investors, regulatory agencies, communities, etc., and confirms through survey questionnaires, interviews, communication meetings and other forms that important issues align with their concerns and expectations.

■ Importance Assessment

Based on the opinions of various stakeholders, Sinochem Holdings fully considers the impact of its business on environment, society and governance and also takes into account the future development trends, such as global warming, sustainable development goals as well as policy and regulatory changes, and then evaluates the importance of each substantive issue to Sinochem Holdings and various stakeholders.

Materiality Matrix



- Governance

 - 1. Communication with stakeholders
 - 2. Board governance
 - 3. Compliance management
 - 4. Risk management
 - 5. Supervision & management
 - 6. Anti-commercial bribery & anti-corruption
 - 7. Anti-unfair competition
 - 8. Business collaboration
- Environment

 - 9. Addressing climate change
 - 10. Environmental management
 - 11. Energy utilization & management
 - 12. Water resource utilization & management
 - 13. Pollutant emissions &management
 - 14. Raw material & waste treatment
 - 15. Circular economy
 - 16. Ecosystem & biodiversity conservation
- Social Responsibility

 - 17. Employee rights & interests
 - 18. Health & safety management
 - 19. Products & services
 - 20. Customer privacy & data security
 - 21. Supply chain management
 - 22. Technological innovation
 - 23. Rural revitalization
 - 24. Community contributions

Topic 1

Sinochem Lianyungang Industrial Park Pier

Green Chemicals Empower Sustainable Development

Ecological civilization is a historical trend in the development of human civilization. As a large global chemical conglomerate, Sinochem Holdings has always highlighted ecological civilization construction in its development. One of its core goals is to build itself into a "responsible enterprise for green development and environmental protection", continuously promoting the circular development of green chemical industry with practical actions, firmly fulfilling its corporate social responsibility, and building a shared future for all life on Earth.



Practicing low-carbon and green transformation is an inherent driving force for an enterprise to achieve sustainable development. In 2023, Sinochem Holdings adopted four low-carbon strategic paths of **"Upgrading Industrial Structure, Promoting Carbon Reduction, Strengthening Carbon Utilization, and Enhancing Carbon Sequestration Capacity"**, coordinated the implementation of 10 key tasks, orderly executed 9 key projects, implemented 6 guarantee measures, and integrated green and low-carbon development throughout the Company's development and management process to ensure the smooth realization of low-carbon development and carbon peaking goals.



(I) Upgrading Industrial Structure to Achieve Green Development and Improve Quality and Efficiency

Achieving efficient utilization of limited carbon resources through industrial upgrading is a key planning direction for Sinochem Holdings' path of "adherence to carbon quality improvement". **In 2023, various units under Sinochem Holdings focused on new industrial growth points such as advanced materials, new energy, and specialty chemicals, and continued to promote the transformation and upgrading of its industrial structure.**

In July 2023, Sinochem Lantian, a subsidiary of Sinochem Holdings, officially launched construction of **a 200kt/a electrolyte project in the Chuannan New Materials Chemical Park in Zigong, Sichuan province**. With a total investment of 1.1 billion yuan, the project aims to build **an advanced electrolyte manufacturing factory that integrates "green development, zero emissions, refinement, and intelligence"**.



In December 2023, a clean energy catalyst industrialization base of Southwest Chemical (Meishan), which is affiliated to the Southwest Research & Design Institute of the Chemical Industry (SWRDICI), a subsidiary of Sinochem Holdings, was officially put into operation. **With an annual output of about 5,000 tons of various catalysts, it is a leading catalyst production base in China in terms of scale and automation**, significantly enhancing the sustainable development capabilities of the Company.

Shanna Synthetic Rubber, a subsidiary of Sinochem Holdings and one of the only two chloroprene rubber enterprises in China, continued to strengthen its innovation efforts in the past years. In 2023, it successfully produced environmentally friendly and low energy consuming SN21X low-temperature resistant rubber, **which has excellent low-temperature resistance and fills the gap in the domestic cold resistant rubber field.**

An electrolyte project to meet demand from lithium battery sector, aiming for green development & zero emissions

1.1 billion yuan
Total investment

200 kt/a
Electrolyte project

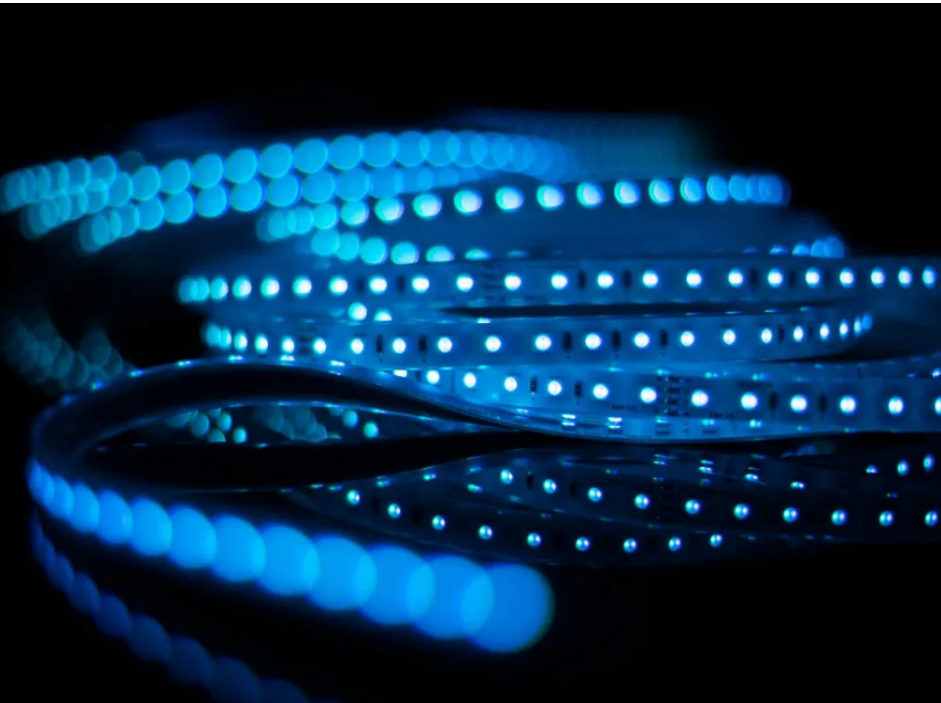
"Catalysis" for new energy, accumulating momentum for takeoff

5,000 tons/a
Various catalysts

New low-temperature resistant CR product launched

Through continuous innovation, new "silicones" launched for a zero carbon future

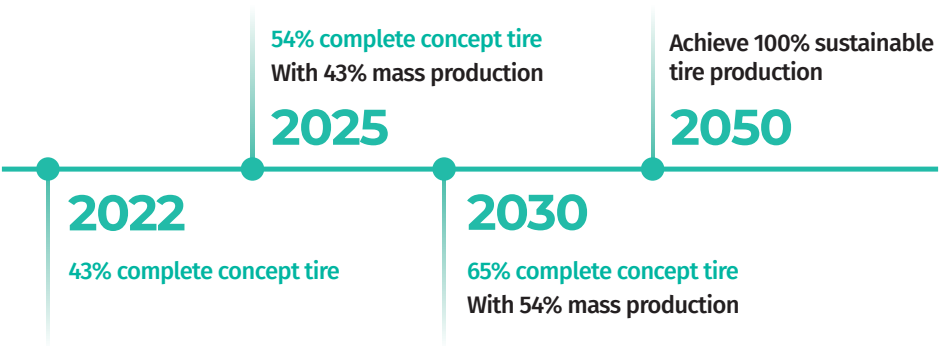
Elkem Silicones, a subsidiary of Sinochem Holdings, launched a new UV LED curing silicone release solution SILCOLEASE UV LED series in 2023. Compared with standard mercury lamps, UV LED curing lamps can reduce energy consumption and avoid the generation of greenhouse gases, making them perform excellently in consumer electronics manufacturing sector.



Aeolus tires to facilitate global green manufacturing

50 %
Making the proportion of sustainable materials in single tire exceed

In 2023, Aeolus, a subsidiary of Sinochem Holdings, completed the testing and evaluation of more than 10 materials, including bio-based synthetic rubber, sustainable carbon materials, and recyclable zinc, making the proportion of sustainable materials in a single tire exceed 50%, further lowering the proportion of petroleum-based raw materials used and reducing carbon footprint of products, and promoting and safeguarding the construction of a global sustainable natural rubber supply chain.



(II) Deepen the Application of Green Energy to Facilitate Energy Conservation and Carbon Emission Reduction

Energy conservation and carbon emission reduction are effective ways to achieve carbon peaking and carbon neutrality. In 2023, Sinochem Holdings highlighted the paths to "promote carbon emission reduction", taking multiple measures such as optimizing processes, energy substitution, and raw material routes optimization to reduce carbon emissions. Each enterprise under Sinochem Holdings actively explored and applied new technologies, methods, and equipment, deepened energy-saving and carbon emission reduction technology transformation and process optimization, and continuously improved energy efficiency and reduced carbon emissions.

Shandong Sennics, a subsidiary of Sinochem Holdings, conducted a full process review of the "heat" produced in 2023, using Potential Failure Mode and Effects Analysis (FMEA) and Value Stream Mapping (VSM) tools to identify energy-saving points in the process. Through measures such as upgrades of equipment energy efficiency, process optimization, and standard Operation Procedure (SOP), energy conservation and consumption reduction have been achieved. After the waste heat utilization projects in the 109 workshops of the factory were put into operation, it achieved an annual energy conservation by 2,597 tons of standard coal and reduced carbon emissions by 8,600 tons.

Zhonghua Yunlong, a subsidiary of Sinochem Holdings, built a Heat Recovery System (HRS), which has increased the heat utilization rate of the heat recovery system from 65% to over 90% during the sulfur-to-sulfuric acid production process. It is estimated to recover heat equivalent to approximately 14,500 tons of standard coal per year, which can reduce carbon dioxide emissions by 38,000 tons, sulfur dioxide emissions by 123 tons, and nitrogen oxides emissions by 107 tons compared to industrial coal-fired boilers.



As an energy intensive enterprise, Elkem, a subsidiary of Sionchem Holdings, follows its climate strategy roadmap and strives to minimize the impact of the entire value chain on the environment by green transformation. In 2023, 82% of the energy consumed by the company was renewable energy.



Comprehensive renovation + special upgrading, playing a leading role in energy conservation

Effective waste heat recovery, enabling a green new life

Upgrade energy-saving equipment further to achieve intelligent emissions control

(III) Developing Green and Low-carbon Technologies and Innovating Carbon Emissions Reduction Models

Sinochem Holdings fully recognizes the importance of developing green and low-carbon technologies, actively leveraging the unique advantages of the chemical industry, **continuously intensifying its efforts in research and development of common key green and low-carbon technologies in materials, agriculture, and other fields and achieving the recycling of carbon resources through the development of chemical conversion and other methods.** In 2023, the Company further accelerated the process of achievement transformation, laying the foundation for creating sources of independently developed and low-carbon technologies.

Low-temperature and high-efficiency CO₂-to-methanol production, creating a low-carbon chemical technology hub

100 kt/a
Development of process software package

Turning carbon dioxide into methanol & promoting the recycling of carbon dioxide

5 kt/a
Carbon dioxide hydrogenation to methanol pilot plant was put into operation successfully and achieved continuous operation

Catalyst performance
Internationally advanced standard

The Southwest Research & Design Institute of the Chemical Industry (SWRDICI), a subsidiary of Sinochem Holdings, took the lead in implementing the key project of "Catalytic Science" in the national key research and development plan during the 14th Five-Year Plan period - the "Efficient Synthesis of Methanol through Catalytic Hydrogenation of Carbon Dioxide" project. It cooperated with universities and research institutes such as Dalian Institute of Chemical Physics of the Chinese Academy of Sciences and Peking University to **develop low-temperature and efficient CO₂-based hydrogenated catalysts, make breakthroughs in core technologies such as catalyst amplification preparation, and develop a 100kt/a process software package,** and accelerate the creation of a low-carbon chemical technology hub.

The 5kt/a carbon dioxide hydrogenation to methanol pilot plant jointly developed and constructed by SWRDICI and Luxi Chemical **was put into operation successfully and achieved continuous operation. The overall technologies used and the performance of the catalyst have reached advanced standards internationally,** opening up a new pathway for producing high-value chemicals from carbon dioxide, which also has significant effects in carbon emission reduction.



As of the end of 2023, **the adsorption-based carbon dioxide capture and purification technology with independent intellectual property rights** developed by the Southwest Research & Design Institute of the Chemical Industry (SWRDICI), a subsidiary of Sinochem Holdings, **has been implemented in more than 70 projects, with a total carbon dioxide capture capacity of more than 5Mt/a.** Many overseas companies, including ShinBiochem (South Korea) and Toko (South Korea), have adopted this technology.



Aiming to develop "swiftly but steadily", CCUS technology effectively promoted

The total CO₂ capture capacity exceeds more than

5 Mt/a

In 2023, Elkem, a subsidiary of Sinochem Holdings, joined hands with several partners in the industry to launch the world's first carbon capture pilot project in a ferrosilicon smelter. The pilot project used the carbon capture mobile test device at the Rana plant in Norway to **achieve carbon capture during the smelting process of high-purity special ferrosilicon alloy products and microsilicon powder.**



Capturing "carbon" in silicon production! The world's first carbon capture pilot project at a ferrosilicon smelter launched

(IV) Strengthening Green Capacity Building and Enhancing Urban Vitality

Sinochem Holdings fully leverages the advantages of its diversified business layout, **improves carbon emission reduction and carbon management capabilities through various means, establishes an efficient energy-carbon management system and improves it continuously, and actively explores green and low-carbon products and services certification, so that its green development can benefit the general public.** At the same time, it continues to deepen the construction of "green factories" and "zero-waste factories", promotes clean production, and strengthen measures to prevent and control pollution. In 2023, Sinochem holdings built 5 green factories certified by the Ministry of Industry and Information Technology, 10 green factories recognized by the China Petroleum and Chemical Industry Federation (CPCIF), and 6 provincial green factories in China.

China's first "carbon-neutral factory" successfully built



A leader in low-carbon agriculture, aiming for continuous carbon emission reduction

In July 2023, Syngenta (Suzhou) Crop Protection Co Ltd. of Syngenta Group, a subsidiary of Sinochem Holdings, officially acquired the "Carbon Neutrality Certificate" issued by the China Beijing Green Exchange, marks Syngenta Group unveils its first certified "carbon-neutral factory" in China. Syngenta (Suzhou) Crop Protection Co., Ltd. committed to achieving the "zero carbon" goal and making the entire production and management process "green" through product packaging transformation and upgrading, equipment fine operation and green supply chain management.

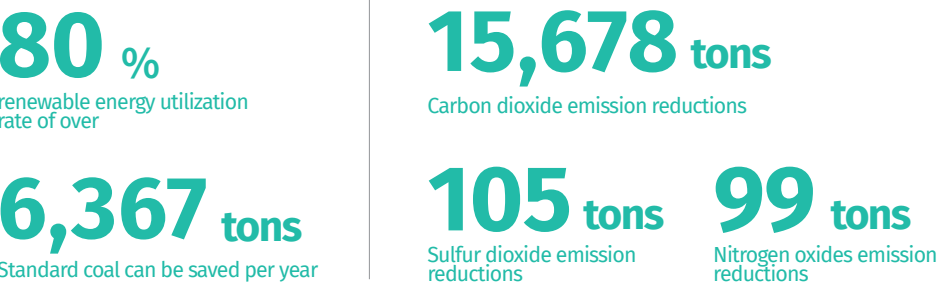


In 2023, Syngenta AG, a subsidiary of Sinochem Holdings, as the first agrochemical company in China to promote products carbon footprint, actively implemented China carbon peaking and carbon neutrality strategy and fulfilled the commitment of the Science-Based Targets initiative (SBTi), and reduced scope 1 and scope 2 greenhouse gas emissions (*statistics include Syngenta's crop protection and seed business units) by 27% compared with 2022. **Since 2023, the company has established cooperative relationships with 18 key domestic technical material (TC) suppliers to obtain products carbon footprint data and promote Scope 3 GHG emissions reduction. At the same time, Syngenta Group's TC manufacturing site in San Gabriel, Louisiana, US, was awarded "Top Partner" status in the U.S. Environmental Protection Agency Green Power Partnership (EPA GPP), making Syngenta Group the only company within the agricultural sector to be included in EPA GPP Top 100 List.**

As an internal financial institution, Sinochem Finance Co., Ltd. strives to draw financial resources to boost agricultural development. It has signed the Strategic Financial Cooperation Agreement for Deeply Implementing the Seed Industry Revitalization Action with Sinochem's internal agricultural enterprises, providing all-round financial services such as credit, settlement, and information construction, helping the group to build an integrated "breeding, reproduction and promotion" system with unique Chinese characteristics. **In 2023, Sinochem Finance provided 13.2 billion yuan loans to the group's agricultural sector.**



The "Wuhan Sixin Fangdao Energy Station" built by China Jinmao, a subsidiary of Sinochem Holdings, is one of the first batch of pilot projects among Wuhan's low-carbon demonstration projects. **It was put into operation and started to supply energy in 2023. With a renewable energy utilization rate of over 80%, the project can save 6,367 tons of standard coal, reduce carbon dioxide emissions by 15,678 tons, sulfur dioxide emissions by 105 tons, and nitrogen oxides emissions by 99 tons each year.** The project mainly relies on sewage source heat pumps, supplemented by ground source heat pumps. With a utilization rate of over 80% of urban primary sewage, it can provide 24-hour centralized cooling and heating services to all kinds of users located in Wuhan Hanyang Sixin Eco-City, which covers an area of about 1.3 million square meters.



Prometeon, a subsidiary of Sinochem Holdings, has a plant in Egypt that actively practices green space protection and employee care. It has opened up green landscape spaces within the factory for employees to use as a leisure place after work. Meanwhile, for the long-term maintenance and sustainable development of the green landscape spaces, Prometeon has also invested money in improving the factory's irrigation system.



Using financial power to support high-quality development of the agricultural industry

132 billion yuan
Provide loan support for the agricultural sector within the Group

The new image of Wuhan, a green city that benefits the people

Idle open space converted into "green landscape"

Topic 2

Win-All High-Tech Planting Base in Nanchang County, Jiangxi Province

Regenerative Agriculture, Circle of Life

Extreme weather caused by global warming is leading to many negative effects, including crop failure, abandoned farmland, and displaced farmers. The future of agriculture depends on sustainable development. Regenerative Agriculture, which focuses on protecting soil health, is becoming a new trend in the sustainable transformation of global agriculture. It is highly consistent with the direction of green and high-quality development of modern agriculture that aims for multiple goals, such as food security, environmental protection, tackling climate change, and rural revitalization.



Concepts and Paths

Regenerative agriculture focuses on the genuine regeneration of the earth's soil and ecosystems. Regenerative agricultural practices help improve the resilience of the entire ecosystem, emphasizing that the health among soil, plants, animals, humans and the environment forms an indivisible whole, including integrated livestock-crop systems (ILCS), cover crops, no-till or reduced-till techniques and diversified production, data-enabled precision agriculture, etc. Regenerative agriculture combines the benefits of new technologies and modern agronomic science with traditional agricultural practices. It is a results-based grain production system that cultivates and restores soil health, protects climate, water resources and biodiversity, and has the potential to increase agricultural productivity and profitability.

Soil Improvement	Innovative Seeds	Microbial Diversity	Integrated Pests Management (Ipm)
Digital Tools	Water Use Efficiency	Conservational Tillage	Encircled Industry Chain



Practices and Effects

(I) High-Tech Seeds: The Path to Build a Greet Seed Power by Revitalization of the Seed Industry

The seed business of Syngenta Group, a subsidiary of Sinochem Holdings, has a long history of more than 150 years. To promote the sustainable development of the global seed value chain, Syngenta Group has continued to cultivate seed products that are both heat-resistant and cold-resistant with greater resilience using innovative technologies.

Leading insect-resistant and synergistic biotechnological trait

The Spodoptera frugiperda is one of the world's top ten plant pests. Its larvae particularly like to eat corn leaves. Once the crop is invaded by the larvae, the yield of the corn will decrease by 20%-30%, and in some severe cases, it will cause a total crop failure. Since migrating from Myanmar to Yunnan in December 2018, the fall armyworm has rapidly spread to more than 20 provinces in China in 2019, threatening the main corn-producing areas. Syngenta Group has developed a corn trait MIR162 with biological technology, which can effectively prevent the fall armyworm from eating the crop. **Globally, MIR162 is currently the only corn trait that shows 100% resistance to the fall armyworm and can replace up to 4 pesticides.**

Regular Corn	Sygenta 901 Pest Resistant Corn
	

Tomato brown rugose fruit virus (ToBRFV) is one of the main viruses that has harmed tomato production in recent years, causing an average loss of 20% to 30% of the harvest in tomato plantations, and even a total crop failure in severe cases. **Syngenta Group has implanted anti-ToBRFV components into a variety of tomato seeds to cultivate new varieties with virus resistance. It has also shortened the cultivation time from ten years to two years, helping various stakeholders respond to the threat posed by the ToBRFV virus more rapidly.**



On November 18, 2023, the Rice Seed Supply Chain Innovation Center of Syngenta Group, a subsidiary of Sinochem Holdings, was officially put into use. It is currently the industry's leading rice seed processing plant, **which can realize the full digitization and visualization of seed breeding, processing, and circulation, reducing the amount of labor cost by 90% compared to traditional processes, increasing processing efficiency by 10 times, and providing seed producers with regional remote sensing, precision meteorology, precision crop protection, and farm management services.** After the innovation center was put into use, it will effectively reduce seed processing, logistics costs and market risks, improve regional seed supply capabilities, and enhance technical service standards.

The race to save ketchup: Growing tomatoes for an increasingly warmer world

Shortening of tomato seeds cultivation time
From ten years to two years

Rice Seed Supply Chain Innovation Center put into use

10 times
Processing efficiency improvement

(II) Green Innovative Products - the Cornerstone for Sustainable Agricultural Development

Syngenta Group, a subsidiary of Sinochem Holdings, offers a broad product portfolio, providing growers with comprehensive solutions for managing pests and diseases, responding to climate change, improving nutrient utilization and protecting soil health.

Introducing innovative products into China to help farmers increase yield and improve quality

It is currently the only nematicide in the market that can provide “0” day protection

NELVIUMTM helps Indonesian farmers fight against Chilo suppressalis

At the end of 2023, Syngenta Group's new nematicide technology, Cleo®, was officially launched in China. **The core ingredient of Cleo®, TYMIRIUM®, is a highly effective innovative compound developed by Syngenta Group over 16 years. It is currently the only nematicide in the market that can provide "0" day protection.** It has a broad spectrum of nematicidal activity and is highly effective in preventing and controlling fungal diseases caused by Fusarium. It also protects soil biodiversity and improves crop quality and yield. Compared with traditional pesticides such as fosthiazate, it can increase the yield of crops such as wheat by 14% and reduces the dosage by 96%.



Indonesia is the world's third largest rice producer, but the country's rice cultivation is threatened by Chilo suppressalis. **NELVIUMTM, launched by Syngenta Group in Indonesia, is based on pheromone technology. It releases odors to interfere with the mating behavior of Chilo suppressalis, effectively controlling pests and helping to protect the diversity and richness of beneficial insects and pollinators.** With the help of NELVIUMTM's significant and lasting protective effect, rice farmer Indra Laksman's rice fields have a bumper harvest year.



Using innovation to protect every acre of farmland

Syngenta Group's Miravis® fungicides aim to provide growers with a comprehensive approach to maximize crop yields, optimize crop quality, and minimize environmental harm. The patented compound contained in the product, ADEPIDYN® technology, has extremely high activity against wheat fusarium head blight. In May 2023, Anhui Province was hit by continuous rainfalls, and some wheat ears were covered with fungi, causing the ears to turn black, and the disease prevention and control situation was severe. At the Miravis® benchmark demonstration farm in Yingshang County, the wheat grown with Miravis® was golden in color, expecting a good harvest. The difference in the field looks like piano keys.



In May 2023, three products of Syngenta Group were included in the "Green and High-quality Pesticide Products" in 2023, i.e. two products of Syngenta Crop Protection, namely Miravis® and Miravis® Duo and one product of ADAMA Maxim, namely Nimit. A total of 13 products of Syngenta Group have won this honor so far.



Included in the "Green and High-quality Pesticide Products" in 2023

(III) Protecting Soil Health - the Only Way to Achieve Sustainable Transformation

Soil health carries the mission of ensuring safe supply and promoting the health of all things. Syngenta Group, a subsidiary of the Company, actively promotes regenerative agriculture, restores and promotes soil health, and improves the productivity and profitability of farmland.

Make every inch of cultivated land fertile soil for harvest

Helping farmers to increase their net income by

10%+

Targeted solutions to soil salinization

In order to systematically solve the problem of soil degradation, Syngenta Group took the lead in launching the "HOPE Soil Health+" strategy, which proposed solutions for "food crop production based on farmland management" through the implementation of six strategic initiatives, i.e. building a soil health evaluation indicator system, jointly building a soil health R&D and achievements transformation platform, gradually improving soil health products and technology systems, innovating soil health service channels, creating a service platform that combines online and offline services and an open soil health ecosystem, and cultivating excellent soil health brand.

Penglai in Shandong province is one of China's apple producing areas with a long history of apple cultivation. Due to the lack of scientific planting and management for many years, some orchards face problems such as soil acidification, lack of organic matter content, poor soil microbial community structure, and nutrient imbalance. Through the HOPE soil health testing, the problems were accurately discovered, **and the comprehensive solution targeting "soil health + efficient nutrition" was implemented systematically**, which significantly alleviated the acidification of the orchard soil, optimized the pH value of the soil rhizosphere by more than 0.5, significantly increased the organic matter content, and balanced the nutrients. Finally, the fruit trees regained vitality, **helping farmers to increase their net income by more than 10% and further realizing the sustainable use of arable land.**



Sinochem Holdings has taken multiple measures to actively explore new technologies and business models for saline-alkali land management and comprehensive utilization. By integrating the company's comprehensive advantages in environmental science (soil management, etc.), life science (seeds, plant nutrition, etc.), and material science (deep processing of crops, etc.), it has accumulated rich experience in saline-alkali land management and screening and cultivation of crop varieties suitable for saline-alkali land, and formed superior products and services capabilities. **The research on high saline-alkali tolerance was rated as one of the top ten domestic science and technology news by China Media Group (CMG). The Company has started to carry out treatment of 41,000 mu (2,733 hectares) of saline-alkali land (paddy field) in Baicheng City, Jilin Province. The improvement and restoration of the land will be completed in 3 to 5 years, which will add 33,000 mu (2,201 hectares) of 10th grade paddy fields to Jilin Province and increase rice production by 16.5 million kilograms per year. It is also treating 36,000 mu of saline-alkali land (upland field), which is expected to be completed in 3 years, and will increase corn production by 21.6 million kilograms per year.**

Planting cover crops improves soil health in winter

Sinochem Agriculture MAP explores the high-efficiency crop rotation of two-year triple cropping with "forage triticale + corn" in accordance with local light and heat resource conditions in Pingyao, Shaanxi province, which are not sufficient to support double cropping in one year. The introduction of cold- and disease-resistant Mexican triticale varieties effectively solves the problems of partial depletion of soil nutrient depletion and breeding of pest and disease caused by continuous cropping and alleviates soil wind erosion by covering the soil with green crops in winter. By making full use of the winter fallow fields, an additional season of forage is harvested, which can increase the yield while also increasing the multiple cropping index and carbon sequestration capacity.



Conservational tillage refers to the one-time completion of sowing, fertilization and suppression operations under the condition of crop straws or root stubble covering the surface, reducing soil erosion and mechanical disturbance, protecting and cultivating the soil, and reducing farmland carbon emissions. Compared with traditional farming methods, it can reduce 2 to 3 operational steps, save planting costs, increases harvests, and improve farmland environment and soil health. **In 2023, Sinochem Holdings' "Runtian" project involving conservational tillage of winter wheat was applied in farmland with a total area of about 16,000 mu (about 1,067 hectares).**



Win-All High-Tech Seed and the Hefei Institutes of Physical Science, Chinese Academy of Sciences, jointly bred a brittle-stalk rice - "Kecuijing No. 1", which features "harvesting both rice and straw, brittle but not falling over easily", and helps to return straw to the field, shortens the natural degradation time in the field, becomes a green fertilizer, and helps to alleviate the environmental pollution problems caused by straw burning, making it a truly important practice of sustainable and high-quality development of green agriculture. At the same time, the straw can also be used as feed for sheep and cattle, allowing it to be removed from the fields and thus eliminating the adverse effects of returning all straw to the fields from the source.

Conservational tillage brings benefits to farmers

1,067 hectares

The total promotion area of winter wheat conservation tillage in "Runtian" project of Sinochem Holdings is about

Returning straw to the field, integrated livestock-crop systems (ILCS)

(IV) Smart Agriculture: An Important Measure for High-quality Agricultural Development

Smart agriculture is a new form of agricultural development. It is an endogenous driving force for further emancipating the productive forces and stimulating sustainable agricultural transformation. It can help China improve the modernization and digitization of agriculture and rural areas and promote the construction of digital villages. The construction of modern agriculture is full of challenges, however, by developing innovative policies that support farmers in transitioning to regenerative agriculture, it can surely lead to a future agriculture that feeds the world while protecting the planet.

Innovation accelerates transformation, regenerative agriculture is feasible

Promoting smart irrigation and improve water utilization efficiency

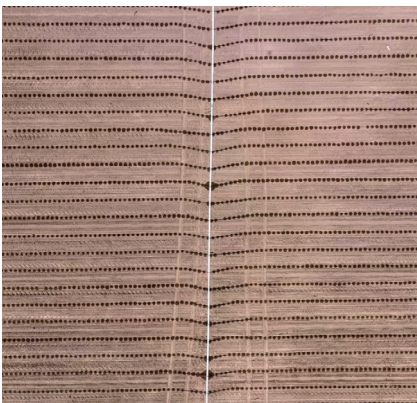
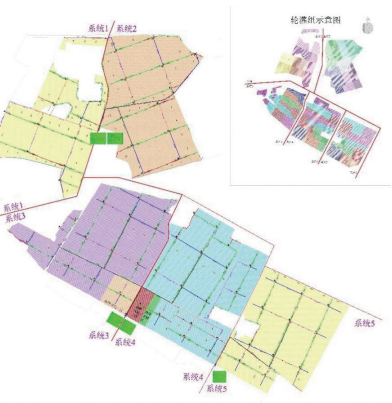
25.97 %

The water resource utilization rate of MAP service farmers is higher than that of ordinary farmers on average

Syngenta Group has one of the strongest innovation pipelines in the industry, investing approximately US\$2 billion in research and development each year to help farmers accelerate their transition to regenerative agriculture and carry out practices on a large scale. INTERRA®Scan can provide high-resolution soil mapping services, using more than 800 data points to assist growers in fully understanding soil conditions, providing growers with detailed information on soil texture, nutrient content and carbon content. It helps growers optimize the ability of crops to absorb nutrients and capture carbon and minimize the use of chemical inputs. Such innovative products are designed specifically for farmers to make regenerative agriculture feasible and profitable for farmers.



In 2023, Sinochem Agriculture MAP in Inner Mongolia explored the EPC+O model, adopted low-flow drip irrigation and intelligent control irrigation systems to improve irrigation uniformity, and achieved water savings of up to 30%-50% compared with traditional small-scale drip irrigation. At the same time, the uniform and efficient irrigation can also lead to a yield increase of about 15%. According to the MAP Green and High-quality Development Report 2023, the water resource utilization efficiency of farmers served by Sinochem Agriculture MAP is 25.97% higher than that of ordinary farmers on average.



Sinochem Agriculture MAP collaborates with China Seed Group, improve the quality and efficiency of seed production. The digital tool "Smart Seed Production" is developed to support China Seed Group in the scientific site selection for seed production bases, systematizing order management, standardizing the seed production processes, ledgerizing purchases and warehousing, and accumulating valuable data. Through the precise data analysis of "Smart Seed Production", China Seed Group can quickly adapt to the optimal seed production bases and seasons to speed up the production and marketing of superior new varieties. At the same time, through the systematic accumulation of data such on soil and climate environment of the seed production bases, the execution of the production plan, and the yield performance, the seed production plan is continuously optimized to improve the seed production yield and quality of the bases.



The "Bin Buster" project implemented by Syngenta Group is used to assess the soil health of hundreds of acres of farms in the North America. The project aims for five goals: ① establishing a soil health baseline, ② ssuming data requirements and digital technologies, ③ evaluating the role of soil genome sequencing, ④ monitoring and modeling diseases, and ⑤ Determining optimum nitrogen and fungicide rates. It helps growers make decisions about seed selection, crop protection, nutrients, yields, and profitability, and understand the relative health of the land in different seasons. The project promotes sustainable farming practices and provides new insights, it's all in keeping with Syngenta Group's emphasis on regenerative agriculture.



"Smart Seed Production" digital tool realizes the digitization of the entire seed production process in the field

"Bin Buster" project uses digital tools to improve soil health

(V) Making Dialogue with the World - Jointly Promoting Sustainable Agricultural Development

Syngenta Group actively participate in dialogues on global challenges, including but not limited to food security, climate change and biodiversity, so as to share expertise, explain the company's contributions and perspectives, and contribute to the sustainable development of the global agriculture.

The first “Soil Health & Regenerative Agriculture” forum

On December 20, 2023, Syngenta Group and the National Institute of Green Agricultural Development jointly held the first "Soil Health and Regenerative Agriculture" forum in Beijing. Focusing on farmland protection, soil health, regenerative agriculture and other aspects, the participants of the conference put forward suggestions on how to ensure food security, promote high-quality agricultural development, and promote rural revitalization.



Establishment of the Center for Agrifood Sector Sustainability & Climate Action (CASCA)

On November 2, 2023, the Center for Agrifood Sector Sustainability & Climate Action, jointly initiated by the World Business Council for Sustainable Development, the World Resources Institute, China Agricultural University and Syngenta Group, was established. The center is committed to promoting the application and exchange of technologies in agrifood sector to address climate change from the perspectives of research, practice and promotion, and to empower enterprises and industries to achieve low-carbon and sustainable transformation through collaborative value.



The first regenerative agriculture demonstration base jointly built by Syngenta Group and Nestlé China, Shandong Huantai MAP Sinochem Modern Agriculture Demonstration Farm, has ushered in its first harvest season for "low-carbon wheat". The farming principles of regenerative agriculture were strictly followed in the entire planting process and a no-till sowing method was adopted to achieve better soil carbon sequestration. **The yield of "low-carbon wheat" per mu is 624.6kg, which is about 7.5% higher than that of surrounding farmers. The greenhouse gas emissions generated are about 30% lower than those of traditional planting methods,** achieving both increased yield and reduced carbon emissions.



The first harvest season of "low-carbon wheat" at the regenerative agriculture demonstration base

7.5 %

Compared with surrounding farmers, the yield per mu increased

30 %

It produces fewer greenhouse gas emissions than conventional farming

FAO Kenya introduced Syngenta Group's regenerative agriculture approach and created Agventure, an agricultural venture capital company dedicated to leading and promoting the transition to regenerative agricultural practices. Currently, Agventure's member farms are in four counties in Kenya: Nakuru, Laikipia, Meru and Isiolo, covering more than 10,000 hectares (24,700 acres), all concentrated in the central and southern regions of the country. By transitioning to regenerative agriculture, Agventure helps alleviate water loss (especially critical during droughts and floods), fosters healthier soil, and increases crop resilience. Farmers can reduce planting costs and save money on tractor fuel.



Kenyan farmers use regenerative agriculture to improve yields and sustainability

Topic 3

Sinochem Quanzhou Petrochemical Base

Industrial Upgrading, Collaborative Sharing

In today's rapidly changing global economic arena, new quality productive forces are becoming a key driver for enterprises to keep growing and leading future development. Cultivating new quality productive forces and enhancing the overall strength of the industrial chain have become an important driver of the Company's high-quality development, while business integration and the mutual benefit and symbiosis of industry players have become an important cornerstone for the sustainable development of the Company. Sinochem Holdings firmly seizes this historical opportunity, and by focusing on developing new quality productive forces, it strives to continuously improve the resilience of the industrial chain and promote healthy and coordinated development of the industry.



Aiming to build itself into a world-leading chemical conglomerate, Sinochem Holdings prioritizes over its core businesses and advantageous industry chain, constantly cultivates new quality productive forces, improves the core competitiveness of its products, builds a service solution system for the entire industry chain, continues to carry out extensive cooperation, actively promote collaborative industrial upgrading, leads the industry growth with practical actions and makes every effort to build a modern industrial system.

(I) Collaborative Industrial Upgrading

Sinochem Holdings is accelerating the construction of a new development pattern, speeding up the upgrade of industry parks and bases, and sparing no efforts in building an industrial cluster system. The Company focuses on the construction of four large-scale integrated bases and is simultaneously building multiple specialized and characteristic bases to promote industrial upgrading in all aspects. In 2023, it further ramped up raw material supplies and promoted the construction of downstream projects on the basis of the existing upstream and downstream integrated industries in Quanzhou, Lianyungang, Liaocheng and other bases, aiming to achieve coordinated industrial development.

Building a full industry chain of epoxy resin

In November 2023, Sinochem International, a subsidiary of Sinochem Holdings, launched commissioning of a 600kt/a PDH unit, the first phase of its C3 project, marking the full operation of Sinochem Lianyungang Circular Economy Industrial Park's integrated facilities of the entire epoxy resin industry chain "PDH-propylene-phenol/acetone&BPA/ECH-epoxy resin".



In addition, the wharf of the industry park has successfully started foreign trade business, fully opening up the sea routes for the import and export of raw materials and finished products and providing important logistics support for the first phase of the C3 project.



(II) Carrying out Extensive Cooperation

Sinochem Holdings explores opportunities for cooperation with external partners and actively conducts exchanges and cooperation with local governments, well-known domestic and foreign companies, leading companies in the industry, upstream and downstream companies in the industrial chain, and key universities and research institutes to build a cooperative "ecosystem", share new development opportunities, and jointly seek a new future of mutual benefit.

In April 2023, Sinochem Holdings participated in an event hosted by SASAC to promote central SOEs in deepening pragmatic cooperation with Hebei Province to jointly promote the construction of Xiong'an New Area, and signed cooperation agreements with the Hebei Provincial Government and the Xiong'an New Area Management Committee. The Company will cooperate with the local government in new energy, new materials, modern agriculture, petrochemical energy, industrial finance, urban operations, business consulting and other business areas to support the decentralization of Beijing's urban functions and the construction of Xiong'an New Area.



In December 2023, the new comprehensive R&D center ELISE (European Lab for Innovation, Science & Expertise) of Bluestar Adisseo, a subsidiary of Sinochem Holdings, was officially and put into use. The ELISE center has a 2,000 square meter laboratory and a 2,000 square meter office area, which can accommodate 100 people to carry out R&D work in the fields of new chemical technology, process optimization and engineering technology, nutritional analysis and research. After the center was put into operation, it will form the Company's global R&D China-Europe dual-pillar innovation synergy system together with RICA (Research & Innovation China Adisseo).

Empowering Xiong'an New Area and jointly building a city of the future

Launching the ELISE Center to promote innovation breakthroughs

(III) Helping the Industry Grow

Sinochem Holdings proactively plays its role as an industry leader, actively joins industry associations, participates in industry seminars and exchange activities, carries out co-construction work in the industry, promotes resource sharing and complementary advantages, and works together with members of the organization to create greater social value.

The first blue book on seed industry chain in China issued

In November 2023, the Blue Book on the Development of Modern Industrial Chain of Crop Seed Industry in 2023, which was mainly compiled by Sinochem Holdings, was released at the Seed Industry Development Cooperation Forum of the 6th China International Import Expo. With the goal of building a research system for the seed industry chain and promoting the high-quality construction of the modern seed industry chain, it focuses on the study and judgement of the direction of seed industry development, the analysis of the development process of the seed industry chain, and the exploration of the innovative path of the entire industry chain, and provides advice for China's seed industry to enhance its resilience and competitiveness.



With more than 60 years of experience in the industry, CNCIC releases a number of research reports to help the industry develop

China National Chemical Information Center (CNCIC), a subsidiary of Sinochem Holdings and a think tank specialized in chemical industry, has been carrying out in-depth research on the chemical industry for more than 60 years. In 2023, CNCIC, in conjunction with China Circular Economy Association, Guangzhou Chemical Trading Center, Beijing University of Chemical Technology and other institutions, drafted and released a number of industry research reports, such as the High-end Polyolefin Industry R&D Technology Development Trend Report, the White Paper on Petroleum and Chemical Industry Patent Trend, the 2023 Blue Book on China Petroleum and Chemical Industry Circular Economy Development, and Towards 2035: Research on the Development of China's Fine Chemical Industry, etc., demonstrating CNCIC's industry data analysis capabilities and industry research insights, and providing important support for the future development of the chemical industry.



(IV) Serving Chemical Industry

By closely studying the needs of the chemical industry, Sinochem Holdings has upgraded its product structure from single products to full industry chain aggregation, and from providing products to providing comprehensive solutions. It has set up production bases, R&D facilities and sales networks in more than 150 countries and regions around the world, and is committed to providing better products and services to its global customers.

Sector	Introduction to Main Products and Services	Cases
<div>Clothing</div>	The Company focuses on the functionality and innovation of clothing fabrics, footwear products and leather, textile, and maintenance solutions to meet diverse clothing needs.	The PTFE dispersion resin produced by the Company can be used to make expanded film for outdoor jacket fabrics and is known as "breathable fabric";The PA6 produced by the Company's subsidiary Luxi Chemical can be used to make swimwear, socks, sportswear, ski jackets and other products.
<div>Food</div>	The Company pays close attention to agricultural health and food safety and contributes to the sustainable development of global agriculture through offering specialized solutions in agriculture and animal nutrition.	Syngenta Group, a subsidiary of the Company, adheres to the concept of "only when crops eat well can humans eat better" and continuously upgrades products such as SeedCare products, biological agent, ecological fertilizers and biostimulants. In 2023, 16 crop varieties of Syngenta Group were included in the "National Catalogue for the promotion of excellent crop varieties in China", and 9 varieties were included in the "2023 National Agricultural Leading Varieties in China". Bluestar Adisseo, a subsidiary of the Company, helps ensure food security with innovative animal nutrition technologies and products.
<div>Housing</div>	The Company is committed to helping build beautiful, green and livable urban buildings. By producing high-performance construction chemicals, formulas and materials, it improves the aesthetics, comfort, greenness and durability of buildings and infrastructures. By developing environmental restoration projects such as wastewater treatment and soil remediation projects, it contributes to building a beautiful earth.	The Company's composite (PU) pultruded products are used to produce window frames, door frames and insulation profiles, which significantly reduce weight while improving the mechanical strength and thermal insulation properties of the products. Shengnai® PVF surface materials are widely used in interior walls, ceilings and cabinet surfaces in various places such as hospitals, schools, shopping malls, and residences. The "Jinleng" brand refrigerant developed by the Company's subsidiary, Sinochem Lantian, is used in refrigeration units in large-scale landmark building projects such as the Beijing Daxing Airport and the Hong Kong-Zhuhai-Macao Bridge.

Sector

Introduction to Main Products and Services

Cases

Transportation



The Company uses cutting-edge technologies to continuously improve the performance of transportation products such as plastic and rubber products, providing high-quality products to meet people's diverse travel needs.

Sinochem's Aeolus Tire has made technical breakthrough in developing the world's largest radial giant tire 59/80R63, achieved mass production and carried out vehicle testing. It has currently run 15,000 kilometers with excellent performance. The company also completed the development of a full range of large-scale wide-body vehicle products 480/90R25, 480/95R29, 505/95R29, and 18.00R25, as well as the technical selection and matching of new models of key OEMs. The industrialization of key technologies for wide-body vehicle series products won the third prize for scientific and technological progress in Henan province in 2023.

Equipment



The Company facilitates the development and application of advanced equipment such as plastic machinery, rubber machinery and chemical equipment to meet all production and living needs.

In April 2023, the first domestic and world's largest shearing type GN700 internal mixer independently developed by Yiyang Rubber Machinery, a subsidiary of Sinochem Holdings, was successfully launched. This product was the first to adopt high-voltage AC permanent magnet drive and servo hydraulic technology, successfully realizing the localization of important components of the hydraulic system, and solving more than 10 technological problems such as harmonic wave control, rubber temperature control, and dust overflow. A GN700 can mix up to 570-600k tons of rubber, the production efficiency is 1.8-3 times of that of small and medium-sized internal mixers, with significant advantages in power consumption, floor space, investment cost, etc.

Pharmaceutical



The Company focuses on the pharmaceutical and nutritional health industries, producing nutrient raw materials, medical beauty and health products, medicines and other products to help improve the health of people and enhance their quality of life.

In 2023, Elkem Silicones, a subsidiary of Sinochem Holdings, relied on its rich experience and innovative technology in the field of 3D printing silicone materials and cooperated with the First Center of External Ear of the Plastic Surgery Hospital of the Chinese Academy of Medical Sciences to launch a silicone solution for 3D printing cartilage teaching aids. This solution enables the silicone soft rib teaching aids to have excellent fidelity and biomechanical properties similar to natural ribs, which can effectively help doctors improve preoperative training and simulation effects.

Finance



The Company's financial business covers trust, financial leasing, life insurance, industrial funds, commercial factoring, insurance brokerage, securities investment funds, financial futures, comprehensive business services and other fields. It has cultivated "FOTIC", "Far East Horizon", "Manulife-Sinochem", "Lion Fund" and other brands with strong competitiveness and influence in the industry.

In 2023, Sinochem Commercial Factoring, a subsidiary of Sinochem Holdings, officially launched the "Oil e-Loan" product customized for Sinochem Petroleum's sales and supply chain customers, which can meet customers' oil production funding needs in one stop.

The World's Largest Radial Giant Tire





D1

Environmental



Environmental Friendliness and Green Circulation

Sinochem Holdings always maintains strategic focus and firm confidence in following the path of green and low-carbon development. It continues to deepen and improve the top-down design of environmental management, sticks to energy conservation and carbon emission reduction, focuses on improving quality and efficiency, and does a good job in reducing pollution and carbon emissions throughout the entire process, facilitating the Company's gradual transformation to a low-carbon, zero-carbon, and waste-free model, and is committed to making its own contributions to the global low-carbon transformation.

(I) Addressing Climate Change

1. Risk Identification and Prevention

Climate Risk Identification

Based on the established climate change risk management framework and risk response mechanism, Sinochem Holdings identifies relevant physical and transition risks, and formulates response plans and measures to reduce the impact of climate risks.

Physical Risks			
Risk Type	Risk Identification and Description	Sinochem Holdings' Response Plans	
Acute	Typhoon Typhoons may cause damage to production facilities in some areas, channels, and problems such as employee personal safety.	Adhere to the bottom line awareness and red line thinking on environmental risks, implement the requirements of the FORUS system, and systematically build a full-process, multi-level environmental risk control mechanism. Carry out in-depth identification of risk factors, and conduct risk assessments from different tenses, different working conditions, and different analysis methods. Formulate control measures based on the risk control level, and carry out risk control from the whole life cycle and hierarchical management. Enterprises with large and above environmental risks shall update their risk lists annually (including the effectiveness assessment of risk control measures) and conduct compliance reviews of laws and regulations per year.	
	Extreme rainfall/Flooding Extreme rainfall or floods may cause damage to production facilities in some areas or factories, leakage of raw chemical materials, and cause harm to the environment and public safety.	Strengthen the top-down design of ecological and environmental protection, and release Sinochem Holdings' Action Plan for Deepening Ecological and Environmental Protection in the 14th FYP Period, Sinochem Holdings' Action Plan for Carbon Peaking and Sinochem's Contingency Plan for Environmental Emergencies.	
	Heat/Drought Extreme weather such as high temperature and drought has caused a reduction in grain production, operational difficulties for businesses, rising costs, and employees' safety hazards such as heat stroke, among other related issues.	Sinochem Holdings continues to increase the introduction of high-quality germplasm and intensify efforts in independent cultivation, accelerates the promotion of the "good seeds, good fields, good methods" MAP model, and strives to improve the efficiency of various resources such as land, water, people, fertilizers, and pesticides. Sinochem Environment Holdings actively develops and applies comprehensive saline-alkali land utilization technologies to achieve the transformation of barren saline-alkali land into high-yield rice fields. The Company also actively promote soil testing and formulated fertilization technology. Sinochem Agriculture, a subsidiary of Sinochem Holdings, carries out MAP strategy and implements localized soil testing and formulated fertilization to reduce fertilizer input, supplement medium and trace elements, enhance plants' resistance to stress, and achieve sustainable goals.	
	Extreme cold/Freezing The extreme cold weather has caused damage to corporate production facilities, increased production and operating costs, and led to poor traffic conditions, affecting the stability of the supply chain.	Establish Sinochem Holdings' Supplier Management Measures to establish a unified supplier management platform and supplier database of the Company in accordance with the principles of global sourcing, dynamic management, resource sharing, and win-win cooperation. Establish a proactive supplier resource search mechanism, conduct market research regularly or irregularly, collect and organize market information, and establish and continuously improve the supplier database and candidate supplier database.	
Chronic	Rising sea levels & Global warming Rising sea levels may shorten the life cycle of equipment in coastal areas and affect plant operations and personnel safety.	Environmental impact assessment and biodiversity impact studies are conducted during the early feasibility study and site selection stages of projects.	

Transition Risks		
Risk Type	Risk Identification and Description	Sinochem Holdings' Response Plans
Policy & Regulatory	Carbon quotas and carbon border taxes The power generation industry has been incorporated in the national carbon market the EU has proposed a new battery trading bill and mechanisms such as CBAM, which may result in additional production and operation costs in the future.	According to its FORUS system management framework, Sinochem Holdings continued to improve the ecological environment protection system, and has promulgated Sinochem Holdings' Energy-Saving and Low Carbon Management Measures, Sinochem Holdings' Management Standards for Carbon Emissions Monitoring, Statistics and Reporting, Sinochem Holdings' Carbon Asset Management Standards, Sinochem Holdings' Management Standards for Environmental Monitoring System Operation and other regulations to further refine the management responsibilities and requirements for carbon inventory, carbon data management, and online monitoring system operation, so that data can be monitored, accounted for, and traced.
	Energy consumption indicators and emission reduction targets Sinochem Holdings' enterprises are widely distributed, and in different regions, different local energy consumption indicators and emission reduction target requirements are adopted.	Through process optimization, replacement with high-efficiency energy-saving equipment and other measures, the Company has tapped into the potential for energy conservation and carbon emission reduction. It has executed 124 energy-saving and carbon emission reduction projects by the end of 2023. The Company also carried out energy efficiency benchmarking and energy efficiency "leaders" actions on key products such as crude oil processing, ethylene, synthetic ammonia, and caustic soda, continued to carry out energy management system certification for key energy-consuming enterprises, and steadily increased energy efficiency. Up to now, the comprehensive energy consumption per unit product of crude oil processing, ethylene, synthetic ammonia and caustic soda are all lower than the industry baseline level, and some products have reached the benchmark level.
	Environmental information disclosure requirements Disclosure of climate and environmental information is mandatory in accordance with the requirements of regulatory agencies such as the SASAC and stock exchanges.	Sinochem Holdings released the first environmental, social and governance (ESG) report in 2023, showing the Company's performance in responding to climate change, environmental protection and pollutant treatment from the perspectives of green transformation, low-carbon practice, climate change response, green circulation, environmental improvement, and resource sharing. It took the lead in formulating and publishing the first group standard in China for evaluating the carbon neutrality potential of the chemical industry, the Guidelines for Carbon Neutrality Evaluation of Chemical Enterprises. The Company also kicked off the formulation of the group standard, the Guidelines for ESG Compilation of China's Petrochemical Industry, to support the petrochemical industry in conducting ESG disclosure.
	Technological innovation R&D risks The increased costs of technological innovation R&D to address climate change and the energy supply crisis, etc.	Increase the efforts in innovation and application of advanced energy-saving technologies, introduce advanced control technologies, use information technology to further optimize process operation indicators, increase the yield of high value-added products, and reduce energy consumption per unit product. Efforts have been made to tackle key common core green and low-carbon technologies in materials and agriculture sectors. Shenyang Research Institute of Chemical Industry (SYRICI), Bluestar Engineering, Sinochem International, Southwest Research & Design Institute of the Chemical Industry (SWRDICI), Syngenta Group, KraussMaffei and other enterprises have made new technological breakthroughs in improving soil ecological health, clean production of pyridine heterocyclic products, large-scale pressure swing adsorption gas separation, research and development of high-efficiency and low-toxic fungicides, and recycling of plastics.
Market-related	Supply and demand risks Market players' awareness of green and low-carbon development is rising, and they tend to use green, circular and harmless products.	Sinochem Holdings integrates green technology and green concepts into the entire life cycle management of R&D, design, production and sales of products and services. For example, Syngenta Group continues to strengthen the R&D of green and high-quality pesticide products. The Chemical Business Unit, Chlor-Alkali Business Unit and China National Bluestar explores the certification of green and low-carbon products and services. China Jinmao intensifies efforts in the promotion and application of green products to provide customers with more and better choices for green and low-carbon procurement and consumption. Focus on new industry growth points such as advanced materials, new energy, and specialty chemicals, and continue to promote the transformation and upgrading of the industrial structure; actively promote the use of clean energy such as wind power and photovoltaics. Carry out the construction of the Company's carbon footprint pilot system, focus on 10 key industrial chains such as silicone, fluorochemicals, epoxy resin, lithium battery materials, and electronic chemicals, and carry out the formulation of product carbon footprint enterprise standards; focus on meeting customer needs, e.g. some local policies require the Company to carry out the accounting of carbon footprint of 11 key products and establish its own carbon footprint database.
	Image risk The market has higher requirements for corporate image and favors environmentally friendly companies such as green and low-carbon ones.	Sinochem Holdings sticks to ecological protection, focus on environmental design and sustainability in product R&D, develop and promote environmentally friendly products, continue to carry out ecological compensation in the production and operation process, and carry out ecological governance and restoration in an orderly manner during resource exploitation, so as to promote harmonious coexistence of man and nature through practical actions.

2. Climate Management Mechanism

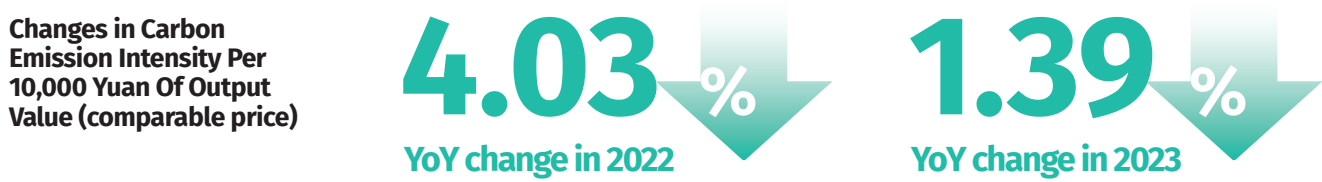
In 2022, the Company formulated the Action Plan of Sinochem Holdings on Carbon Peaking and each tier-2 company formulated low-carbon development plans and implementation plans to establish a top-down "1+1+14+N" low-carbon planning system (i.e.1 "China National Chemical Corporation Carbon Peaking Action Plan", 1 Action Plan of Sinochem Holdings on Carbon Peaking, 1 Strategic Plan of Sinochem Holdings on Low-carbon Development, 14 Tier-2 Companies' Low-carbon Development Plans and Implementation Plans and N Special Studies for System Support), fully integrating the carbon peaking and carbon neutrality goals into Sinochem Holdings' development plan.

Under the leadership of Sinochem Holdings' carbon peaking and carbon neutrality leadership group, the Company fully promoted the implementation of the Action Plan of Sinochem Holdings on Carbon Peaking in 2023, **formulated and released the Suggestions on Key Tasks and Division of Labor and Arrangements in Carbon Peaking Actions, clarified five key tasks and promoted the orderly implementation of Sinochem Holdings' carbon peaking actions.**

Category	Climate Management Related Responsibilities	Progress Made in 2023
Headquarters Responsibilities	<div>1. Organize the formulation and implementation of relevant management systems, standards and processes.</div> <div>2. Regularly carry out situation forecasting and analysis, and put forward countermeasures and suggestions on major issues.</div> <div>3 Research, formulate and improve the Company's low-carbon indicators, target responsibilities and evaluation and assessment system, and break down and implement the annual low-carbon work assessment indicators.</div> <div>4. Organize and carry out low-carbon benchmarking improvement, low-carbon technology exchange and promotion and application.</div> <div>5. Guide all affiliated enterprises to comprehensively and systematically improve low-carbon management, summarize good practices, and promote continuous improvement of low-carbon management performance.</div> <div>6. Supervise, guide and evaluate the low-carbon work of all directly affiliated subsidiaries, strategic business units and subordinate enterprises.</div>	<div>1. Strengthened the top-down design of ecological and environmental protection, released the Action Plan of the Sinochem Holdings on Deepening Ecological and Environmental Protection in the 14th Five-Year Plan Period, defining its ecological and environmental protection goals in the period, and comprehensively deepened low-carbon environmental protection work according to a clear timetable and roadmap; focused on key areas such as carbon assets and online environmental monitoring, compiled and released the Standards of Sinochem Holdings on Carbon Asset Management and other regulations.</div> <div>2. Carried out low-carbon and environmental protection training in 2023. 146 professionals from 115 units participated in the 2023 energy-saving and low-carbon training, studying the relevant policies and professional knowledge of low-carbon and energy conservation, and shared good practices and excellent project cases.</div> <div>3. Carried out progress assessment and revision of Sinochem Holdings' carbon peaking action plans, held low-carbon development strategy seminars, and invited internal and external experts to provide professional opinions on the construction of the carbon peaking management system, technical paths for carbon emission reduction, and optimization of the industrial structure layout.</div> <div>4. Released the Guidelines for the Preparation of Feasibility Study Reports for Engineering Construction Projects of Sinochem Holdings, requiring the Company to formulate the Carbon Emission Environmental Impact Assessment Method for Feasibility Studies of Engineering Construction Projects for key projects</div> <div>5. Through organizing activities such as the Energy Conservation Publicity Week, National Low Carbon Day and the first National Ecological Day, Sinochem Holdings launched the "Green and Low Carbon Action for All Staff" to publicize the relevant laws and regulations on energy conservation and carbon emission reduction and the achievements made in the area. In 2023, a total of 53 materials and more than 800 photos of various activities were reported.</div> <div>6. Energy efficiency targets are set for key products, and energy efficiency benchmarking is carried out. Key products (such as crude oil processing, caustic soda, etc.) have reached or exceeded energy efficiency baseline values, and some products have reached energy efficiency benchmark values.</div> <div>7. Invested in the construction of the headquarters' low-carbon management information system and Haohua Aerospace and other pilot enterprises' energy and carbon management system to complete the transformation of energy conservation and carbon emission reduction from "invisible, uncontrollable, and unreduceble" to "visible, controllable, and reducible", providing basic guarantees for the Company's carbon peaking and carbon neutrality actions.</div>

Category	Climate Management Related Responsibilities	Progress Made in 2023
Responsibilities of Directly Affiliated Subsidiaries and Strategic Business Units	<div>1. Actively practice the concept of green, low-carbon and circular development, formulate special plans and incorporate them into corporate development plans and annual plans, and establish and improve the energy-saving and low-carbon responsibility system at each level.</div> <div>2. Sign a letter of responsibility containing energy-saving and low-carbon indicators, and require its subordinate enterprises to fully transform, decompose and implement them to achieve the breakdown of energy-saving and low-carbon tasks at all levels.</div> <div>3. Establish and improve energy-saving and low-carbon organizations, designate departments responsible for supervising energy-saving and low-carbon performance, equip energy-saving and low-carbon staff as required, organize and implement energy-saving and low-carbon education and training, and enhance employees' professional capabilities.</div> <div>4. Responsible for energy-saving and low-carbon management of fixed asset investment projects, carbon asset management, energy-saving and low-carbon technology development and utilization, energy-saving and low-carbon monitoring and statistics, cultural publicity, etc.</div>	<div>1. Established and improved the Company's dual-carbon management and system, set up a dual-carbon leadership group, and established the dual-carbon leadership group office.</div> <div>2. Subsidiaries carred out mid-term assessment of low-carbon development plans and planning and assessment of key industry parks and zero-carbon and low-carbon parks.</div> <div>3. All 10 companies included in the national carbon market have fulfilled their obligations, with a total quota of 430,000 tons.</div> <div>4. All 10 companies included in the national carbon market have fulfilled their obligations, with a total quota of 430,000 tons.</div> <div>5. Steadily advanced the optimization of energy structure and actively promoted the use of clean energy such as wind power and photovoltaics. In 2023, Sinochem's enterprises at all levels utilized 3,214MWh of photovoltaic power and purchased green electricity and green electricity certificates totaling approximately 140,000MWh.</div> <div>6. Three products of Syngenta Group were selected as "green and high-quality pesticide products", and a total of 21 products have been certified, making it the company with the most relevant certifications in China.</div> <div>2. 17 products of Xinghuo Silicone and 4 products of Shandong Bluestar Dongda have obtained carbon footprint certification, laying a foundation for the companies to further expand the international market.</div>

3. Greenhouse Gas Emissions Intensity



4. Greenhouse Gas Emission Control Actions

Since the implementation of its action plan on carbon peaking, Sinochem Holdings has improved its organizational structure related to carbon peaking and carbon neutrality, its carbon emissions per unit of output value (carbon emission intensity) has gradually decreased, breakthroughs have been made in key low-carbon technologies, low-carbon projects have been steadily executed, and low-carbon capabilities have continued to improve. **In 2023, in China, Sinochem Holdings completed construction of 124 technical upgrading projects aiming for energy conservation and carbon emission reduction, achieving energy use reduction by about 160,700 tons of standard coal and reducing carbon dioxide emissions by about 442,500 tons.**

Sinochem Holdings’ Dual Carbon Actions in 2023

Establishment of The Sinochem Holdings Carbon Peaking and Carbon Neutrality Work Leading Group

Sinochem Holdings’ main leaders serve as team leaders, making overall deployment and systematic promotion of low-carbon development related work. Each strategic business unit established a dual-carbon work leading group, with the main leaders serving as the first responsible persons to organize and implement special tasks for low-carbon development.

Implement the Suggestions on Key Tasks and Division of Labor and Arrangements in Carbon Peaking Actions

Completed 21 key tasks in 6 areas

Break down the tasks of the carbon peaking action plan, develop carbon emission budgets, improve the low-carbon management system, accelerate the training of low-carbon talents, pilot carbon footprint management, strengthen low-carbon learning and training, carry out themed low-carbon activities, continue to carry out low-carbon publicity and promotion, strengthen external exchanges, actively participate in standard setting, strengthen the promotion of overseas corporate experience, continue to follow up on the progress of key projects, consolidate the Company's carbon emission data, monitor, evaluate and revise plans, formulate low-carbon and zero-carbon development plans for key bases, carry out carbon emission assessments, conduct carbon emission reviews of projects, conduct carbon emission evaluations in conjunction with audit projects, and promote low-carbon technology R&D and demonstration projects.

Carry out Carbon Compliance and Carbon Verification

All 10 companies affiliated to Sinochem Holdings included in the national carbon market fulfilled their tasks, with a total quota of 430,000 tons and a net expenditure of about 21.6 million yuan. The Company also carried out internal obligation coordination, reducing net capital outflow by about 12.68 million yuan.

Complete the Construction of Low-Carbon Management Information System Project

By promoting the construction of a low-carbon management information system across the group, online reporting of carbon emissions and data was achieved. Through intelligent means, the Company achieved the goals of clear base number, clear increase and decrease, accurate accounting, and comprehensive analysis of the carbon data, and realized vertical management and control of energy and carbon. **Based on more than 100 basic carbon emission accounting models developed, the carbon emissions of 276 companies included in the statistics were automatically calculated,** covering 8 major business segments, 80 sub-sectors, and accounting of more than 4,000 emission sources. The Company conducted online carbon inventory checking to achieve unified information management of carbon emissions in its subordinate enterprises at all levels and provided data guarantee.

Accelerate the Construction of Pilot Carbon Footprint System

In 2023, Sinochem Holdings carried out the pilot project of carbon footprint system construction, and formulated the gap analysis report of Sinochem Holdings on carbon footprint management benchmarking, the current situation and demand research and analysis report, 10 key industrial chains and products’ carbon footprint standards, the carbon footprint accounting report for 11 types of key products, which highly responded to the requirements of the NDRC’s Opinions on Accelerating the Establishment of a Product Carbon Footprint Management System.

- 1. 10 key industrial chains:** silicone, fluoro-chemicals, electronic chemicals, lithium battery materials, engineering plastics, specialty fibers, polymer additives, epoxy resins, tires, and chlor-alkali.
- 2. 11 types of key products:** polyvinylidene fluoride (PVDF), lithium hexafluorophosphate (LiPF6), ternary cathode material (NCM523), electrolyte, N-(1,3-dimethylbutyl)-N-phenyl-p-phenylenediamine(6PPD, silicone ring (DMC), caustic soda, formic acid, octanol, synthetic ammonia, toluene diisocyanate(TDI).

Sinochem Holdings’ Dual Carbon Actions in 2023

Breakthroughs Made in Key Core Technologies

Sinochem Holdings’ subsidiaries, Shenyang Research Institute of Chemical Industry (SYRICI), Bluestar Engineering, Sinochem International, Southwest Research & Design Institute of the Chemical Industry (SWRDICI), Syngenta Group, KraussMaffei and other enterprises have made new breakthroughs in key core technologies relatd to improving soil ecological health, clean production of pyridine heterocyclic products, large-scale pressure swing adsorption gas separation, research and development of high-efficiency and low-toxic fungicides, and recycling of plastics, continuously boosting confidence in building sources of original green and low-carbon technologies.

- 1.** Bluestar Engineering's "Key Technologies for Preparation of High-Efficiency Reverse Osmosis Membranes for Recycled Water Treatment and Greening of Processes" won the first prize in Environmental Protection Science and Technology Award;
- 2.** Sinochem International's green synthesis technology for high dimer content TMQ rubber antioxidant, clean production technology for microchannel continuous flow catalytic synthesis of pyridine heterocyclic products, and SWRDICI’s large-scale pressure swing adsorption gas separation technologies were selected into the catalog of technologies and products encouraged by the Ministry of Industry and Information Technology for promotion and application;
- 3.** KraussMaffei's BluePower series twin-screw extruders use recycled materials to produce ultra-pure recycled resins with performance and appearance close to pure polypropylene, which can reduce energy consumption by 79% and carbon emissions by 35%.

Promote Green and Low-Carbon Consumption Concepts

Sinochem insists on integrating green technologies and green concepts into the entire life cycle management of R&D, design, production and sales of products and services.

- 1.** Sinochem Hebei New Materials' WBT product was awarded the title of "Green Product" by the China Petroleum and Chemical Industry Federation in 2023;
- 2.** ELIX Polymers has developed special ABS and PC/ABS to reduce car cabin noise, which has been recognized by a high-end German vehicle manufacturer.

Make energy conservation and low-carbon practice a conscious action

Taking the Energy Conservation Promotion Week, National Low Carbon Day and the first National Ecological Day activities as opportunities, the Company launched the "Green and Low-Carbon Action for All Staff" to publicize relevant laws and regulations on energy conservation and carbon emission reduction and the achievements made in the area. In 2023, a total of 53 pieces of various activity materials and more than 800 pictures were reported.



Doing our best to save energy and seeking a brighter future by low-carbon practice

During the 2023 National Energy Conservation Publicity Week, the Energy Conservation and Low Carbon Management Office of Harbin Petrochemical, a subsidiary of Sinochem Holdings, launched a number of measures and actively organized five series of actions, including **calling on all employees to practice the "135" low-carbon lifestyle on Low Carbon Day (May 15),** namely: walking shall be chosen if the distance is within 1km, cycling within 3km distance, and public transportation within 5km distance. The Company also used the "Sinochem i-Learning" platform to carry out "green and low-carbon" online training for all employees, etc., to continuously improve the energy conservation and carbon emission reduction awareness of all employees.

“135” low-carbon lifestyle



(II) Environmental Risk Identification and Management

1. Environmental Risk Identification and Impact Assessment

The Company identifies relevant environmental risk factors based on the Management Standards of Sinochem Holdings on HSE Risk Prevention and Control, including material consumption, energy consumption, emission of air pollutants, discharge of pollutants to water bodies, hazardous waste generation, management and disposal, general waste generation, management and disposal, discharge of pollutants to soil and groundwater, impact on plants and animals, noise, radiation, and light pollution, etc.

In 2023, the Company carried out in-depth environmental risk identification and impact assessment in China in accordance with the environmental management system based on 34 regulations, including Sinochem Holdings’ HSE Management Regulations, Sinochem Holdings’ Environmental Protection Management Measures, and Sinochem Holdings’ Ecological Environment Protection Responsibility System, etc.

Opportunities	Challenges
Promoting green development has become a prominent feature of China's modernization: China has made major strategic arrangements for promoting green development and promoting harmonious coexistence between man and nature, providing a fundamental guideline for the Company to do a good job in ecological and environmental protection and achieve high-quality development.	Low-carbon development and environmental protection are related to corporate competitiveness and right to subsistence: green and low-carbon development has become an important consideration for companies to gain consumer favor and capital investment; the increase in cost of infraction and environmental protection costs has accelerated the elimination of outdated capacity in the chemical industry; stricter supervision and higher entry barriers have accelerated the industry reshuffle process.
The construction of a beautiful China has entered a critical period: The next five years will be an important period. The government must comprehensively promote the construction of a beautiful China and accelerate the realization of modernization with harmonious coexistence between man and nature.	External regulatory pressure continues to rise: the third round of central environmental inspections has been launched, and the SASAC has issued a series of important documents to urge central SOEs to strictly implement major decisions and deployments of the Chinese government, making in-depth efforts to fight pollution and promote high-quality development of the Yangtze River and Yellow River basins.
Enjoy significant advantages in coordinated efforts in pollution and carbon emission reduction: Sinochem Holdings is involved in the entire industrial chain of chemical industry, so it enjoys obvious advantages in promoting pollution and carbon emission reduction and green development across the entire industrial chain and the entire process. The Company's various units have extensive potential for enhancing synergistic efficiency in solid waste utilization, air pollution control and other aspects.	It is still a critical period for the Company to manage environmental risks: the basic fundamentals of its ecological and environmental risks, which feature "many risk points, wide range, and potential serious consequences", have not changed, and both existing risks and new risks tend to be on the rise. Key tasks such as ultra-low emission control of coal-fired boilers and in-depth treatment of industrial wastewater are in the stage of addressing the "last mile" problem. New tasks such as source control of soil pollution and control of new pollutants are imminent.

2. Environmental Risk Prevention

With a total investment of 2,161 million yuan, Sinochem Holdings continued to increase its input in environmental protection in 2023. The Company regularly conducts statistics, analysis, and early warning of environmental incidents, and strictly organizes the investigation and handling of serious environmental incidents and more severe incidents in accordance with the four “Don’t let it go” principles (The four basic principles that must be followed when dealing with process safety accidents, i.e. don’t let it go if the cause of the accident is not identified; don’t let it go if the persons responsible for the accident are not dealt with or punished accordingly; don’t let it go if the persons responsible for the accident are not well educated on it; and don’t let it go if corrective measures are not implemented), establishes an ecological and environmental protection emergency management mechanism, and commands and coordinates emergency response and rescue work in case of major and above incidents.

2,161 million yuan
Input in environmental protection in 2023

In 2023, the Company revised the Emergency Response Plan of Sinochem Holdings for Sudden Environmental Incidents, clarified environmental risk analysis and emergency principles, improved emergency agencies and responsibilities, and determined emergency response, post disposal, and emergency support, etc. Based on the degree of harm caused by the accident, scope of impact and ability to control the situation, the Company's emergency response to sudden environmental incidents is divided into three levels: the tier-3 enterprises level, tier-2 enterprises (the strategic business unit and directly affiliated subsidiary) level, and the Company level, and the response level is gradually higher. In general, the correspondence between the level of sudden environmental incidents and the level of emergency response is as follows:

Level of Environmental Emergencies	Emergency Response Activation Level		
Company level	Response from relevant enterprise	Response from strategic business units and directly affiliated subsidiaries	Response from the company headquarters
General Incident	√	√	
Serious Incident	√	√	√
Major Incident	√	√	√
Extraordinary Incident	√	√	√

3. Environmental Protection Capacity Improvement & Training

Sinochem Holdings organized the 2023 professional training on environmental protection. By combining on-site and online training, the Company organized environmental protection management personnel from all levels of its affiliated enterprises to learn environment legal responsibilities and risk prevention, industrial water pollution control, air pollution control and soil pollution prevention and control technologies and other expertise.

Strategic Business Unit (SBU) of Chemicals carries out environmental training

The Company's SBU of Chemicals and its factories carried out more than 200 environmental management-related training sessions in 2023, with more than 15,000 participants and a 100% pass rate. ISO14001 environmental management system certification has been acquired by the headquarters and its subsidiaries.

100 %
Pass rate

15 k+
Training participants



(III) Energy Management

1. Energy Management System

Based on the FORUS system management framework, Sinochem Holdings continues to improve its energy management system to minimize impact on ecological environment by company operations and steadily promotes the implementation of Sinochem Holdings’ Energy Conservation and Low Carbon Management Measures.

Energy Management Related Responsibilities		Progress Made in 2023
Headquarters Responsibilities	<p>1. Organize the formulation and implementation of the Company's energy-saving and low-carbon management systems, standards and processes.</p> <p>2. Research, formulate and improve the Company's energy-saving and low-carbon indicators, target responsibilities and evaluation and assessment system, and decompose and implement annual energy-saving and low-carbon work assessment indicators.</p> <p>3. Organize and carry out energy-saving and low-carbon benchmarking improvement, energy-saving and low-carbon technology exchange, promotion and application.</p> <p>4. Guide all its enterprises to comprehensively and systematically improve energy-saving and low-carbon management under the FORUS system, with risk management as the core, summarize good practices, and promote continuous improvement of energy-saving and low-carbon management performance.</p> <p>5. Supervise, guide and evaluate the energy conservation and low-carbon work of all directly affiliated subsidiaries, strategic business units and subordinate enterprises.</p>	<p>1. Organize subordinate enterprises to actively carry out energy-saving and carbon-reduction actions in light of actual conditions, and tap into potential for energy-saving and carbon emission reduction through process optimization and upgrading, upgrading of equipment's energy efficiency and other measures. A total of 124 energy-saving and carbon-reduction projects were executed in 2023. Energy efficiency benchmarking and energy efficiency "leader" creation actions were carried out on key products such as crude oil processing, ethylene, synthetic ammonia, and caustic soda, and energy management system certification for key energy-consuming enterprises was continuously carried out, and energy efficiency levels were raised steadily. All units cut energy consumption by 160,700 tons of standard coal and reduced carbon emissions by 442,500 tons.</p> <p>2. Energy efficiency targets are set for key products, and energy efficiency benchmarking is carried out. Key products (such as crude oil processing, caustic soda, etc.) have reached or exceeded energy efficiency benchmark values, and some products have reached energy efficiency benchmark values.</p> <p>3. Sinochem Holdings carried out energy-saving and carbon-reduction inspections on its four chlor-alkali enterprises, including Shenyang Chemical and Dezhou Shihua, to check the compliance issues of these enterprises' energy-saving and low-carbon management, help enterprises tap their energy-saving potential, and promote the improvement of their green, low-carbon, energy-saving and consumption reduction work.</p>
	Responsibilities of Directly Affiliated Subsidiaries and Strategic Business Units	<p>1. In accordance with the requirements of energy-saving and low-carbon laws and standards, these enterprises shall have control over the total energy consumption and energy use intensity, and the total carbon emissions and intensity, optimize the energy consumption structure, improve energy utilization efficiency, and strengthen the whole- process management of energy procurement, utilization, conversion and transmission systems.</p> <p>1. Elkem Silicon Materials (Lanzhou) organized a special inspection of high-energy-consuming and outdated electromechanical equipment in 2023, and actively promoted the elimination and replacement of 73 motors and 7 transformers.</p> <p>2. Aeolus Tire (Taiyuan) completed the replacement of 37 obsolete motors in 2023, which could save electricity use by 120,000kWh and reduce carbon dioxide emissions by 108 tons a year.</p>

2. Current Status of Energy Management

Indicators	2022	2023
Enterprises that have passed energy management system certification	40 key energy-consuming units	58 key energy-consuming units
Energy management system certification rate of key enterprises	60%	80%
Year-on-year change in comprehensive energy consumption per 10,000 yuan of output value	↓7.63%	↑1.4%
Energy-saving technical innovation Projects implemented throughout the year	More than 200 projects	More than 120 projects

3. Energy Saving Management Actions

The technical and green upgrade project of a coking furnace carried out by Sinochem Quanzhou Petrochemical, a subsidiary of Sinochem Holdings, has increased the thermal efficiency of the furnace from 92.9% to 95.1%, making it the first coking furnace with a thermal efficiency of more than 95% for Sinochem Quanzhou Petrochemical.



Energy conservation and carbon emission reduction actions and performance in key areas

Sinochem Quanzhou Petrochemical has increased the thermal efficiency of the furnace to

95.1 %

Sinochem Energy Saving Technology (Beijing), a subsidiary of Sinochem Holdings, is a leading player in China that offers turbine-section enhanced heat exchange tubes and high-density butyl cell enhanced heat exchange tubes. The company holds 21 patents. In the next five years, it is estimated to reduce energy consumption by 20kt/a of standard coal and lower carbon emissions by 50kt/a.

21 patents

Jiangxi Xinghuo Silicone, a subsidiary of Sinochem holdings, has optimized the thermal efficiency of the heating furnace system at its third plant, reducing gas consumption by 800 Nm³/h. It is expected to reduce carbon emissions by 13,200 tons and save approximately 20 million yuan in costs annually.

800 Nm³/h
Gas consumption reductions

The new anodes and cathodes produced by Bluestar (Beijing) Chemical Machinery Co., Ltd., a subsidiary of Sinochem Holdings, are used in its customers' chlor-alkali electrolysis equipment, which can save 116 million kWh/a of electricity and achieve an annual carbon emission reduction of 75,400 tons.

116 million kWh/a
Annual Energy saving

IV. Resource Management and Pollution Prevention and Control

1. Resource Management

Sinochem Holdings has always attached great importance to the management of resources, continuously strengthened water resource protection, rationally utilized land resources, improved energy efficiency, and promoted the comprehensive conservation and recycling of natural resources.

In 2023, all units under Sinochem fully implemented the action plan to improve industrial water use efficiency. Petrochemical enterprises, chemical enterprises and other key industrial enterprises used the Guidelines for the Evaluation of Water-Saving Enterprises as a guide, conducted benchmarking with industries’ leaders in water use efficiency, and tapped the potential for water saving and efficiency improvement throughout the entire process. Positive results have been achieved in the year, and **the industrial water recycling rate has hit a new high, reaching 97.85%.**

Sinochem Holdings’ Water Resources Management Performance in 2023
Sinochem Lantian’s Shangyu Base added 800kt/a of reclaimed water reuse capacity.
Twelve key water-using enterprises under Luxi Chemical were rated as water-saving enterprises in Shandong province in 2023.
Shenyang Sciencreat Chemicals Co.,Ltd. was rated as a water-saving enterprise in Liaoning province in 2023.
Sinochem Environment's integrated technology for high-salinity wastewater resource recycling was selected into the Ministry of Industry and Information Technology's Catalogue of Industrial Water-saving Processes, Technologies and Equipment Encouraged by the State (2023) and the Key Membrane-Based Seawater Desalination Technologies and Equipment for Large-Scale Applications. On May 20, 2023, it was selected into the SASAC's Manual of Scientific and Technological Innovation Achievements and Products by Central SOEs (2022 edition).

2. Pollutant Prevention and Control Management System

Sinochem Holdings strictly abides by various national laws and local regulations, including the Environmental Protection Law of the People's Republic of China, the Air Pollution Prevention and Control Law of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, and the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste. **The Company fully implements precise, scientific pollution control, and coordinates efforts to cut carbon emissions, reduce pollution, expand green development, and pursue economic growth.**

In 2023, Sinochem Holdings released environmental risk management regulations such as Sinochem Holdings’ Air Pollution Prevention and Control Standards, Sinochem Holdings’ Wastewater Pollution Prevention and Control Standards, Sinochem Holdings’ Solid Waste Pollution Prevention and Control Standards, Sinochem Holdings’ Soil Pollution Prevention and Control Standards, Sinochem Holdings’ Noise Pollution Prevention and Control Standards, and Sinochem Holdings’ Radioactive Risk Management Standards, therefore established unified pollution prevention and control standard systems.

In 2023, the Company issued the Action Plan of Sinochem Holdings on Deepening Ecological and Environmental Protection in the 14th Five-Year Plan Period to implement the important decisions and deployments of the Chinese government on ecological and environmental protection and the Company's HSE development plan in the 14th Five-Year Plan period, sticking to four major goals, i.e. pollutant emission reduction, resource conservation and intensive utilization, improvement of inherent low-carbon and environmental protection levels, and green industry development, providing a clear timetable and roadmap for the ecological and environmental protection work during the 14th Five-Year Plan period.

Water Pollution Prevention and Control System

Based on Sinochem Holdings’ Wastewater Pollution Prevention and Control Standards, the Company implemented the Action Plan of Sinochem Holdings on Deepening Ecological and Environmental Protection in the 14th Five-Year Plan Period, and attached great importance to the ecological and environmental protection of key river basins such as the Yangtze River and the Yellow River. In 2023, the Company formulated the Special Remediation Action Plan of Sinochem Holdings on Ecological Environment Protection of Yangtze River and Yellow River Basins, closely monitored the implementation of the action plan, further understood and dynamically mastered the base number of ecological and environmental risks, and helped protect the Yangtze River and the Yellow River with first-class environmental protection achievements.

Sinochem Holdings’ Water Pollution Prevention and Control Actions and Performance in 2023	
Carry out special rectification of environmental issues	In 2023, Sinochem Holdings formulated a special action plan for environmental rectification in the Yangtze River and Yellow River basins, focusing on five major tasks such as group learning, high-quality development and pollution control, and carried out the special rectification work.
Conduct special assessment on phosphorus pollution risks	In 2023, Sinochem Holdings organized its phosphorus-related enterprises to carry out special assessments on phosphorus pollution risks and implement control measures item by item.
Strengthen management of sewage outlets	Sinochem Holdings further strengthened the management of sewage outlets in 2023, urged its subsidiary enterprises to implement sewage outlet renovation, and continuously cut the number of direct discharge outlets into the Yangtze River and the Yellow River.
Improvement of emergency response capabilities to pollution	Sinochem Holdings effectively improved environmental emergency response capabilities in 2023, motivated its subsidiary enterprises to increase emergency pool capacity based on their actual emergency needs, and realize the interlocking of online monitoring data signals with rainwater and sewage shut-off valves.

Air Pollution Prevention and Control System

Sinochem Holdings adheres to pollution prevention and control from the source. Based on Sinochem Holdings’ Air Pollution Prevention and Control Standards, the Company focuses on three key tasks, namely, striving to eliminate heavy pollution weather, prevent and control ozone pollution, and tackle diesel truck pollution. It solidly promotes the comprehensive governance of industrial furnaces, pollution control throughout the life cycle of coal use, prevention and control of volatile organic compounds (VOCs) pollution, improving non-road mobile machinery standards, and ensuring air quality during important time spans.

Soil Pollution Prevention and Control System

Sinochem Holdings sticks to integrating soil protection in the entire process of a project, from construction of the project, production and operation, to its shutdown, etc. The Company regularly conducts soil environment monitoring, hidden peril investigation on soil and other routine management work, carries out risk management in an orderly manner, and firmly implements Sinochem Holdings’ Soil Pollution Prevention and Control Standards. **In 2023, the Company urged its operatonal enterprises to carry out soil pollution source control comprehensively and do the same on projects “that are engaged in production and pollution control”, making good progress in soil pollution prevention and control.** The Company also finished the construction of a soil and groundwater information management system, including 8 major modules such as monitoring plans, and established the Company's land information database to provide support for strengthening soil pollution control.

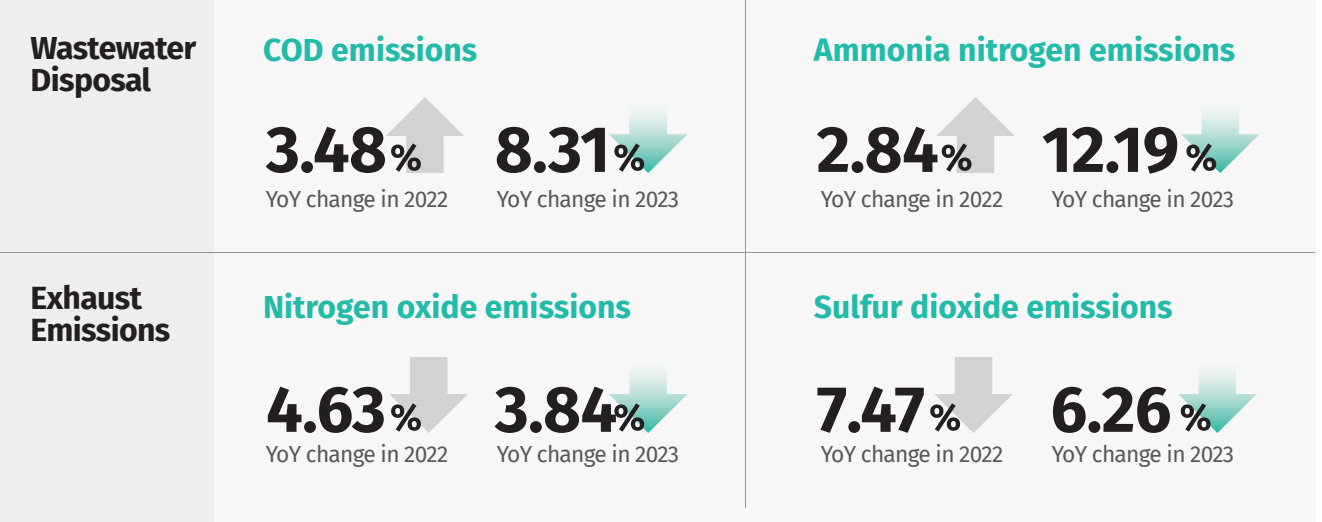
Solid Waste Pollution Prevention and Control System

Sinochem Holdings firmly implements China’s relevant work deployment on the construction of "zero-waste groups", sticks to the combination of policies and the Company's actual needs, and relies on Sinochem Environment to systematically carry out a pilot plan plan for building a "zero-waste group". The Company plans to carry out pilot projects in 120 enterprises within the group from 2023 to 2025, and **minimize the amount of solid waste generated, fully utilize resources, and standardize final disposal, leading the green and high-quality development of the chemical industry** through solid waste system management, innovative management of hazardous waste and other means.

Other Types of Pollution Prevention Systems

In 2023, the Company released Sinochem Holdings’ Noise Pollution Prevention and Control Standards to improve the sound environment quality in its factories and surrounding areas, so as to prevent industrial noise from causing serious impact on the lives of residents around the factories. It also issued Sinochem Holdings’ Radioactive Risk Management Standards, which standardize radioactive risk control measures.

3. Pollutant Emissions indicators



Keep the Waters Clear

Sinochem Holdings continues efforts to keep the waters clear, deepens wastewater treatment and water efficiency improvement, and continuously improves the level of water resource utilization. In accordance with the latest national emission standards, the Company implemented in-depth treatment of some difficult-to-treat wastewater with high concentration and complex components and raised the treatment standard. **In 2023, online monitoring showed that 100% of the sewage discharge met the relevant standards.**

Solving the problem of wastewater treatment in fine chemical sector

Yangzhou Huayu, a subsidiary of Sinochem Holdings, is responsible for treating industrial wastewater discharged by 38 enterprises in Yangzhou Chemical Industry Park. It solves the problem of wastewater treatment in fine chemical sector by adopting advanced technologies such as anaerobic micron carrier fluidized bed. In 2023, the industrial wastewater treatment plant in Yangzhou Chemical Industry Park was recognized as a typical case of third-party treatment of environmental pollution in industrial parks by the Ministry of Ecology and Environment, and won the nomination award of the China Industrial Award, the highest award in China's industrial sector.



Keep the Skies Blue

In 2023, Sinochem Holdings intensified its efforts in the fight to keep the skies blue. The Company advanced comprehensive air pollution control, whole-process control of volatile organic compounds and special control actions, and air quality assurance during key time periods, fully fulfilling the responsibilities of a central SOE.

Sinochem Holdings' Air Pollution Control Work and Achievements in 2023

The Company deepened the comprehensive control of air pollution and continued to promote ultra-low emissions of industrial boilers and special inspections and rectification of coal-related pollution, achieving remarkable outcomes.

The Company promoted the full-process management of VOCs, carry out special VOCs management actions, and conduct VOCs treatment at crude oil and refined oil terminals and oil tankers in the energy sector.

It strived to ensure good air quality during key time periods and fulfill its responsibilities as a central state-owned enterprise.

Achieve effective waste gas treatment due to emission source treatment and end-of-pipe treatment

Sinochem Yangzhou, a subsidiary of Sinochem Holdings, built a new fully automated “adsorption-low temperature absorption” waste treatment device with a processing capacity of 1,500Nm³/h. After the waste gas is treated, the concentration of non-methane total hydrocarbon emissions is stably controlled below 5g/m³, the organic waste gas emission removal rate is greater than 98%, higher than the Emission Standards of Air Pollutants for Oil Storage Depots (GB20950-2020).



Controlling unorganized emissions and improving competitiveness in green development

In 2023, Sinochem Xinbao, a subsidiary of Sinochem Holdings, invested 10.64 million yuan to build a new set of comprehensive tail gas treatment facilities with three-stage oil washing absorption, activated carbon adsorption (steam desorption) and regeneration to achieve full adsorption of all useful gases and discharge of all waste gases.

Fight to Keep the Lands Pollution-free

In 2023, Sinochem Holdings continued to strengthen the entire life cycle management of soil based on the principles of "full-process supervision, classified management, prevention first, and combination of prevention and treatment". The Company advanced source control of soil pollution and the projects that “are engaged in production and pollution control” at the same time, systematically planned the creation of a "waste-free group", and implemented special inspections on mercury pollution prevention and control, making the soil pollution prevention and control barrier more solid.

Sinochem Holdings' Soil Pollution Prevention and Control Work and Achievements in 2023

Operational enterprises that were under tough supervision shall complete the self-monitoring of soil and groundwater and the investigation of hidden soil perils as required and carry out the production and pollution control work simultaneously as required.

Carry out soil and groundwater surveys on plots that suspended production to find out basic information on their status and implement risk control as required.

Four soil pollution source control projects have been selected into the national major engineering project database and were being implemented as planned.

Guizhou Tianzhu project saves slag treatment costs by hundreds of millions of yuan

Guizhou Tianzhu project is the largest chemical slag treatment project in China to date. The project carried out in-situ stabilized treatment of waste slag in 2023, stabilized 570,000 cubic meters of barium slag in the year. The slag site covers an area of 45,000 square meters, and treated 180,000 cubic meters of leachate in 2023. Relying on 6 agents and equipment independently developed by Sinochem Holdings, it saved slag treatment costs by hundreds of millions of yuan. The project used in-situ stabilized remediation technology on a large scale for the first time, systematically solving the problems related to solid waste, contaminated soil and contaminated water in the slag site.



Promote the Reduction of Solid Waste Discharge at the Source

Sinochem Holdings is making every effort to build a "zero-waste group", promoting the reduction of solid waste discharge at the source, continuously deepening the treatment of heavy metal pollution in key industries, and promoting a "green" manufacturing system throughout the entire process. At the same time, it is also improving the efficiency of hazardous waste transfer, optimizing the centralized collection capacity of hazardous waste, and enabling enterprises within the group to share hazardous waste disposal facilities. The Company strives to deepen the control of heavy metal pollution in key industries and strictly implemented an ecological redline policy to safeguard ecological safety. It tries to get the basic statistics on new pollutants and strengthen the risk prevention and control of new pollutants.

Practicing "zero waste" concept and creating a zero waste factory

Hazardous waste treatment in industry park helps build a “zero-waste city”

Hazardous waste resource utilization to turn waste into treasure

100 %
Recycling of ferrous chloride

40 %
Recycling of ferrous wastewater

Sinochem Holdings is actively carrying out the pilot construction of a "waste-free group". In June 2023, Sinochem High Performance Fiber Materials, a subsidiary of Sinochem Holdings, and the Institute of Environmental Planning and Design of Nanjing University held a ceremony to celebrate the launch of the design and construction of a "waste-free factory". **By focusing on key stages such as design, production, use, recycling and disposal to explore the potential of green development, they will promote the construction of the "waste-free factory" comprehensively.** This marks that the Company’s construction of "waste-free factories" has entered a new stage.

The second phase of the hazardous waste recycling project of Shenyang Renewable Resources Park, invested and constructed by Sinochem Environment, a subsidiary of Sinochem Holdings, mainly aims to build a 10,000t/a comprehensive waste activated carbon utilization project, a 5,000t/a waste paint residue and paint liquid regeneration project, and a 220pieces/a waste packaging barrel regeneration project. Based on ths project the company also established a joint research and development center integrating industry, academia and research areas, a hazardous waste emergency center in Liaoning province, and a service platform for small and medium-sized enterprises to help Shenyang fully achieve the goal of building a "zero-waste city" in 2023.



The Taquari site of Syngenta Group in Brazil, a subsidiary of Sinochem Holdings, reduced chemical landfill waste through recycling hazardous waste and reprocessing materials reused in production. The site has achieved 100% recycling of ferrous chloride (about 80% recycled within the plant and 20% recycled outside the plant) and 40% recycling of ferrous wastewater.



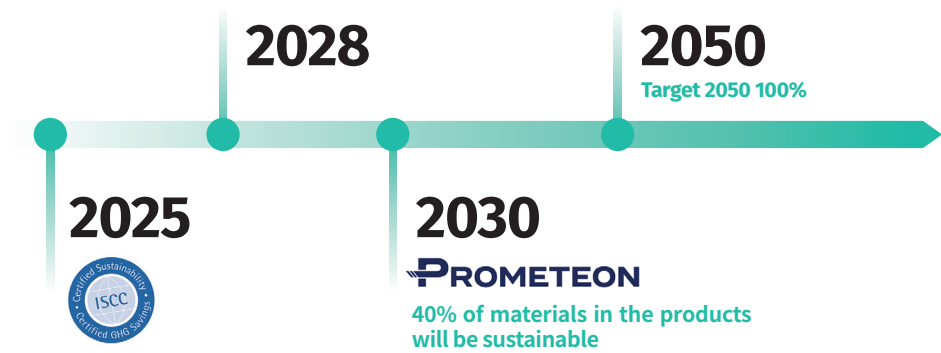
(V) Circular Economy

Sinochem has always adhered to green development, circular development, and low-carbon development, and has rationally extended the industrial chain of deep processing of recycled resources such as waste non-ferrous metals and waste plastics. By complying with relevant policies such as the Circular Economy Development Plan in the 14th Five-Year Plan Period and the Action plan on Plastic Pollution Control in the 14th Five-Year Plan Period, the Company has kept deepening the high-value recycling of plastics, optimized the production process in the processing of new materials, and increased the utilization ratio of recycled materials.

The compounding technology of a German plant of KraussMaffei, a subsidiary of Sinochem Holdings, can process various types of recycled plastics into high-quality composite materials and apply them to extrusion or injection molding, making plastic turnover boxes 100% recyclable. **In 2023, KraussMaffei's German plant used internal waste to replace recycled materials from the market, achieving "closed-loop recycling", and helping save energy and reduce emissions.**

ADAMA Israel, a subsidiary of Sinochem Holdings, has set up "green stations" in the local market to collect farmers' empty crop protection product containers. In 2023, a total of 573 tons of plastic were recycled and 1,300 tons of plastic waste were collected from India. The company also recycles the residual product at the bottom of containers to minimize waste.

Prometeon, a subsidiary of Sinochem, set its sustainable development goals for 2030 and 2050 in 2023. It is committed to replacing virgin materials with recyclable materials. The company plans to realize the goals of using 40% recyclable materials in 2030 and 100% recyclable materials in 2050.



Elkem, a subsidiary of Sinochem Holdings, has reduced the purchase of new pallets by reusing and repairing wooden pallets at its warehouse in Nagpur, India. The program has now been expanded to all warehouses in India, reusing about 6,000 pallets per year.

Elkem, a subsidiary of Sinochem Holdings, has proposed to develop a more competitive and environmentally friendly low-temperature depolymerization process for silicone polymers in the REPOS project. The first trial test in 2023 proved the feasibility of the project, which, as a sustainable production process, can reduce resource waste by more than 65%.

Mastering plastic recycling technology

Intensifying efforts in waste plastic recycling to promote circular economy

Setting the target to use 100% recyclable materials by 2050

Wooden pallet recycling, a new trend in warehouse logistics

Focusing on new technology development to promote low-carbon development & environmental protection

(VI) Biodiversity

1. Policies and Practices in Protecting Biodiversity

Sinochem Holdings adheres to the concept of ecological civilization and gives full play to its technological advantages in the fields of life sciences and environmental sciences to advance biodiversity conservation more effectively. All of its subsidiaries conduct environmental impact assessment and biodiversity impact studies in the early feasibility study and site selection stages of a project. They attach great importance to environmental design and sustainability in product development, and try to develop and promote products that has minimal impact on the environment. In the process of production and operation, they continue to make efforts in eco-compensation. During the process of resource exploitation, they carry out ecological governance and restoration in an orderly manner, and take practical actions to promote harmonious coexistence between man and nature.

2. Biodiversity Practices and Achievements

The biodiversity promotion cases of Syngenta Group, a subsidiary of Sinochem Holdings, were selected into the Collection of Corporate Biodiversity Conservation Cases released in the COP15 of the United Nations Convention on Biological Diversity (CBD).

Exploring the utilization of field margins to protecting farmland biodiversity

654.55 %
Number of pollinators in the surrounding farmland increased by

Exploring solutions to marine plastic pollution

The MAP (Modern Agriculture Platform), a subsidiary of Sinochem Holdings, has explored and implemented the "Pollination Action" project in Hubei, Shandong, Tianjin, and other regions to effectively utilize the agricultural field margins by planting nectar-producing flowers and establishing habitats for pollinating insects. According to statistics from the Institute of Apicultural Research (IAR), Chinese Academy of Agricultural Sciences (CAAS), the number of pollinators in the surrounding farmland has increased by 654.55% and the number of other beneficial insects has increased by 11% through the implementation of "Operational Pollination" Project.



KraussMaffei, a subsidiary of Sinochem Holdings, has worked closely with Oldroyd, a leading supplier of waterproof materials and solutions in Northern Europe, to develop and produce waterproof membrane support structure fixings for tunnel construction using marine plastic waste such as damaged fishing nets and plastic ropes as raw material as well as KraussMaffei's CX series injection molding equipment and technical processes, achieving the recycling of marine plastic waste.



The agricultural, cultural and tourism project "Jinmao Idyll in South Taihu Lake" jointly created by China Jinmao and Syngenta Group, two subsidiaries of Sinochem Holdings, has built an ecological micro-environment including ponds, rivers, and woodlands, while strictly adhering to protecting the redlines for permanent basic farmland. It cultivates and protects wild soybeans, a national second-level protected wild plant, and water grass, a globally vulnerable species, in the area. **The good ecological environment has attracted the yellow-breasted bunting, a national first-level protected wild animal, to appear in the rapeseed fields. The project was rated as the "2023 Characteristic Biodiversity Experience Site in Huzhou City"**, providing an excellent demonstration and educational sample for the local government's continued promotion of biodiversity conservation.



The Egyptian plant of Prometeon, a subsidiary of Sinochem Holdings, protects biodiversity in its wastewater treatment area by embedding ecological spaces in the heavy industrial plant. The company built wooden habitats for different types of animals, such as fish ponds and peacock pavilions, provided the necessary food and water, and assigned daily management tasks to the HSE and industrial departments.



Jinmao Idyll project an excellent demonstration of biodiversity conservation

Ecological space in a heavy industrial plant



02

Social



Creating Value, Giving Back to the Society

Sinochem Holdings continues to deepen its efforts in ensuring process safety and occupational health, adheres to the strategy of developing enterprises through using talents properly, attaches great importance to technological innovation and digital transformation, expands products and services offering capabilities in multiple fields, and builds a sustainable supply chain. The Company actively shoulder social responsibilities, upholds rural revitalization, educational assistance programs and charitable donations, and continuously improves its sustainable development capabilities and sense of social responsibility.

(I) Process Safety and Occupational Health

As a leading chemical conglomerate, Sinochem is aware that process safety and occupational health are the cornerstones of its sustainable development. In 2023, the Company fully launched a major safety rectification campaign, and the total recordable incident rate (TRIR) per 200,000 man-hours and the lost time injury rate (LTIR) per 200,000 man-hours continued to decline for three consecutive years. Sinochem Holdings will continue to follow the FORUS system strictly, steadily improve its safety production, occupational health and emergency management capabilities, and ensure the Company's sustainable development.

Sinochem Holdings’ Process Safety Performance in 2023

Indicators	2021	2022	2023	YoY Change in 2022	YoY Change in 2023	Target Value in 2025
Total Recordable Incident Rate (TRIR) per 200,000 man-hours	0.14	0.096	0.062	↓31.4%	↓35.4%	< 0.1
Lost Time Injury Rate (LTIR) per 200,000 man-hours	0.076	0.053	0.041	↓30.3%	↓22.6%	< 0.1
Total investment in process safety (million yuan)	850	1035	1148	↑22%	↑11%	

1. FORUS System Promotion and Integration

Sinochem Holdings is committed to the vision of being a “global HSE leader” and achieving the goal of “zero loss”, focusing on key procedures such as organizational leadership, publicity and guidance, institutional construction, team building, practice-driven, and review and rating. The Company has carried out in-depth publicity and implementation of the FORUS system and promoted the achievements of the requirements of the FORUS system. The FORUS system has become the common language of HSE management for all staff of Sinochem Holdings in China.

The Company highlights publicity and guidance, adheres to the "daily sign-off" to continuously promote good experiences and practices on the front line, and particularly stresses publicity and guidance in case of important occasions such as process safety Month, World Environment Day, the launch of new workwear, and safety leadership. All units used micro-videos, publicity competitions, podiums and other forms to publicize the core values of HSE, creating a good atmosphere for the FORUS culture to take root.

The Company emphasizes cultural-driven awareness by releasing the FORUS visual identification system and supporting products, and each enterprise actively carries out the construction of the FORUS corridor to enhance the recognition, identification and practice of the FORUS system among all employees, making the FORUS system more perceptible, touchable and feasible.

Sinochem Holdings stresses institutional construction, and all of its enterprises have revised a total of 586 HSE regulations and procedures, forming an institutional framework in which the headquarters focuses on policies and general management requirements, tier-2 enterprises focus on professional standards, and the tier-3 enterprises focus on execution processes, providing an effective guarantee for promoting Sinochem Holdings’ HSE governance system and governance capabilities.



334

Enterprises completed the 2023 FORUS review and rating

The Company keeps building its HSE teams, continuously conducts regular checks on its HSE management organizations and personnel, systematically sorts out and finds out the specific number of HSE organizations and personnel, further optimizes the staffing, and improves echelon building, laying a solid foundation for building a top-notch HSE team.

The Company strengthens practice-driven progress in FORUS system. In 2023, all units "localized" good practices based on its own management status and industry characteristics, and promoted a total of 3,829 good practices through meetings, on-site promotion, compilation of manuals, special training, video shooting and other forms, achieving remarkable results in helping the implementation of the FORUS system and enabling the improvement of HSE management.

Sinochem Holdings conducts FORUS review and rating. 334 enterprises completed the 2023 FORUS review and rating. The current status of HSE management has been understood more clearly, areas of weak management have been identified, more practical continuous improvement measures have been formulated, and the determination to pursue industry leading HSE performance has been strengthened.



"Organizational Guidance, Group Support" FORUS system promotion seminar

In 2023, Sinochem Holdings organized an experience sharing meeting to promote the FORUS system. Ten of its subsidiaries, including Sinochem Energy Logistics, Shenyang Kechuang Chemicals, Anhui Sheng'ao, Elkem Xinghuo Silicones, Zhonghao Chenguang, Luxi Chemical, Heilongjiang Haohua, China Jinmao, Haohua Junhua, and Sinochem Finance, shared their experiences and practices in promoting the FORUS system based on their actual work, guiding employees to actively practice the FORUS concepts and requirements in their actual work, and promoting the FORUS system to take root at the grassroots level.

Commending the 2022 "FORUS Stars"

In July 2023, the Company commended four units and 29 individuals for their outstanding contributions to the promotion of the FORUS system and daily HSE work, further upholding the FORUS culture, implementing the core values of HSE, and playing a typical exemplary role.

2. Process Safety

Mechanism Improvement and Responsibility Implementation

In 2023, Sinochem Holdings formulated and issued the Action Plan of Sinochem Holdings on the Year of Strengthening Safety Management, which consists of 75 key points of work and actions, including strengthening the construction of safety production mechanisms and working out specific tasks for each person or department; implementing the responsibility system at all levels to clarify the responsibilities of relevant leaders; establishing a rigid safety duty list for leaders at each level; establishing a performance review and evaluation mechanism for the main responsible persons; and guiding leaders to take the initiative to perform their duties. The Company has fully implemented the grid-based safety management system, and 217 units have formulated plans to promote the implementation of a responsibility system for all levels of leaders through defining grid management, assigning specific personnel, clarifying responsibility and effects regarding safety management.

Sinochem Holdings’ Safety Production Mechanism Construction and Responsibility Implementation in 2023	
Formulate a checklist of safety duties for leading cadres at all levels	The Company headquarters and its subordinate strategic business units formulated lists of duties and a rigid performance ledger for the main responsible persons and other members of the leadership team as required, and promote leading cadres at all levels to set good examples for their subordinates, earnestly practice what they advocate, and perform their duties effectively.
Establish an HSE talks mechanism	The Company leaders held HSE talks with 26 newly appointed principals of strategic business units and main persons in charge of directly-managed units and leaders in charge of HSE, and provided work tips based on the actual situation of their units and individuals.
Establish an HSE reporting mechanism	The Company organized 27 HSE leaders and HSE directors of its tier-2 units to report on their HSE duties, and conducted multi-dimensional quantitative evaluation of HSE performance to promote continuous improvement in their awareness and ability to perform their duties.
Comprehensively implement grid-based process safety management	The Guiding Opinions on Promoting Grid-based Safety Management at the Grassroots Level was issued and implemented, and grid-based safety management control was carried out. Grid-based on-site safety management at grassroots units was implemented with full regional coverage and no blind spots in responsibility assignment, and safety management responsibilities within the grid were executed at different levels.

The main persons in charge actively practice rigid performance of duties

In 2023, the Company's QHSE Department continued to track and promote the progress of the major rectification campaign through monthly HSE committee meetings, monthly HSE handler meetings, and biweekly rectification meetings; the main responsible persons of subordinate tier-2 units have paid 427 inspection visits to enterprises , and identified and rectified 2,889 problems; the main responsible persons of tier-3 enterprises carried out regular inspections and found a total of 24,904 problems; 957 "Taking the Lead to Ensure Produciton Safety from Five Aspects" publicity and "Safety Commitment and Practice" activities were carried out, with 39,000 participants.

Carrying out supervision on safety performance of leading cadres

139 companies were inspected

In 2023, the Company's QHSE department and each tier-2 unit conducted spot checks on the performance of the leading cadres of front-line enterprises through on-site inspections, personnel positioning system inquiries, remote inspections, and spot checks on leaders on duty, in order to urge the leadership to perform their duties rigidly. Each strategic business unit and directly affiliated subsidiaryunit has established a spot check mechanism on on-duty personnel to conduct daily spot checks on the on-duty performance status of each enterprise, and check the on-duty personnel's mastering of accident information reporting and operational risk control. A total of 139 companies were inspected, 581 leaders were spot checked, and 15,399 problems were found during the on-duty inspections of leaders.

Raising Awareness and Improving Capabilities

Sinochem Holdings focuses on carrying out high-profile and high-frequency safety capacity improvement training for its leaders, professional teams, front-line team leaders and operators to. In 2023, it held four training sessions on "Improving Leaders’ Abilities to Perform Safety Duties". 304 main persons in charge of hazardous chemical enterprises, leaders of tier-2 units and those in charge of BU production, equipment, and HSE completed the rotational training and passed the assessment, therefore all principals of hazardous chemical enterprises were able to obtain certificates before taking up their posts; professional knowledge and skills training was provided to more than 1,000 HSE and related professional managers through centralized lectures, exchanges and discussions, case analysis, practical simulations, theoretical assessments, and results reports, and these training sessions enabled key talents to grow and help improve HSE management; 70 on-site training courses for team leaders were organized in 12 regional training centers, and 6,447 team leaders from 147 enterprises completed the rotational training and passed the assessment, achieving full coverage of safety production training for team leaders in domestic hazardous chemicals enterprises.

All units under Sinochem Holdings have carried out in-depth training on "Five Understandings, Five Skills and Five Abilities" and compiled a total of 4,801 learning manuals and developed 5,272 courses in 2023, with a total of 836,000 training hours and 638,000 participants. Personnel involved in 4,801 jobs participated such training sessions. Through carrying out practical assessments, skill competitions, job training and other activities, employees' job operation and emergency response capabilities were strengthened.

Strengthening the ability to perform safety duties

In 2023, Sinochem Holdings comprehensively raised the safety awareness of all employees and enhanced the safety performance of the leaders through offline training courses for improving leaders' safety performance, research on hazardous chemical enterprises' process safety, and online platform "Sinochem i-Learning" safety performance courses. Four training courses were held, with 304 leaders of hazardous chemical enterprises, persons in charge of production and equipment participating. In 2024, full coverage will be further achieved.



Safety Risk Identification and Management

Sinochem Holdings further enhanced its safety risk management capabilities in 2023. The Company carried out overall deployment of safety risk identification and control work, with the focus on comprehensively understanding the key safety risks and completing the draft of a safety risk map; strengthening safety control in the operation process and completing the review and evaluation of operating procedures; strictly controlling the number of workers in high-risk areas and clarifying the requirements for limiting the number of workers in the device area and sites; and further strengthening the control of non-routine operations and contractor management.

Sinochem Holdings’ Safety Risk Management Contents in 2023	
Establish a safety production risk map	The Company organized its units at all levels to complete the safety production risk map and put it in use in 2023, realizing the management of safety risks by "one map". Based on their own risk status, 313 enterprises analyzed the possibility and severity of accidents, completed the construction of safety risk maps and continued to improve them, optimized risk assessment models, and promoted the integration of grid-based management and risk maps.
Strengthen personnel control in high-risk installations and sites	110 hazardous chemical enterprises under the Company have completed the construction of personnel positioning systems, realizing functions such as electronic fences, excessive personnel numbers, stranded personnel and stationary alarms.
Safety control of non-routine operations	The Company coordinated the construction of a non-routine operation management system, and made the approval and licensing conditions for special operations such as hot work, confined space operations, and temporary power operations itemized, electronic, and process-based, carrying out process and trace management during the entire operation process and realizing information-based and procedural management of the entire process of special operations.
Conduct contractor safety assessments	376 enterprises that deal with contractors have incorporated contractors into integrated management, and have completed assessment on 2,100 contractors and established a contractor ledger and blacklist. 16 enterprises put 65 contractors on the blacklist.

At the same time, the Company has continued to strengthen safety risk analysis and governance on its projects and facilities, using the HAZOP (Hazard and Operability Analysis) method, one of the most widely used risk control tools in the global chemical industry, to complete HAZOP reanalysis and rediagnosis on more than 600 operating units. More than 5,000 corrective measures were proposed and implemented.

"Process Safety Month" event in 2023

Chairman Li Fanrong delivered an important speech on process safety in 2023. The Company held 3,582 lectures on process safety in the year, with a total of 113,497 participants; organized 7,070 activities such as "Work Safety Discussions", "Pre-shift Meetings", and "Explaining the Laws with Cases", with 124,533 participants; carried out 992 "Safety Commitment and Practice" activities for the main responsible persons of enterprises, with 40,123 participants; enterprises organized 2,649 accident emergency drills, with 53,967 participants; carried out 1,614 self-rescue and mutual rescue skills training for employees, with 30,202 participants; organized hidden peril inspections on 5,693 vehicles, held 738 centralized education activities, with 24,976 participants; held 673 other activities, including safety day activities, special training, knowledge competitions, skill competitions, "Delivering Courses to the Grassroots", safety month signatures, responsible persons taking the lead in learning videos, law popularization activities, calligraphy and painting exhibitions, etc., with 81,628 participants. The Company also intensified efforts in publicity and summary of such events. It organized 65,000 people to participate in the online knowledge contest, with 1,234,204 participants in the event, opened a special column for Safety Production Month, selected and shared more than 100 pictures of activities from various units and collected 136 activity summaries.

Special Activities to Rectify Safety Risks

In 2023, Sinochem Holdings organized the "Major Reflection and Major Discussion" activites, with a total of 389,781 participants, formulated and fulfilled 2,152 major risk prevention and control measures for units and 83,509 measures for individuals. The Company carried out a series of special investigation and rectification actions, strengthened the centralized management of the top three hidden dangers, and investigated and rectified more than 140,000 safety hazards in 2023. 112 hazardous chemical enterprises under the Company fully completed the construction of a dual prevention system in 2023, realizing the digital management of safety risk classification control and hidden danger investigation and treatment.

Sinochem Holdings' Special Safety Risk Rectification Activities and Performance in 2023	
Special investigation and rectification of nitrate-related risk hazards	A hidden danger investigation list was drawn up and in-depth troubleshooting was carried out on relevant equipment. A total of 320 hidden dangers were found in nitrate-related equipment and all rectifications were completed.
Special investigation and rectification of hydrogen peroxide risk hazards	407 hidden dangers in hydrogen peroxide enterprises and 84 hidden dangers in hydrogen peroxide using enterprises were identified, and all rectifications were completed.
Special investigation and rectification of hidden risks in mines and tailings reservoirs	A special investigation and rectification of hidden dangers was carried out on all mines and tailing reservoirs, and 226 hidden dangers were found, all of which have been rectified.
Special investigation and rectification of dangerous manual operations	A total of 78 problems were found in the manual feeding and discharging operations involving toxic, explosive dust, and flammable and explosive materials, 25 of which were rectified, and plans have been made to promote the rectification of the remaining problems.
Investigation and rectification of key fire safety hazards	The Company carried out investigations and rectifications on fire safety hazards in rental and leasing, gas, crowded office spaces, grain warehouses, etc., and inspected and rectified 2,879 problems; and cleared out 71 rental and leasing places with high fire safety risks and poor management foundations.

3. Occupational Health

Occupational Health Infrastructure

In 2023, Sinochem Holdings adhered to protecting the occupational health of its employees as the fundamental basis and kept strengthening occupational health management. The Company invested 281 million yuan in occupational health in 2023, an increase of 2.55% over the previous year. It continued to improve institutional construction, formulated and issued the Technical Guidelines for Occupational Hazard Management of Sinochem Holdings, strictly followed the "three simultaneous" principle when constructing occupational disease prevention and control facilities (The occupational disease prevention and control facilities must be designed, constructed, put into use simultaneously with the main work of a construction project), detection and evaluation of occupational hazard factors, and occupational health examinations and occupational health training, which further consolidated the foundation of source control and management of occupational health Sinochem Holdings continued to carry out special governance of occupational hazards such as dust, chemical poisons and noises, and focused on special rectification of open operations at production sites. The Company issued and implemented the Technical Requirements of Sinochem Holdings on Workwear, the Visual Image Manual for Sinochem Holdings' Workwear, and the Management Rules for Sinochem Holdings' Labor Protective Clothing, unified and standardized the requirements for labor protective clothing, standardized and strengthened labor protection, and further improved the working environment and working conditions.

2.55 %
Investment in occupational health has increased by

Sinochem Holdings' Occupational Health Management Performance in 2023				
Indicators	Unit	2022	2023	Changes in value
Implementation rate of excessive occupational hazard management	%	100	100	Maintain full coverage
Occupational Health Examination Coverage	%	100	100	
Job transfer rate of personnel with occupational contraindications	%	100	100	
Investment in occupational health	100 million yuan	2.74	2.81	↑2.55%

In-depth special treatment of occupational hazards

The Company formulated and issued the Technical Guidelines of Sinochem Holdings on Occupational Hazard Management, and organized its enterprises to improve the working environment and working conditions through process improvement, engineering control, management measures, etc. With a total investment of about 32.56 million yuan, the Company executed 50 hazard management projects, completed 124 open operation rectifications, and reduced the number of people exposed to occupational hazard by 256. At the same time, the Company carried out on-site guidance services for key management projects of its subsidiaries, proposed systematic solutions, and improved the enterprises' occupational disease and hazard management capabilities.

50
Number of hazard management projects

124
Number of open operation rectifications

256
Reduction in number of people exposed to occupational hazard

Promoting Occupational Health

In 2023, the Company continued to carry out awareness campaigns of the Occupational Disease Prevention and Control Law and occupational health promotion activities, actively promoted the creation of healthy enterprises and the cultivation of "Occupational Health Experts", publicized and popularized occupational health knowledge, kept raising the occupational health awareness of all employees, and realized zero increase in new occupational diseases.

Organizing publicity week activity on the Occupational Disease Prevention and Control Law

The Company held a centralized theme training on occupational health, with a total of 2,134 occupational health management related personnel participating. It carried out 1,627 theme publicity activities of "improving the working environment and conditions, protecting the physical and mental health of employees", 4,969 special training sessions, and the number of audiences reached 118,000.



Soliciting works on occupational health communication

The Company produced promotional works on the theme of "improving occupational health accomplishments and protecting the health of working people" and completed a total of 105 occupational health communication works.The Company produced promotional works on the theme of "improving occupational health accomplishments and protecting the health of working people" and completed a total of 105 occupational health communication works.

Healthy Enterprises and the "Occupational Health Experts" Activities

In 2023, Sinochem Holdings promoted the creation of healthy enterprises and launched the campaign to foster "occupational health experts". The Company's subsidiaries founded 20 new healthy enterprises, including 8 provincial-level healthy enterprises. 72 employees of the Company were awarded the title of health expert by local governments, including 1 national excellent case. At the same time, Sinochem Holdings carried out activities to select “Occupational Health Experts”, including "Experts in Healthy Sports", "Experts in Health Knowledge", "Experts in Health Protection" and "Experts in Health Management”. After publicity and promotion, enterprise recommendations, preliminary evaluation and selection, and internal and external expert review, 30 health experts were selected in 2023 to guide all employees to actively practice healthy work and healthy life.



Mental Health Support

Sinochem Holdings has always regarded the mental health of its employees as an important part of occupational health, and the mental health of its employees is an important cornerstone of corporate development. In 2023, the Company regularly held mental health lectures, provided professional psychological counseling services, and set up an employee care hotline, etc., to create a caring, supportive and positive working environment.

EAP psychological services

In 2023, Sinochem Holdings opened up a special psychological welfare channel, providing EAP (Employee Assistance Program) psychological counseling services to 27 employees through on-site and online consultations. The Company kept optimizing its employees’ physical examination program to comprehensively protect their psychological and physical health.

4. Emergency Management

In 2023, Sinochem Holdings continued to improve its emergency response system and accident information reporting system, and optimize the emergency command organization. Focusing on identifying and preventing major risks, it carried out typical HSE accident scenario construction and emergency plan revision. The Company and its tier-2 subsidiaries conducted comprehensive desktop simulation emergency drills, and front-line enterprises conducted 21,783 desktop simulations and actual drills.

Sinochem Holdings' emergency management achievements in 2023

Optimize the emergency command organization	Optimized the responsibilities of the functional groups of the emergency command center, optimized clarification of responsibility assignment, added member units, adjusted the method of reporting emergency accident information, clarified the emergency command model, revised the emergency action instruction card, etc.
Improve emergency response plans and scenario construction	Organized the revision and improvement of emergency plans, revised 5,558 plans, with a completion rate of 100%; formulated and implemented the Guidelines for the Construction of Typical HSE Accident Scenarios in Sinochem Holdings’ Production and Operation Units; carried out online training on the construction of typical HSE accident scenarios, with more than 400 participants; organized scenario construction, with 48 scenarios constructed by tier-2 units and 1,225 scenarios constructed by tier-1 enterprises, of which 621 scenarios were constructed by enterprises with major hazardous sources.
Improve the emergency duty mechanism	For the first time, continuous production was used as the purpose to clarify the requirements for emergency duty; enterprises’ leadership and heads of relevant production departments are clearly defined as the main on-duty leaders; a weekly reporting mechanism for on-duty leaders and a night inspection mechanism were established.
Carry out emergency drills in various forms	The Company carried out emergency plan training and desktop emergency drills, with 462 people from its tier-2 subsidiaries participating in the training and drills. Frontline enterprises conducted 21,783 desktop and actual drills for typical accidents such as fire, explosion, leakage, and poisoning. In 2023, the Company was deeply aware of the significant risks of fire and explosion in its chemical enterprises, strengthened the construction of emergency rescue, first aid and treatment capabilities, improved the emergency on-duty mechanism, strengthened the construction of professional fire brigades, and established professional fire brigades in 30 hazardous chemical enterprises, with 965 firefighters. It implemented the grassroots "135" (initiate emergency response and report the situation in 1 minute, the teams coordinate with each other and retreat to safe places in 3 minutes, professional fire fighting forces arrive at the scene and coordinate handling in 5 minutes) emergency response method to enhance the emergency response capabilities of grassroots units under abnormal working conditions.
Standardize emergency response to abnormal operating conditions	Use HAZOP analysis results to identify deviations and anomalies and establish a "deviation" list; for various abnormal working conditions, optimize on-site disposal plans in accordance with the "135" principle to enhance the emergency disposal capabilities of grassroots units for abnormal working conditions.
Strengthen the construction of professional fire-fighting brigades	30 hazardous chemical enterprises have established professional fight fighting brigades, with an authorized staffing of 1,012 firefighters and 965 actual firefighters, and 181 fire trucks. For the first time, a seminar and exchange on emergency rescue technology for professional fire brigades was organized, focusing on topics such as the standardized construction of professional fire brigades, emergency rescue technologies, and disaster relief.
Carry out the construction of the “four capabilities” in fire fighting	Fire safety training was organized for the first time. 128 fire safety management personnel participated in the training. A series of fire education activities were carried out, including "Emergency Drill Week" and "119" Fire Fighting Promotion Month. During the Emergency Drill Week, 2,649 emergency drills were organized, with 53,967 participants. During the Fire Fighting Promotion Month, "Four Topics" fire education activities and five special fire fighting activities were carried out, with a total of 161,919 participants in education and training and 71,938 participants in emergency drills.
First pre-departure security training for employees assigned to overseas posts	In 2023, the Company developed an emergency plan for overseas security incidents, improved the emergency mechanism for overseas security incidents, put the overseas employee safety guarantee emergency system into use, and strengthened and improved the emergency response capabilities for overseas emergencies. For the first time, it carried out pre-departure security training to employees assigned to overseas posts, and held 16 offline pre-departure public safety trainings for employees traveling abroad on official business, and 1,309 people passed the systematic training covering "theoretical explanation + scenario simulation + practical exercise".

5. Ensuring Process Safety

In accordance with China's "Industrial Internet + Safe Production of Hazardous Chemicals" pilot construction requirements and the Company's overall deployment of "Smart Factory + Smart HSE", Sinochem Holdings has built a top-down HSE management digital system and fully completed the construction of "One General Chart + Coverage of Six Areas". The Company has fully carried out HSE digital supervision and monitoring, implemented penetrating online monitoring of HSE, and the average daily alarm numbers of major hazard source systems and personnel positioning systems have decreased by 80% and 34% respectively, and the proficiency in the use of non-routine operation systems and the standardization in filling electronic operation sheets have increased by 23%. The Company has also carried out the construction of AI video monitoring systems, completed the access of more than 40,000 videos of nearly 300 enterprises, and gradually realized the intelligent identification and analysis of unsafe behaviors and unsafe conditions in key sites of enterprises.

1 General Chart
Showing A Full View Of Risks

Covering all production and operation enterprises under Sinochem Holdings, it realizes real-time dynamic display of risk data from front-line enterprises to headquarters. It focuses on presenting risk data such as major hazard sources, processes subject to key supervision, hazardous chemicals subject to key supervision, hidden HSE risks and hazards, special operations, and hazardous chemical storage sites.

6 Major Areas
Rigid And Standardized Operations

Achieve full coverage in six major areas - full coverage of major hazardous sources, full coverage of dual prevention, full coverage of non-routine operations, full coverage of intelligent inspections, full coverage of personnel positioning, and full coverage of video surveillance.

2 Measures
Improvement Of Application Effectiveness

Carry out special inspection on HSE system construction and application, establish online monitoring team, discover problems online and offline, regularly track and urge rectification, promote the continuous improvement of the system.



(II) Employee Training and Talent Management

As a responsible global enterprise, Sinochem Holdings regards its employees as the core force driving the development of the Company. The Company strictly abides by various labor laws and regulations, respects and protects the legitimate rights and interests of employees; adheres to equal employment, and is committed to creating a diversified and equal working environment for its employees; attaches great importance to the construction and improvement of the talent team, and provides employees with rich and diverse training; constantly improves the incentive and promotion mechanism, strives to create value, scientifically evaluate value, and reasonably distribute value, fully mobilizes the enthusiasm and creativity of talents, and strives to achieve the free and full development of employees; sincerely cares for employees, actively fulfills and protects the legitimate rights and interests of employees, takes the initiative to seek benefits for employees, enhances employees' sense of belonging, creates a "fair, enterprising, and harmonious" corporate atmosphere, and promotes the common growth of employees and enterprises.

1. Talent Management Strategy

Sinochem has formulated the Management Measures of Sinochem Holding on Labor Employment in accordance with relevant laws and regulations, covering all forms of employment adopted by the Company and strictly implementing classified management. The Company has also issued internal management and talent training systems such as Sinochem Holdings' Recruitment and Deployment Management Measures and Sinochem Holdings' Education and Training Management Measures. In 2023, the Company followed the policy of "compliance, professionalism, innovation, and diligence", continued to build a team of high-quality and professional cadres and talents, deepened and promoted management mechanism innovation in assessment and incentives, authorized institutional staffing, etc., and provided organizational guarantees and talent support for the Company's high-quality development.

Employee Recruitment

Sinochem Holdings adheres to the recruitment principle of "leading in professionalism, outstanding ability, excellent personal qualities, and matching of skills with posts" and fully implements the requirements of "open recruitment, mandatory tests for all job applicants, and merit-based admission". The Company also strives to ensure information disclosure, process disclosure, and results disclosure, and the labor contract signing rate and social insurance coverage rate are both 100%. **In the past three years, the proportion of open recruitment has remained 100%, realizing full process disclosure.**

100 %

The proportion of open recruitment in the past three years has remained

Strategic Recruitment

The Company has clarified the guiding ideology of "strategic recruitment", closely integrating open recruitment with the Company's strategic planning, technological innovation, and talent development, and dividing personnel into four categories, i.e. technology, production, business, and comprehensive management for differentiated management. Campus recruitment focuses on the reserve of scientific and technological talents and the improvement of the quality of production personnel, and optimizes the personnel structure and employment efficiency by improving the quality of open recruitment.

University-Enterprise Cooperation

The Company has established "university-enterprise talent supply and demand strategic partnership" with many universities and colleges, especially in campus recruitment. It mainly recruits staff from relevant colleges and universities such as Tsinghua University, Beijing University of Chemical Technology, and China Agricultural University, attracting outstanding graduates in chemical engineering, materials, agronomy and other majors, and reserving a large number of high-quality talents for the Company.

Digital Recruitment

The Company has made full use of digital means to build a unified recruitment platform to achieve full online management of the entire process. Resume screening, online assessment, interview evaluation, pre-employment physical examination, offer issuance and other procedures can be tracked online to ensure the transparency and efficiency of the recruitment process. Penetrating management is implemented for social recruitment, and all positions are publicly released through Sinochem Holdings' recruitment platform, further improving the degree of standardization and openness in the recruitment process.

Diversity and Equality

In 2023, the Company was committed to creating a working environment with gender balance, ethnic unity, and care for vulnerable groups, ensuring that its employees could achieve career development and personal value in a diverse working environment.

Indicators		Unit	2022	2023
Number of employees by gender	Male employees	Person	88,730	86,008
	Female employees	Person	30,010	28,218
Number of employees by age	35 years old and below	Person	48,668	44,955
	36-59 years old	Person	69,784	69,059
Number of employees by job level	Senior Management	Person	7	8
	Mid-level staff	Person	400	379
	General staff	Person	118,333	113,839
Number of employees by region	Employees in Chinese Mainland	Person	128,519	114,226
	Employees in overseas countries, Hong Kong, Macau and Taiwan of China	Person	99,138	95,242
Number of employees by educational background	Below undergraduate	Person	70,693	65,060
	Undergraduate	Person	36,517	37,468
	Master degree and above	Person	11,530	11,698
Number of jobs provided in 2023		Person	11,461	6590
Number of ethnic minority employees		Person	4,035	3902
Number of employees with disabilities		Person	581	575
Percentage of employees with disabilities in total employees		%	0.49	0.50

Note: The above data divided by gender, age, job level, educational background, and the number of jobs provided, number of ethnic minority employees, number of disabled employees, etc. are all statistics from Sinochem's local enterprises in China.

Diversified youth activities

In 2023, the Company organized 1,612 youth learning and education activities of various types, carried out more than 80 theme league activites, formed 195 youth commandos targeting the Company's innovation and development center tasks, held 58 events such as youth innovation forums at all levels, youth innovation and creativity competitions, and "Five Small Achievements" competitions, and carried out 5 "Chemistry-driven Youth" friendship building activities to comprehensively enhance the quality and cohesion of young talents.

"Speaking Up" culture creates a more equal working environment for employees

Syngenta Group, a subsidiary of Sinochem Holdings, encourages its employees and stakeholders to report violations of the Code of Conduct (CoC) and provides them with a Compliance Helpline in 24 languages. In 2023, Syngenta Group increased the number of helpline reports by strengthening the "Speaking Up" culture and creating a safe environment. Key performance included initiative of employee education and increased the on-site visibility of Ethical Compliance matters in Brazil, which promoted confidence in reporting CoC violations. The "Respect at the Workplace" campaign was implemented, reinforcing the "Speaking Up Culture", focusing on behavioral issues and reporting of Workplace Civility and Harassment.

2. Sustainable Development of Talents

Career Development and Planning

Sinochem Holdings persists in scientifically planning its employees' career development channels and paths, and divides the Company's jobs into three major categories, i.e. Management (M), Technical (T) and Skilled Talents (W). The Company formulated targeted policies and management measures to these three categories of job, guiding the career development of various types of talents, and facilitating the implementation of the Company's strategy.

Talent Catagory	Management Measures and Achievements
Management (M)	In 2023, the Company optimized its cadre selection and appointment mechanism, improved the professionalization, rejuvenation and internationalization of the cadre team through internal promotion, cross-unit exchanges and recruitment from external organizations, and strictly implemented cadre supervision and management to ensure standardized behavior.
Technical (T)	The Company continued to strengthen talent introduction in 2023. It launched the "Phoenix Plan" to strengthen the introduction of high-level talents. The Company continued to implement the "Scientific Research Management Training" project, explored the integrated training model of research, production and sales, and recruited and trained talents with doctoral degrees from prestigious universities around the world. By closely focusing on the Company's strategic planning, industrial planning, and planning to optimize talent structure, it built a four-tier talent teams covering "Strategic Scientists (Great) – Top Scientific and Technological Talents (Top) – Leading Scientific and Technological Talents (Lead) - Young Scientific and Technological Talents (Young)". Sinochem Holdings has built and implemented a CVC evaluation model for scientific and technological talents that is in line with the actual development of the Company's diversified business. In the fields of biological breeding and new materials, the Company has established cooperation with 9 universities, including China Agricultural University and Zhejiang University, to cultivate talents. The Joint Training Program of Sinochem Holdings for Masters and Doctors of Engineering was issued to reserve outstanding engineers for the Company's core business areas.
Skilled Talent (W)	Sinochem Holdings strives to build a team of highly skilled talents. In 2023, the Company promoted the construction of the production skill category talents (W category), and 6 people won the first prize in the 2023 National Chemical Industry Employee Vocational Skills Competition, and one person won the title of "National Food and Material Reserve Skills Master", and continued to build a team of leading skilled talents to support the Company's industrial transformation and development.

Organizing a training camp for scientific and technological talents on innovative methods

In accordance with the "Empowerment-Coaching-Practice-Evaluation" chain of scientific and technological talent training, Sinochem Holdings organized the second scientific and technological talent innovation training camp for young scientific and technological backbones of various business units in 2023, which completed the organization of three concentrated theoretical studies, and carried out three scientific research topic selection and collective counseling. The Company organized the training camp members to participate in the 2023 China Innovation Method Competition. All five representative teams participated the competition for the first time and won three first prizes in Shandong, Henan and Jiangsu divisions and two second prizes in Shandong.



Talent Cultivation

Sinochem Holdings continues to adhere to the scientific and systematic "Sinochem Training Systems" (STS), focusing on the training of six major study groups, including senior managers and high-potential talents, newly promoted personnel and newly hired employees, professional technical personnel and professional functional personnel). In 2023, the Company continued to carry out multi-form, multi-field and multi-content training, and constantly improved the training system. The newly revised Sinochem Holdings' Education and Training Management Measures has improved the learning content, learning methods, study hours, training discipline, leave principles, training assessment, file management and the requirements on leadership cadres' lecturing for cadre education and training based on the requirements of relevant policies and the Company's management practices. It has put forward clear requirements for the education and training of young cadres, raised the requirements for the political literacy of internal trainers, and strengthened the requirements for training supervision.

Conducting new employee training

Sinochem Holdings adopts a "1+N" hierarchical training model, with the Company responsible for arranging general courses and subordinate units responsible for professional and job expertise training. In 2023, a total of 2,035 new graduates participated in the training through a combination of online and offline sessions, achieving full coverage of new employees. The traning motivated new employees to understand and practice the "spirit" of Sinochem Holdings in the new era, strengthened their sense of identity and belonging to the Company, enabled them to master the necessary working methods and skills, quickly integrate into the new environment and be competent for their new jobs.

Sinochem Holdings Lecture Hall

Sinochem Holdings has fully utilized the "Sinochem Lecture Hall" communication platform. By focusing on the Company's business development direction and key tasks, the Company often invites well-known scholars and corporate executives in the fields of theory and practice at home and abroad to share insights, exchange views and experiences, and help all employees of the Company to increase their knowledge, inspire their thinking, and improve their abilities. In 2023, the Company held a total of 6 lectures, covering topics such as artificial intelligence, dual-carbon strategy, state-owned enterprise reform, compliance management, systematic thinking, and macro-political and economic situation and other contents. A total of more than 14,000 staff participated in such online training.

3. Safeguarding Talent Supply

Compensation System

Sinochem Holdings sticks to market-oriented reforms, practices the incentive orientation based on the "spirit" of Sinochem Holdings in the new era, and provides effective incentives and reasonable guarantees for employees from six dimensions, including fixed salary, performance bonus, medium- and long-term incentives, welfare, honor recognition, and career development. Its employees' compensation depends on the job value, employee performance, and ability evaluation, and performance bonuses are fully linked to the performance of the organization, team, and individual. The Company pays social insurance and housing provident fund for employees in accordance with the law, and provides employees with an excellent welfare security system in terms of "medical care, food, housing, daily necessities, and transportation", so as to relieve employees of their worries and focus on performing their duties. The Company fulfills its employer obligations by purchasing employer liability insurance and provides employees with insurances for personal accidents and other safety guarantees. The Company cares about employees' post-retirement benefits, establishes and continuously expands the coverage of enterprise annuities, provides thoughtful services for retired employees, and ensures them to live a decent post-retirement life.

In 2023, the Company focused on technological innovation business and continuously strengthened incentives. It issued an implementation plan to further increase efforts to promote the construction of incentive and guarantee mechanisms for technological innovation. Focusing on the three key points of technological incentives and guarantees, such as key platforms, key projects, and key talents, Sinochem Holdings further increased efforts in expanding incentives and guarantees for the entire process of the technological innovation chain from multiple aspects, including assessment-driven improvement, salary support, incentive mechanisms, achievement transformation, capital investment, and benefits guarantee. The Company clarified special compensation and benefits guarantee policies for senior scientific research experts (T5) and skill masters (W5), made full use of the high-quality tools of the State-owned Assets Supervision and Administration Commission (SASAC) to continuously expand the coverage of incentive tools for technology-oriented enterprises, and obtained the first batch of innovation follow-up investment pilot qualifications from the SASAC. The Company attached equal importance to material incentives and spiritual incentives, and optimized its evaluation system in accordance with the reward orientation of "technology-led, performance-driven, and operational excellence". Sinochem Holdings commended and rewarded teams and individuals with outstanding performance in technological innovation, performance improvement, operational excellence, and daily work, while it was inclined to provide rewards to scientific and technological talents, skilled talents and grassroots frontline employees.

Welfare and Care

In 2023, Sinochem Holdings formulated the Implementation Measures of Sinochem Holdings for Employees Caring and Support Program, and has taken a number of measures in terms of employee welfare and care, focusing on discovering and selecting typical characters from the grassroots and ordinary positions to enhance employees' sense of honor and belonging. The Company strived to ensure the physical and mental health of its employees at work and in daily life through a variety of activities and policies, paying special attention to female employees and employees with special needs. The Company continued to adhere to the corporate democratic management system with the staff representative conference as the basic form to protect the legitimate rights and interests of its employees.

Protection of female employees' rights and interests and related care work

"Female Role Models for Outstanding Achievements"

On the occasion of the Women's Day in 2023, 20 people who maintain firm political stance, have made outstanding contributions, have a strong exemplary role, are highly recognized by the masses, and are advanced and exemplary in their units and systems were selected as Sinochem Holdings' "Female Role Models for Outstanding Achieve

Recommendation of Candidates for Delegates to the 13th National Women's Congress

In accordance with the spirit of the SASAC's Notice on the Selection of Representatives for Central SOEs (in Beijing) to Attend the 13th National Women's Congress. Based on the number of female employees in Beijing, three women were recommended as candidates for representatives of Sinochem Holdings (in Beijing) to attend the 13th National Women's Congress.

Other Work to Care for Female Employees

Sinochem Holdings organized a flower arrangement activity themed "Taking some time to feel the beauty of flowers" on International Women's Day. The Company also sent a "Letter of Consolation" to its female employees. When selecting female employee representatives and advanced models in large-scale meetings such as staff congresses and labor congresses, it ensured the proportion of female employee representatives. The Company also carefully selected special physical examination items for female employees; timely consolations were given to sick female employees, and assistance was provided to female employees who encountered major diseases or accidents.

Caring for children

Children's Day Parent-Child Activities

On Children's Day, the Company held the "Let Your Voice Be Heard - Parent-Child Psychological Painting Interpretation" activity to help employees better understand their children's emotional pressure, interpersonal skills, psychological needs and personality traits, enter the children's inner world, become helpers in driving their growth, and at the same time help their children grow up healthily and happily.

The First International Summer Camp

The Company successfully held the first International Summer Camp, bringing together 60 children of its employees from 10 different countries and regions, including China, the United States, Italy, France, Germany, Spain, Portugal, South Korea, and Thailand, to help young people expand their international horizons and improve their cross-cultural communication skills.



(III) Product Services and Quality

Sinochem Holdings attaches great importance to its product offerings, which mainly focus on eight business segments. The Company effectively utilized digital technology to independently establish and launch a comprehensive e-commerce platform for chemical industry in 2022 - Sinochem E-commerce Platform. Its business scope covers more than 10,000 key products and more than 60,000 specific grades of nearly 100 companies within the Sinochem system, forming 12 major industry solutions, 126 application solutions and 6 major service areas.

1. Product Safety and Quality

The Company strictly controls its product safety and quality. In early 2023, it issued a series of management measures, including the Regulations of Sinochem Holdings on Production Management, the Management Measures of Sinochem Holdings on Product Marketing and Sinochem Holdings' Warehousing Management Measures, and constantly revised them later. The Company and its subsidiaries have established organizational, talent and management mechanisms to support the continuous development of "Strategic Good Products". It carried out product structure management and clarified the Company's product structure, product positioning and product portfolio so as to enhance its core competitiveness, guided by its market segmentation strategy and based on its strategic positioning, long-term development goals and market demand. At present, 184 subsidiaries of the Company have passed ISO 9001 Certification. 16 enterprises, including Aeolus Tyre, Beijing Bluestar Cleaning, and Elkem Xinghuo Silicones, have passed IATF 16949 certification.

Central SOEs' Scientific and Technological Innovation Products

In 2023, the State-owned Assets Supervision and Administration Commission of the State Council released the product manual of scientific and technological innovation achievements of central SOEs, and six achievements of Sinochem Holdings were selected, including five in the field of "key materials" and one in the field of "advanced technology". The products selected included high-shielding special conductive silicone rubber materials and products, and para-aramid high-strength products, etc. The Company will continue to promote technological progress and develop more excellent products by focusing on key strategies and industrial chain development directions.

Green Products

The Company continued to respond to the global sustainable development trend in 2023, focusing on improving the green and low-carbon attributes of its products, reducing the Company's scope 3 emissions and improving the competitiveness of its products. The Company carried out the carbon footprint accounting of 11 key industry chain products, and further specified the key emission sources in each link of the industrial chain to continuously optimize the emission structure. Four products of Bluestar Dongda, and 17 silicone products from Elkem Xinghuo Silicones such as DMC, M2, M3 have passed the carbon footprint certification, further enhancing the green attributes of the Company's products. The "Water-borne Exterior Wall Paint - Liquid Coil HY-408" product independently developed and produced by the Company's Zhuzhou Rubber Research & Design Institute has been recognized as a single "Green Design Product" in the "2022 Green Manufacturing List" of the Ministry of Industry and Information Technology.

2. Customer Services, Rights and Interests

Sinochem Holdings adheres to the principles of honest management, fair dealing and customer first in protecting the rights and interests of its customers, ensuring that the legitimate rights and interests of its customers are not infringed.

Transparent Transaction Process	Fair Trading Conditions	Strict Privacy Protection
Ensure that all transaction information is open and transparent, and customers can obtain sufficient information and protection during the transaction process.	Provide equal and fair trading conditions to all customers and eradicate any form of discrimination and unfair treatment.	Strictly keep customers' personal information and business secrets confidential to prevent information leakage and abuse.
After-Sales Service Management	Effective Complaint Handling Mechanism	
Attach great importance to after-sales service management and is committed to providing customers with efficient and high-quality after-sales services to fully protect their rights and interests.	Establish a sound complaint handling mechanism to promptly deal with and resolve customer complaints and ensure that customer opinions and suggestions are taken seriously and responded to.	

Sinochem Holdings is committed to establishing long-term trusting relationships with its customers, improving customer satisfaction and loyalty, and promoting common development and progress between the Company and its customers.

(IV) Sustainable Supply Chain

Sinochem Holdings adheres to transparent procurement, strengthens the internal control of bidding and procurement processes, continuously improves supplier management, strengthens strategic cooperation, and is committed to building a sustainable supply chain system.

1. Tendering and Bidding Management

Sinochem Holdings has always strictly abided by the Tendering and Bidding Law of the People's Republic of China, the Implementation Regulations of the Tendering and Bidding Law and other laws and regulations, and strictly prohibited discriminatory and biased clauses in tendering. The Company revised Sinochem Holdings' Tendering Management Measures and Sinochem's Tendering and Procurement Negative Behavior List to further standardize the requirements for tendering and bidding business. Special tendering and bidding governance and "looking back campaign" were carried out, and the compliance of tendering and bidding was continuously improved through self-examination and self-correction organized at all levels.

2. Supplier Management

Sinochem Holdings has continuously optimized the supplier qualification review and dynamic performance evaluation mechanism, stepped up efforts to deal with breach of contract, established and improved the supplier "blacklist" management mechanism, unblocked the supplier appeal channel, and strived to build a transparent supply chain ecosystem.

Establish a unified supplier management system

In 2023, the Company issued Sinochem Holdings' Supplier Management Measures, the Guidelines of Sinochem Holdings for Supplier Access Management, the Guidelines of Sinochem Holdings for Supplier Review and Performance Evaluation, the Guidelines of Sinochem Holdings for Supplier Classification and Grading Management and Supplier Relationship Management and other regulations and guidance documents to establish a unified supplier management system and process, and clarify supplier sourcing, assessment, evaluation (assessment), credit, grading, and penalties, etc.

Dynamically carry out supplier performance assessment and evaluation

Carry out dynamic evaluation on suppliers' timeliness of delivery, quality of deliverables, costs, services, etc. Differentiated evaluation models are developed according to different service attributes, a reverse evaluation channel for suppliers is provided and the dynamic evaluation on suppliers is kept in the digital procurement platform.

Toughen Blacklist Management

Increase penalties on suppliers who breach contracts. The Guidelines for the Management of Sinochem Holdings' Supplier Blacklist clearly defines the management agency, review process, behavior identification standards, and graded handling methods of the supplier blacklist, and proposes to unblock the supplier appeal channel. A total of 116 suppliers were blacklisted in 2023.

3. Green Supply Chain

Bluestar Dongda awarded "A Green Supply Chain Management Enterprise in Shandong Province"

Bluestar Dongda, a subsidiary of Sinochem Holdings, has fully implemented low-carbon actions throughout the value chain, integrated green development into every aspect of the product life cycle, and proactively established a sustainable development system oriented towards green, low-carbon, energy conservation, and environmental friendliness. As a national single champion demonstration enterprise in manufacturing sector, it persists in its own green development path and helps promote green management of the industrial supply chain.

4. Construction of a Supply Chain Management Platform

The Company has built a digital procurement platform with major functions such as sourcing management, electronic tendering and bidding, procurement mall, inventory management, supplier life cycle management, etc., realizing the digitization of the entire supply chain management process.

Sinochem Procurement Mall officially launched

CIIE improves supply chain stability

13.5+ billion dollar
Total procurement amount

Sinochem Procurement Mall has been officially launched. Relying on the Company's industrial advantages and digital empowerment, the Procurement Mall boasts four major functions, i.e. "collective procurement of special materials and honoring of contracts", "one-stop convenient procurement of low-value and consumable materials", "supply and demand coordination among internal enterprises", and "procurement and supply chain services", and strives to create an open, collaborative, green and intelligent supply chain ecosystem.

Sinochem Holdings actively participated in the 6th China International Import Expo (CIIE). Four of its overseas subsidiaries, including Syngenta Group, Adisseo, Elkem and KraussMaffei, continued to participate in the exposition, exhibiting industry-leading seed industry, crop protection and crop nutrition technologies, soil health solutions and digital agriculture, as well as animal nutrition, new materials, intelligent equipment and other innovative products, technologies and solutions, with outstanding highlights. During the exhibition, Sinochem Holdings signed cooperation agreements with more than 30 customers from more than 10 countries and regions, including Argentina, Brazil, Chile, Ethiopia, France, Kazakhstan, Saudi Arabia, Tanzania, Thailand, the United States, and Japan, generating a total procurement amount of more than US\$13.5 billion, hitting a record in the contract value of Sinochem in the six CIIEs. By strengthening cooperation with global energy, chemical and agricultural products companies, Sinochem Holdings has effectively broadened the upstream resource acquisition channels for relevant industries in China, realized the diversification of import channels, and helped stabilize the industrial chain.



(V) Digital Transformation and Technological Innovation

1. Digital Transformation

Sinochem Holdings is deeply aware of the importance of digital transformation, and it strives to improve in the in-depth integration of digital technology and the Company's operational excellence system, HSE system, and governance and control systems, so as to improve transparency and compliance, promote the Company's sustainable development, ensure that the Company remains competitive in the global market and achieves its long-term strategic goals.

In 2023, the Company's 32 digital transformation practices won awards from national ministries/commissions and local governments. In the 2023 intelligent manufacturing pilot demonstration action jointly carried out by the Ministry of Industry and Information Technology, the SASAC and three other ministries and commissions, 10 application scenarios developed by 9 units of the Company were selected as "Excellent Intelligent Manufacturing Scenarios", making the Company a top player among central SOEs in terms of the number of excellent scenarios.

Construction of a digital transformation management system

The Company has set up a three-level digital management system of "control-management-construction". The Cyberspace Affairs Leading Group and the "Online Sinochem" Digital Transformation Leading Group work together and are responsible for coordinating and promoting digital transformation. Subsidiaries and key enterprises also set up digital transformation organizations, which hold regular meetings to do relevant research and promote digital transformation, and work reports are produced every month.

CONTROL	MANAGEMENT	CONSTRUCTION
Led by head of The company	The Company leadership is responsible for coordinating the work of digitalization department	Construction handled by Sinochem IT and supervised by relevant business units
The Cyberspace Leadership Group and the "Online Sinochem" Leadership Group work together to coordinate and lead the work related to cyber-space and digital transformation	"Online Sinochem" Working Group <div>Members of the Working Group<ul style="list-style-type: none">General affairs teamCorporate synergism teamData coordination team</div>	<div>Executive team for projects under construction<ul style="list-style-type: none">Projects ordered to be constructed by the CompanyPilot projects ordered to be constructed by subordinate unit(sy)</div> <div>Working group supporting the execution of projects<ul style="list-style-type: none">Projects aiming for guarantee governanceProjects to support platform construction</div>

Digital platform construction

In 2023, the Company continued to strengthen its digital platform construction capabilities. The Company continued to make digital platform play an important role in key areas such as finance, human resources, and supply chain management to promote sustainable development.

Sinochem Holdings' Achievements in Digital Platform Construction in 2023

The basic platform of the treasury system was established, and it was fully promoted to all domestic enterprises of all levels and its overseas enterprises. The Company's treasury management system was initially established, and the account visibility rate increased by 14 percentage points. Significant results were achieved in the intensive management of financial resources and debt risks. The concentration of Sinochem Holdings' domestic capital increased by 15 percentage points, the domestic system settlement rate increased by 27 percentage points, and the annual interest expenditure decreased by 6.1 billion yuan, and the liquidity risk was significantly alleviated.

The Company completed the formulation of the financial sharing plan in 2023, clarifying the digital architecture and development path of financial sharing. It completed the construction and launch of the first phase of the financial sharing platform, covering 11 units including the Company headquarters, and comprehensively improved the efficiency of financial sharing.

The Company has completed the construction of an integrated smart human resources platform to empower its talent-driven development strategy. The platform has eight functional modules, including organization, personnel, compensation, performance, and attendance, covering 110,000 employees in China, improving the comprehensiveness, accuracy, and timeliness of human resources management.

The Company continued to expand e-commerce platform construction to facilitate precision marketing in 2023. It opened Sinochem 1688 official flagship store, the first of its kind among central SOEs. The number of companies online on Sinochem's e-commerce platform has reached 91, and the cumulative online transaction volume in 2023 reached 240 billion yuan, the total number of customers exceeded 150,000, and it managed to promote the interconnection with existing platforms such as 1Chemic.com, Sinochem E-Power app, and Luxi Mall.

The Company launched the construction of a unified digital procurement platform in 2023. The first batch of pilot projects covered all 41 Sinochem Energy subsidiaries of the Company. The annual online procurement reached 4.9 billion yuan, and the procurement cost decreased by 8.6 million yuan. It has fully launched the promotion of the platform to the second batch enterprises (46 enterprises), accelerated the full coverage of digital procurement, and standardized the management of the entire procurement process.

Digital training

The Company continues to strengthen the construction of digital talent teams and cultivate employees' digital literacy. In 2023, the Company designed a training course system covering key areas such as operational excellence, management supervision, and cyber security. The headquarters held 29 training sessions throughout the year, with 49,000 participants, and the Company and its subsidiaries organized 758 training activities, with 81,800 participants, comprehensively improving the cyber security awareness of all employees and effectively enhancing the digital knowledge and skills of employees.

Data management and security

813 TB
Scale of shared data

25
Level 2 system

10
Level 3 system

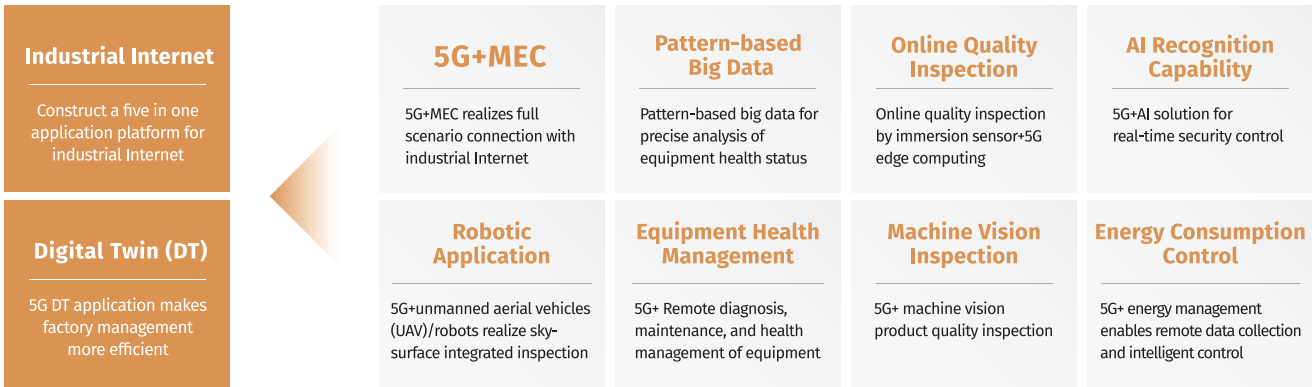
In 2023, the Company launched a data security system construction project, improved the data security system, compiled an overall design of the data security, and completed the deployment of the system in various departments of the Company's headquarters. The Company issued 7 regulations related to data standards, data applications, data life cycle, data quality, data architecture, and master data management to consolidate the foundation of data management. The Company's headquarters passed the GB/T 36073-2018 Data Management Capability Maturity Assessment Model (DCMM) Level 3 certification, reaching a robust level. At the same time, a data management capability improvement plan was developed to guide the work. The construction of the Sinochem Vision-Sinochem big data platform, was continuously improved to promote horizontal expansion and vertical integration, and the scale of shared data reached 813TB. The master data planning was designed in a coordinated manner, and the master data management system was scientifically formulated to form 4 sets of master data processes and 8 types of master data standards. A new generation of master data management platform was built and launched to comprehensively promote the construction of master data standards. The Company's headquarters currently has 10 level 3 security evaluation and certification systems and 25 level 2 systems, all of which have completed the classification and filing assessment, and the level 3 systems are retested every year.

Data security training: The Company held a special training on "Data Compliance", explaining the Data Security Law, the Personal Information Protection Law, and data outbound transfer compliance in 2023. The training lasted 2 hours and attracted 880 participants.

Cybersecurity incident response and emergency drills: In 2023, the Company detected 251 general cyber security incidents, all of which were promptly handled and recorded. In August, the Company carried out “Sinochem Holdings’ 2023 Office Terminal Security Emergency Drill” and immediately conducted emergency handling operations on affected terminals and treated them according to the corresponding level of emergency response incidents.

5G Smart Factory

Elkem Xinghuo Silicones, a subsidiary of Sinochem Holdings, built a 5G fully connected factory, collected data on factory personnel, machines, and environment through multi-scenario innovative applications such as 5G industrial gateways, machine vision, and drone inspections, integrated big data applications to create a full-factor digital twin factory, which was included in the "Top 10 5G Factories" list of the 2023 World Industrial Internet Industry Conference.



2. R&D and Innovation Management System

Strengthen top-down design
Focus on key business areas

Sinochem Holdings insists on making scientific and technological innovation the top priority and the only choice for the Company's high-quality development. It has strengthened top-down design, focused on R&D directions in key business areas, coordinated scientific and technological innovation resources, and initially established a three-level R&D structure consisting of cutting-edge common research institutes, core advantageous industry research institutes, and professional research centers. It focuses on common cutting-edge technologies, key core technologies in advantageous industrial chains, and industrial technology collaboration, and carries out scientific and technological innovation research work in stages, striving to enhance independent innovation capabilities and promote the deep integration and development of the industrial chain and innovation chain.

2+2+N
R&D system that covers the entire seed industry innovation chain

At the same time, a "2+2+N" R&D system that covers the entire seed industry innovation chain was established. Two national innovation platforms, the National Key Laboratory and the National Technology Innovation Center, are a core part of the system, and b two world-class R&D platforms, Syngenta Beijing Innovation Center and Yangling Breeding Technology Center, are the foundation for the system, and multiple comprehensive breeding bases in major ecological zones across the country are used to carry out high-throughput and intelligent breeding technology research and development, gene editing trait research and development, and variety regional testing, effectively supporting the cultivation of new varieties of important crops and accelerating the high quality development of the Company's seed industry.

Sinochem Holdings' Innovation and R&D Performance in 2023		
Indicators	Unit	2023
R&D and innovation investment	100 million yuan	229.90
R & D personnel	Person	20,347
Incl.: Number of doctors and postdoctoral fellows	Person	1,347
Number of R&D personnel with Master's degree	Person	4,818
Number of R&D personnel with Bachelor degree	Person	6,762
Valid cumulative authorized patents held by the end of the year	Item	31,000+
Incl.: Invention Patents	Item	21,000+
Cumulative patent applications within the year	Item	2,962
Incl.: Invention Patents	Item	2,073
Standards formulated in 2023 (leading in formulation and revision), total number	Item	91
Incl.: International standards	Item	4
National standards	Item	37
Industry standards	Item	34

Note: The above data/statistics are within the domestic scope in China.

3. Innovative Achievements

Sinochem Holdings continued to strengthen innovative R&D in 2023. It has achieved a series of innovative R&D results in terms of technological breakthroughs, material R&D, process improvement, equipment optimization, etc. Many technological achievements have reached the advanced standards internationally, and some technological achievements have filled the gaps in China's research of relevant fields. By the end of 2023, the Company held more than 31,000 valid patents, including more than 21,000 invention patents. Sinochem Holdings applied for 2,962 patents in 2023, including 2,073 invention patents. The Company has won many honorary awards for its scientific and technological innovation, and the relevant technologies and products have been fully recognized in the industry, greatly enhancing the Company's influence in scientific and technological innovation.

<div>Some Scientific and Technological Achievements of Sinochem Holdings</div>	<div>Key technologies and equipment for separation, purification and drying of polyphenylene ether slurry – Reached internationally advanced standards in the area</div> <div>Semiconductor etching gas hexafluorobutadiene – Filled the gap in domestic high-end fluorine-containing electronic gas sector</div>		
	<div>First Prize of China National Textile and Apparel Council (CNTAC) Technology Invention Award</div> <div>Research on the mechanism and application technology of supercritical carbon dioxide anhydrous dyeing of polyester fiber cheese yarn</div>	<div>China Fluorosilicon Industry Outstanding Scientific and Technological Achievement Award</div> <div>Preparation technology and engineering research of silicone conformal coatings for high-frequency circuit components</div>	<div>First Prize of Shanghai Science and Technology Award for Technological Invention</div> <div>Sinochem High Fiber's "Key Technologies for Large-Scale Production of Para-Aromatic Polyamide Fibers" project</div>
	<div>Second Prize for Scientific and Technological Progress, Liaoning Provincial Science and Technology Award</div> <div>Shenyang Research Institute of Chemical Industry's "Chemical Risk Early Warning, Intelligent Assessment and Control Technology and Application" project</div>	<div>Second Prize for Scientific and Technological Progress, Sichuan Provincial Science and Technology Award</div> <div>Southwest Research Institute of Chemical Industry's "Large-scale Pressure Swing Adsorption (PSA) System Technology Development and Application" project</div>	<div>First Prize of AVK Fiber Reinforced Composite Materials Process and Method Innovation Award</div> <div>CFP technology</div>
	<div>The First Hebei Province Patent Excellence Award</div> <div>Cangzhou Dahua's invention patent for "Processing method for crude TDI".</div>	<div>Third Prize of China Petrochemical Technology Invention Award</div> <div>Hangzhou Water Treatment's "New process of zero wastewater discharge integrating multi-membrane technology and molecular sieve production" project</div>	

Sinochem Science and Technology Conference

10
Technological invention awards

28
Patent awards

The 2023 Sinochem Science and Technology Conference was held to systematically review the achievements of the Company's scientific and technological work in the year and deploy key tasks for scientific and technological innovation in 2024. More than 1,200 people, including members of the Company's leading group, external directors, representatives of professional research centers, T5 representatives of scientific research, and representatives of winners of the 2023 Sinochem Science and Technology Award, attended the meeting on site or via video. The conference presented awards to the winners of the 2023 Sinochem Science and Technology Award, including 10 technological invention awards, 25 scientific and technological progress awards, and 28 patent awards. The conference issued assignment to launch construction of four research institutes, including Sinochem Chemical Process Technology Research Institute, Sinochem Chemical Materials Application Technology Research Institute, Sinochem Fluoro-chemical Research Institute, and Sinochem Silicone Research Institute. In the internal innovation experience exchange session, typical representatives of scientific and technological innovation practices from Syngenta Group Global Crop Protection, Syngenta Group Beijing Innovation Center, Sinochem Lantian, and Shuguang Rubber Industry Research and Design Institute shared successful cases and excellent practices in innovation system construction, R&D efficiency improvement, and scientific and technological achievements transformation and application.

Based on traditional catalyst for methanol synthesis, Southwest Chemical Research and Design Institute, a subsidiary of Sinochem Holdings, has made breakthroughs in the physicochemical properties, reaction activity, selectivity and service life of catalyst for large-scale methanol synthesis, which can deal with the harsh conditions in large-scale methanol synthesis, such as high reaction intensity, good selectivity and heat resistance, and has mastered core technologies such as catalyst scale-up preparation. Its independently developed XNC-98-5 methanol synthesis catalyst has replaced foreign catalysts in three sets of 1.8Mt/a coal-to-methanol units of CHN Energy, successfully breaking the monopoly of foreign catalyst producers.



Sinochem High Performance Fiber Materials actively promotes the aramid industry-university-research institute collaboration with Donghua University. The jointly developed "Key Technology for Large-Scale Production of Para-Aromatic Polyamide Fiber" won the first prize of Shanghai Technology Invention Award. The research was carried out based on functional modification method of PPTA fiber with an open microporous structure of wet fiber, new filler solvent extraction, solvent/extractant temperature controlled separation and efficient solvent refining technologies were developed, moreover, PPTA precipitation fiber preparation technology based on molecular weight control was also developed, opening up the overall process flow and breaking through the core technology of short-cut fiber for aramid paper. Aramid paper was successfully developed and sold. The overall technology of the aramid project has reached internationally advanced standards.



Sinochem Holdings firmly promoted the tripartite strategic cooperation between Sinochem Holdings' China Seed, Yazhou Bay Seed Laboratory and Yazhou Bay Science and Technology City, and created a deep integration mechanism of industry-university-research institute featured "enterprise-based project demand, gate management of projects, locked-in of technological achievements and market-based innovation incentives". After multiple procedures such as enterprise assigning tasks, laboratory announcement of the project, research team combination, and review and demonstration, 20 projects, the first batch of projects related to four major crops, were launched, 67 teams from leading scientific research institutions across China will work together with China Seed and Yazhou Bay Seed Laboratory to tackle the problems, building a seed industry innovation ecosystem with deep integration of industrial chain and innovation chain.

Sinochem Holdings achieves domestic substitution in catalyst for large-scale methanol synthesis

Industry-university-research institute collaboration leads to breakthroughs in aramid technology

First prize
Won the Shanghai Technology Invention Awards

Jointly launch the first batch of "Open bidding for selecting the best candidates" projects with Yazhou Bay Seed Laboratory

(VI) Social Welfare

In 2023, Sinochem Holdings attached great importance to social welfare, revised and issued the Management Measures for Sinochem's Aid and External Donations to contribute to rural revitalization, educational assistance and youth education. In terms of promoting rural revitalization, the Company helped poverty-stricken areas achieve sustainable development through technical support and resource investment. In the field of educational assistance and youth education, Sinochem Holdings funded poor students, improved educational facilities, and promoted educational equity, reflecting the Company's deep commitment and active practice of social responsibility.

1. Payment of Taxes and Fees

As a central SOE, Sinochem Holdings actively fulfills its tax obligations and paid 51.54 billion yuan in taxes in 2023, demonstrating its support for the country's economic development and its commitment to social responsibility. Through transparent and standardized financial management, the Company has promoted its own sustainable development and provided strong financial support for social public services.

51.54 billion yuan
Total tax amount in 2023

Indicator	Unit	2023	Note
Total tax amount	Billion yuan	51.54	Specifically, the cumulative tax paid domestically was about 35.96 billion yuan, and the cumulative tax paid overseas was about 15.58 billion yuan.

2. Rural Revitalization

Sinochem Holdings has strictly implemented China’s poverty relief policy with “four characteristics” (continue to shoulder poverty relief responsibilities, implement poverty relief policies, fulfil support responsibility and conduct monitoring to rural areas and residents lifted out of poverty), and fully leveraged its advantages in industry, technology, and talents to practice the “2+4” special assistance model that is driven by both industrial assistance and people’s livelihood assistance, with intellectual and moral assistance, consumption assistance, and concerted efforts as important support, and has effectively promoted the assisted areas to consolidate and expand the achievements of poverty alleviation and to achieve practical results in the comprehensive revitalization of rural areas.

The Company has received a "good" rating in the assessment of the targeted assistance work of central SOEs for six consecutive years. In 2023, it ranked 14th among the 91 central SOEs participating in the assessment, and won the 12th "China Charity Awards" (the highest government award in China's public welfare and charity field).

Targeted assistance and pairing assistance areas

Sinochem Holdings provides targeted assistance to four banners/counties, including Ar Horqin Banner and Linxi County, Chifeng City, Inner Mongolia Autonomous Region; Gulang County, Wuwei City, Gansu Province (Key Assisted Counties for National Rural Revitalization); and Pingshan County, Shijiazhuang City, Hebei Province. The major assistance indicators all realized significant growth compared to 2022. The Company undertook the honorable task of providing pairing assistance to Gangba County, Shigatse City, Tibet Autonomous Region and Da Qaidam Administrative Region, Haixi Prefecture, Qinghai Province.

93.2 million yuan
Input in helping people in poverty-stricken areas

In 2023, the Company gave away about 93.2 million yuan to help people in poverty-stricken areas. It also provided 95.5 million yuan to people in need, who shall repay the funds in some ways later, and introduced 136 million yuan in assistance funds. The Company implemented 54 assistance projects of various types, including industrial development, compulsory education, basic medical care, housing safety, and drinking water safety; and 10 cadres serving temporary posts and 62 agricultural science and technology commissioners were sent to train more than 19,000 grassroots cadres and professional talents. The Company purchased and helped sell agricultural products in poverty-stricken areas worthy of 214 million yuan, and helped Linxi County become a "National Demonstration County for Rural Revitalization."

3. Educational Assistance

Sinochem Holdings adheres to the principle of prioritizing assistance funds to grassroots areas and executing assistance projects to improve people's livelihoods. The Company has invested a total of about 35 million yuan in free assistance funds and attracted about 5.82 million yuan in free assistance funds. It implemented 29 livelihood projects concerning compulsory education, basic medical care, housing safety, and drinking water safety, and firmly held the bottom line of preventing the recurrence of large-scale poverty.

35 million yuan
Input in free assistance funds

Sinochem Holdings implements the "Dream-Fulfilling Actions", "Dream Building Actions" and “Bluestar Classes Aiming for Self-improvement” and other branded student aid projects in 6 assisted areas. It has donated a total of about 5.8 million yuan in grants and 660,000 yuan in scholarships, providing direct assistance to 6,992 students from needy families.

5.82 million yuan
Attracting funds for free assistance

Sinochem Holdings built two teaching buildings for a primary school in Ar Horqin Banner, Chifeng City, benefiting 1,350 students. It also renovated the infrastructure of two primary schools in Linxi County and Gulang County, renovated and expanded the dormitory building of Gangba County Middle School and the Da Qaidam Administrative Committee Kindergarten, and organized more than 100 teachers and students from Da Qaidam to visit Beijing and participate in summer research and study activities.

4. Charity Donations

The Company has been carrying out the charity education project, "Dream-Fulfilling Actions", for 11 consecutive years, and has continuously improved the quality and effectiveness of the project through the "foundation + charitable trust" model. In 2023, more than 22,000 caring employees of the Company voluntarily donated about 5.06 million yuan in scholarships, helping 3,824 students realize their dreams of seeking knowledge and education.

5.06 million yuan
Total donations from company employees for students in need

5. Community Contribution

Chemical Industry Museum

Strive to improve the quality of exhibitions, independently plan special exhibitions such as "Rereading Hou Debang" and "Photo Exhibition of Centennial Chemical Industry Cultural Relics", carry out 101 in-depth online and offline science popularization activities in enterprises, campuses and communities, with more than 40,000 people participating.

Youth Volunteers

There are 128 youth volunteer organizations and 6,230 young volunteers, and 356 youth volunteer service activities were carried out in 2023.

Assisting in Disaster Relief and Reconstruction

Many companies under Sinochem Holdings such as Sinofert, Syngenta (China) Investment, Total Sinochem Oil (TSO) have actively rushed to support the Beijing-Tianjin-Hebei region and other areas affected by heavy rain and floods. They have supported local flood control, disaster relief and post-disaster reconstruction by donating money, transporting relief supplies to disaster areas, and providing oil supplies. They have also provided guidance on post-disaster land maintenance, pest control, and assisted affected farmers in resuming normal production and life.

Rescue Work in Türkiye-Syria Earthquake-stricken Areas

In February 2023, two consecutive 7.8-magnitude earthquakes hit southern Turkey near the Syrian border. The Company has been highly concerned with the safety of its local employees. Prometeon, a subsidiary of Sinochem Holdings, donated 500,000 Turkish liras (about 180,000 yuan) and 50,000 euros (about 540,000 yuan) to relevant disaster and emergency management authority, provided tires for rescue vehicles, and organized blood donation and provided other assistance. The residences of 45 employees in Syngenta Group’s commercial office have been damaged. Syngenta Turkey arranged hotel stays for employees and distributed emergency supplies and food. Syngenta Group has also organized donations to the Turkish Red Crescent, providing onsite medical support, food, shelter and resources. In addition, Elkem has donated to the Norwegian Red Cross to support disaster relief efforts in Turkey and Syria.



03

Governance



Strengthen the Foundation to Improve Governance Efficiency

Sinochem Holdings has always implemented the ESG concept, strengthened its ESG governance capabilities, focused on its main responsibilities and businesses to establish and improve governance mechanisms, strengthened compliance and risk management, adhered to the bottom line of business ethics, and safeguarded the rights and interests of investors. The Company will continuously improve its "excellent operational capabilities", actively explore the balance between its own development and environmental and social benefits, and ensure its stable development.

(I) Responsibility Management

Sinochem Holdings proactively demonstrates its ESG responsibilities, practices and performance to stakeholders by publishing its annual ESG report.

1. Integrating ESG into the Corporate Structure

In order to continuously fulfill its ESG responsibilities, Sinochem Holdings has established a corporate management department to coordinate the management of ESG-related work, and is responsible for the formulation of ESG work plans, ESG information disclosure, and providing guidance to listed companies under Sinochem Holdings on the establishment of ESG systems. The corporate management department established an ESG working group, which is composed of full-time ESG leaders from various departments and strategic business units and responsible for the statistics and collation of ESG data and the execution of specific ESG tasks.

Main Achievements in 2023 ESG Work

■ In March 2023, the Company organized its first special training on ESG, providing comprehensive and systematic training on global ESG policies and regulatory interpretation, ESG ratings, and ESG disclosure requirements of the Beijing, Shanghai, Guangzhou and Shenzhen Stock Exchanges for ESG-related liaison personnel in various departments of the Company's headquarters and full-time ESG personnel of listed subsidiary companies.

■ As the overall ESG management department, the Company's corporate management department has held several ESG exchange meetings with Syngenta Group to effectively communicate on its ESG work planning, ESG operation model and disclosing proposals, to promoted the alignment of its ESG practices acting on international practices.

2. Integrating ESG into Investment Decisions

As a responsible investor, Sinochem Holdings proactively factors ESG concept into its investment decisions. The Company will fully consider ESG-related factors during the selection and evaluation of a project, conduct a comprehensive evaluation on the project, such as persisting in implementing the environmental protection system featuring "three simultaneous operations" (i.e. the supporting environmental protection facilities must be designed, constructed, and put into operation simultaneously with the main work of the construction project), strengthen demonstration and review of the feasibility study in terms of safety, environmental protection, occupational health, energy conservation and emission reduction, etc., highlight environmental contribution, social value and health governance, and promote green and sustainable development.

(II) Governance Structure

Sinochem has established a governance system with clear responsibilities and rights for each department or individual, and the Company strives to keep improving its corporate governance.

1. Board of Directors

The board of directors is the decision-making body for Sinochem Holdings' operations and management. Sinochem Holdings is committed to promoting the diversification of board members. As of the end of 2023, the Company's board of directors had a total of 8 directors, including one female director, 4 external directors, and one workers' director. The directors all have a professional educational background, usually majoring in management, finance, and finance and law, to ensure that the board of directors can exercise its rights, perform its duties and make scientific decisions. During the reporting period, the board of directors held 25 meetings in total.

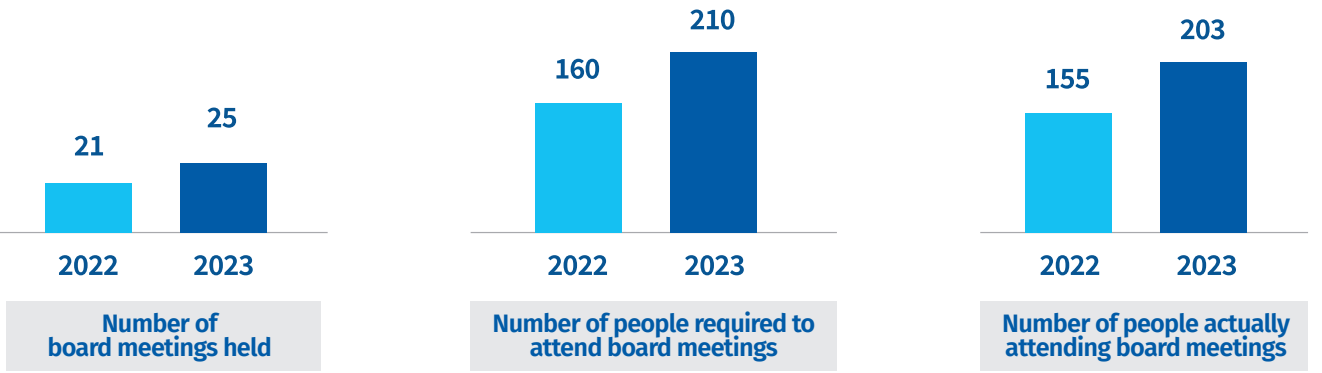
Number of board meetings held during the reporting period

25

Basic Information of Sinochem Holdings' Board Members

Name	Gender	Position
Li Fanrong	Male	Chairman
Jiao Jian	Male	Director
Chen Dechun	Female	Director
Wang Binghua	Male	External Director
Li Yinquan	Male	External Director
Deng Zhixiong	Male	External Director
Wang Mingfeng	Male	External Director
Ren Bing	Male	Workers' Director

Attendance of Directors at Board Meetings



2. Special Committees of the Board of Directors

The special committees of the board of directors are special working bodies of the board of directors, which are responsible to the board of directors and provide consultation and suggestions to the board of directors in its decision-making. Sinochem Holdings' board of directors consists of five special committees, Strategy and Investment Committee, Remuneration and Appraisal Committee, Audit and Risk Committee, Supervision Committee, and Nomination Committee. The Strategy and Investment Committee provides review opinions on the Company's strategic positioning and development direction, as well as major investments and financing. The Remuneration and Appraisal Committee provides review opinions on the assessment plan, remuneration distribution, etc. The Audit and Risk Committee promotes the construction of the Company's risk, internal control, compliance, and accountability system for non-compliant operations and investment. The Supervision Committee strengthens supervision over the rectification of problems discovered in auditing, state-owned asset supervision, and relevant special inspections. The Nomination Committee provides opinions to the board of directors on the appointment of senior management personnel.

Sinochem Holdings has formulated a number of institutional documents, including the Working Rules for Sinochem Holdings' Strategy and Investment Committee of the Board of Directors, the Working Rules for Sinochem Holdings' Remuneration and Appraisal Committee of the Board of Directors, the Working Rules for Sinochem Holdings' Audit and Risk Committee of the Board of Directors, the Working Rules for Sinochem Holdings' Supervision Committee of the Board of Directors, and the Working Rules for Sinochem Holdings' Nomination Committee of the Board of Directors, clarifying the organizational structure, responsibilities and rights, and working procedures of each special committee of the board of directors and ensuring standardized performance of duties.

(III) Governance Mechanism

A standardized governance mechanism is the cornerstone to ensure a company’s sustainable development. As a risk management-oriented company, Sinochem Holdings takes compliance management and business ethics as the bottom line, supervision and management as the lever, and data governance as its backing to strengthen its overseas governance capabilities, protect the legitimate rights and interests of its investors, constantly improve its modern governance capabilities, and create long-term investment value.

1. Risk Management

Sinochem Holdings continues to optimize various risk management systems, including the corporate risk management system, internal control system, compliance management system, and accountability system for irregular operations and investments, and effectively integrates risk management into all its production and operation activities, improves risk prevention capabilities, and ensures the Company's safe and stable operation.

Risk Management System

Sinochem Holdings' board of directors fully plays its role in formulating strategies, making decisions and preventing risks, strictly implements the Company's risk and internal control management, and conducts in-depth review and strict supervision of internal risk control management, including ESG. By effectively identifying and assessing potential risks, actively promoting the prevention and resolution of major risks, the board of directors fully monitors and evaluates relevant systems and implementation effects to ensure the continuity and effectiveness of the systems' operation.

Organizational Structure	Functional Division
Audit and Risk Committee Guide the construction of risk management system	The Board of Directors has an Audit and Risk Committee, which consists of three external directors (including a head of directors). The committee is responsible for guiding the construction of the corporate risk management system, internal control system, compliance management system and accountability system for irregular business and investment operations, supervising the formulation and implementation of the internal audit system, and inspecting and evaluating relevant systems and their implementation.
Chief Accountant Coordinate the construction of an internal control system	The Chief Accountant also serves as the General Legal Counsel and Chief Compliance Officer, and is in charge of the Finance Department and the Legal and Compliance Department. He is responsible for coordinating and promoting the construction of an internal control system that is "risk management-oriented and compliance management and supervision-focused".
Finance Department Risk management and internal control system construction	The Finance Department is the responsible department for the construction of a risk management and internal control system. It has a Risk Management Department under it, which is responsible for coordinating and promoting the daily work of risk management and internal control system construction, supervising various strategic business units and directly-managed units to improve the risk management and internal control work mechanisms, and organizing risk culture training and promotion activities.
Subsidiaries Appoint the first responsible person.	In accordance with the requirements of Sinochem Holdings' risk management system, the principals in charge of each subsidiary of the Company shall be the first responsible persons for the risk management and internal control of their respective units. The management of each unit shall be responsible for the daily operation of the internal control of the unit and shall be accountable to the board of directors of the Company for the effectiveness of risk management and internal control.

Risk Management System

Sinochem Holdings has clearly stipulated that its subsidiary enterprises at all levels shall fulfill their principal responsibilities for risk management and internal control. The principal person in charge of each unit is the first responsible person for the risk management and internal control of the unit. The management of each unit is responsible for the daily operation of the internal control of the unit and is accountable to the board of directors of the Company for the effectiveness of risk management and internal control. In 2023, the Company conducted in-depth analysis on various major risks, including HSE risks, debt risks, compliance risks, etc., formulated specific response strategies and assigned clear responsibilities to departments, established a top-down and interactive regular tracking and monitoring mechanism for major risks, laying a solid foundation for the collaborative construction of a comprehensive risk management and prevention mechanism covering all staff, all procedures and all systems.

Risk Assessment and Response

Sinochem Holdings has established and improved risk prevention and control mechanisms to realize the identification and assessment of major risks. At the end of 2022, the Company launched the annual major risk identification and assessment work and strictly clarified risk management responsibilities for each level of management personnel. By closely focusing on the Company's strategic and business objectives and following the principle of "key areas, key businesses, and significant impacts", the Company has evaluated and identified the top five major risks in 2023, **further unifying the understanding of the major risks faced by enterprises at all levels of the Company in the process of operation and management.** After an overall review at the end of 2023, the Company found out that the top five major operating risks identified by the Company at the beginning of the year were accurate and rational, objectively reflecting the Company's actual operations, and laying a good foundation for effectively preventing and resolving major risks. In terms of responding to major operating risks, **the main responsible departments for major risks and collaborative departments have formed a sound management mechanism of respective responsibilities and joint management,** further improved the risk prevention and control mechanisms, and orderly promoted the integration of risk management with daily operation and management. By continuously tracking, analyzing and reporting on major risk changes, the Company has effectively improved its abilities to warn, analyze, control and deal with major risks.

Risk Culture Building

Sinochem Holdings has continuously strengthened its risk management awareness, comprehensively considered the external environment and internal business situation, and organized various risk culture training and publicity activities from top to bottom to promote the formation of a cultural atmosphere of "Everyone is involved and everyone is responsible". In order to further strengthen the performance capacity of the Company's financial personnel, Sinochem Holdings proactively explored a long-term mechanism for performance management in 2023 and carried out multi-level financial personnel training and annual financial project research, providing solid guarantees for the healthy, stable and sustainable development of the Company.

Risk Management Training Performance of Sinochem Holdings in 2023		
Indicators	Unit	2023
Number of risk management related trainings	Time	1
Risk management related training duration	Hours/person	2
Number of participants in risk management related training	Number of participants	1,380

Special training on false trading

In September 2023, the Company held a special training on false trade business, with a total of more than 1,380 people participating. The special training comprehensively sorted out the regulatory requirements, summarized and analyzed the characteristics of various types of false trade business, standardized relevant inspections and prevention measures, and improved the risk identification capabilities of each subsidiary company for false trade business.

Identification and Prevention of Major Risks

Sinochem Holdings adheres to the principle of "key areas, key businesses, and major impacts", closely focuses on the Company's strategies and business objectives, scientifically identifies major risk types, and implements comprehensive risk management in a practical and meticulous manner.

Risk Prevention Measures	Main Contents
Organize annual major risk assessment	Identify the Company's top five major risks in 2023: HSE risk, international operation risk, debt risk, macroeconomic risk, and compliance risk.
Improve the reporting mechanism for operational risk events	Unify the reporting time limits and procedures for enterprises at all levels, implement full-cycle closed-loop management, and unify the judgment standards for enterprises at all levels; through information technology, summarize various risk events to improve reporting efficiency and accuracy.
Conduct quarterly tracking of major risks	Track and monitor the changes in major risk classification and monitoring indicators on a quarterly basis, prepare a quarterly tracking and monitoring report and submit it to the SASAC.

Digital Transformation Empowers Risk Management

With the advancement of the Company's key digital construction tasks, Sinochem Holdings established a safety production risk map step by step in 2023. The Company fully completed the pilot construction of "Industrial Internet + Hazardous Chemical Process Safety", and effectively improved the capabilities of rapid perception, real-time monitoring, advance warning, and joint handling. In terms of finance, the Company focused on the current status and existing problems of master data, carried out the design of master data systems, standards and platforms, completed the development of the master data systems, and helped promote excellent operations and compliant operations.

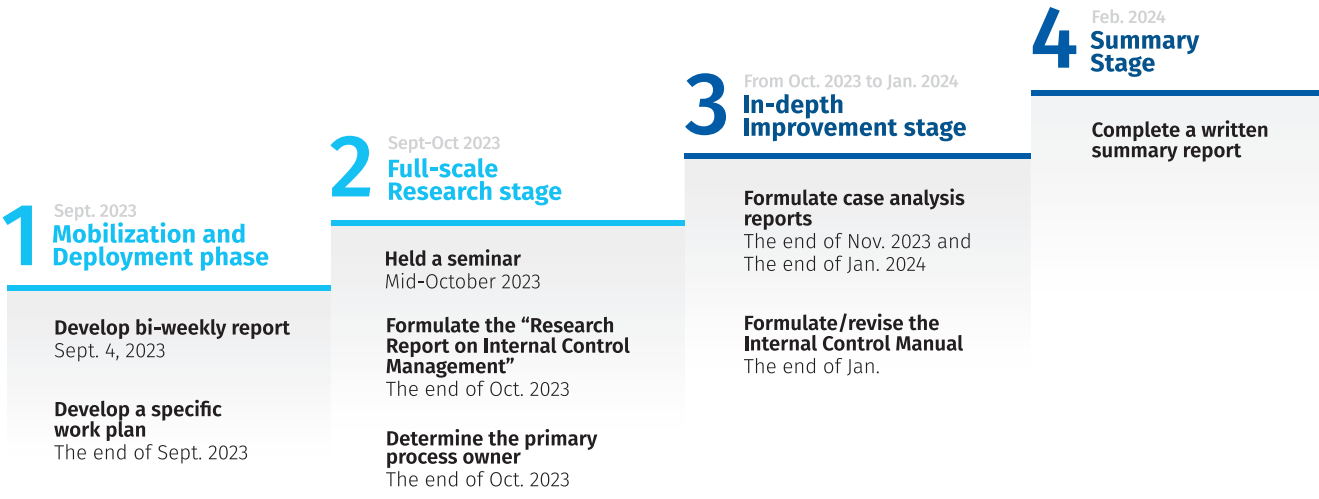
Internal Control System

Sinochem Holdings has always adhered to the goal of "strengthening internal control, preventing risks, and promoting compliance", and has established a strict, standardized, comprehensive and effective internal control system that is risk management-oriented and focuses on compliance management and supervision and continued to improve it.

In 2023, Sinochem Holdings further **promoted the implementation of the Internal Control Standards for Sinochem Holdings (2022 Edition) and in accordance with new demand for optimization and improvement of the internal control system, it improved and released Sinochem Holdings' Internal Control Management Measures (revised in 2023)** in accordance with the requirements of relevant documents such as the Basic Norms for Corporate Internal Control and its supporting guidelines, and the Implementation Opinions on Strengthening the Construction and Supervision of the Internal Control System of Central SOEs.

Launch a Special Project Team to Optimize and Improve the Internal Control System

In September 2023, special working groups for the internal control system optimization and improvement project were set up to further promote the reshaping of the internal control system. The executive team focused on "key enterprises, important processes, and major risks", clarified the key tasks in four stages, namely, "mobilization and deployment, comprehensive investigation, in-depth improvement, and summary and consolidation", and focused on solving common problems in the construction and supervision of internal control systems of enterprises at all levels.



Stage	Key Tasks
Mobilization and deployment	Convene a kick-off meeting to release a work plan that clarifies the priorities of each stage of work and relevant requirements, reaching a consensus on management. All tier-2 units shall respond proactively and set up special working groups, formulate internal control system optimization work plans that are in line with their own industry and corporate characteristics, and strengthened efforts in making leaders at all levels to fulfill their responsibilities and consolidate the foundation of internal control work.
Comprehensive investigation	Focus on key enterprises and establish a long-list and short-list system: supervise each unit to sort out and develop a long list of enterprises that should establish internal control systems. 64 enterprises were selected to be in the short list and regarded as "key enterprises" for establishing such systems, and differentiate the priorities on internal control improvement. Focus on important processes and conduct comparative analysis: 136 enterprises on the long list have completed internal control investigation, sorting out the implementation of 408 "key control requirements" in 14 "important processes" to identify missing control links by comparing with the Internal Control Standards.
In-depth improvement	Promote the implementation of internal control standards and bolster weak areas in management: The Company urged enterprises at all levels to establish or revise the Internal Control Manual, improved the internal control management system, consolidated the internal control foundation, and clarified management rights and responsibilities. Establish an internal control process responsibility system and clarify the responsible person for the process: The Company newly proposed the requirements on establishing an "internal control process responsibility system" in 2023, urged its tier-2 units to confirm their first-level process responsible persons for the Company's 33 internal control standards. Establish an internal control case database and strengthen reflection on internal control deficiencies: Organize all enterprises to conduct internal control case analysis based on the characteristics of their industry, initially establish a case database, and guide all employees to learn from and draw inferences from these cases.
Summary and consolidation	Tareting the goals of "changing in mindset, finding gaps, bolstering weak areas, and laying a solid foundation" for internal control, Sinochem Holdings guided special groups in summarization and analysis to promote the transformation and upgrading of the results of the special actions on a larger scale.

Carry out Publicity and Promotion of Internal Control Management

To prompt all of its employees to establish a bottom-line thinking and implement internal control responsibilities, Sinochem Holdings organized special activities such as "Top Leader Talks about Internal Control", released 4 issues of Internal Control Special Journal, shared 23 basic internal risk control tips, 8 typical cases on internal control deficiencies, and 4 corporate management practices and experiences, effectively enhancing internal risk control exchanges and internal risk control awareness of all employees.

Sinochem Holdings’ Achievements in Internal Control Management Training in 2023		
Indicators	Unit	2023
Number of internal control system related trainings	Time	1
Duration of internal control system related training	Hours/person	3
Number of participants in internal control system related training	Number of participants	2,036

Special activities on "Top Leader Talks about Internal Control"

10 tier-2 units, including Luxi Chemical, Strategic Business Unit of Chlor-Alkali, and China National Chemical Equipment, organized the "Top Leader Talks about Internal Control" activity to accelerate the improvement of their internal control system construction capabilities and ensure the effective operation of these enterprises’ overall internal risk control standards.



2. Compliance Management

In 2023, the Company continued to improve and perfect its rules and regulations, constantly consolidating the foundation of its legal and compliance management system.

First, the legal compliance review rate of rules and regulations, economic contracts and important decisions reached 100% by revising and implementing the Regulations on the Management of Sinochem Holdings’ Legal Affairs, the Regulations on the Management of Sinochem Holdings’ Legal Compliance, the Regulations on the Management of Sinochem Holding’s Litigation and the Regulations on the Management of Sinochem Holding’s Contracts. Second, the Company formulated and published special manuals such as Sinochem Holdings’ Export Management Compliance Manual, emphasizing that key business personnel should master the necessary expertise required by their jobs and relevant rules, and guiding subordinate companies to formulate special compliance manuals based on their business characteristics. Third, the Company drew up the Compliance Risk Identification List, the Compliance Responsibilities List for Different Posts and the Compliance Process Control List, which covered key businesses, key procedures and key positions, helping identify compliance risks, issue timely warnings, and optimize the operation and coordination of various management procedures.



Sinochem Holdings' Compliance Management Performance in 2023



Promoting the Construction of Compliance System

In 2023, Sinochem Holdings used the above-mentioned regulations to continuously strengthen the legal and compliance review and further enhance the rigidity of compliance review. For review and research matters involving legal and compliance issues, legal and compliance opinions are sought at the topic raising stage; during the topic review and research stage, the General Counsel/Chief Compliance Officer and the Legal and Compliance Department shall participate in/attend the meeting and provide professional opinions. The legal and compliance regarding the subject qualifications, asset ownership, transaction plans, approval processes, etc. shall be reviewed. The Company also urged the compliance review capacity building of various functional departments in 2023.

The Company strictly follows the legal review standards for contracts, pays attention to the compliance review of key legal clauses and key processes, and publishes Sinochem Holdings’ Anti-Commercial Bribery Model Clauses to promote fair transactions among all entities of the Company, and to conduct business activities and participate in competition in accordance with the law. In The Company headquarters has published three types of standard contract texts, urged strategic business units, directly affiliated subsidiaries and subordinate enterprises to establish standard contract texts that meet the business characteristics of each sector, and effectively strengthened risk prevention in the contract field.

The Company strictly conducts pre-compliance review of authorization management, strengthens the consistency review of business types and indicators for key business authorizations such as derivatives, pays attention to changes in authorizers and authorized persons, and adjusts authorization documents in a timely manner.

Strengthening Compliance Risk Management

Sinochem Holdings tracks risks in a timely manner and issues risk warnings regularly. It tracks the dynamics of foreign-related legal risks on a daily basis and has issued a total of 30 risk warning letters on external sanctions measures, sensitive legislative trends, etc. It issues special compliance risk warnings for different business areas and foreign-related risk points of its tier-2 companies. It regularly sorts out and summarizes Chinese and foreign policies and regulations, and publishes quarterly reports on sanctions data and Chinese and foreign legislation and law enforcement dynamics.

The Company regularly conducts compliance risk checks and responds to them proactively and properly. It conducts one-on-one on-site checks, training, and guidance on key risks such as supply chain and trade compliance for relevant companies. It has effectively responded to multiple investment security reviews by foreign governments and prevented a spillover of risks.

The Company persists in improving compliance supervision, building a solid "three lines of defense" for compliance management, and focusing on top-down design and strengthening organizational leadership according to relevant work requirements. The Company clarifies its leading group's unified leadership position in accountability investigation, and it is responsible for reviewing the accountability handling plan, issuing handling decisions, and strengthening the seriousness and deterrence of accountability investigation. The leading group has innovated the joint meeting working mechanism, planned and deployed the accountability investigation in a coordinated manner, studied and reviewed important matters in the accountability investigation, and ensured the standardization and organization of accountability investigation. It also consolidated the cross-departmental joint investigation method, clarified the division of responsibilities, gave full play to the strengths of all parties, formed a working synergy, and improved the professionalism and fairness of accountability investigation.

Comprehensive Management of Legal Disputes

Litigation case management system	The Company formulated the Management Measures for Sinochem Holdings’ Litigation, which fully stipulates the litigation management institutions and their responsibilities, litigation case management mechanisms, mediation and reconciliation management, litigation management supervision, etc. The Company carried out special management on its litigation cases, and continued to drive the "promotion of management through cases and generating profits through management".
Analysis of controversial governance events	The overall risk caused by Sinochem Holdings' legal disputes and cases is controllable. The practice of "using cases to promote management" has been proved effective, and the total number of cases has remained stable, the growth momentum has been effectively curbed, and the case settlement rate has remained at a high level. The Company's legal dispute and case management has shown a healthy and orderly development, and has achieved good results in "reducing the number of existing cases and controlling the increase in new cases".

Building a Legal Compliance Culture

Sinochem Holdings continues to build a legal compliance culture, promote the construction of the General Counsel/Chief Compliance Officer system, appoint the Deputy General Manager, a member of the leading group, as the General Counsel of Sinochem Holdings and the Chief Compliance Officer of the Company concurrently. The Company organizes the formulation of a list of regulations and national laws that company leaders should be aware of, and urge leading cadres to take the lead in respecting, studying, abiding by and utilizing the law. It fully respects the legal and compliance review opinions on major decision-making matters related to the Company's collective research/decision-making, as well as the Company's articles of association and amendments to the articles of association. The Company has further strengthened the compliance review of its external publicity contents, assisted relevant tier-2 units in formulating external publicity compliance review guidelines. The Company has deepened its understanding of foreign-related legal work, and firmly established the international business philosophy of compliance with the law and not crossing the red line.

Carrying out legal publicity and education activities

External training - The Company actively participates in the "Legal Lecture" series of trainings organized by the State-owned Assets Supervision and Administration Commission of the State Council. It participates in the domestic and foreign operator concentration and antitrust review training, the legal compliance risk management training for the subsidiaries of central SOEs, the antitrust law training, and the data property rights training, and continuously improves the legal awareness of all employees.

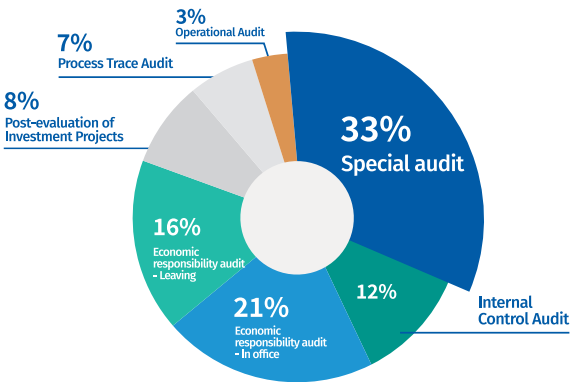
Internal training - The Company carries out compliance management and new employee training in key areas, training on foreign-related policies and regulations, training on the revised Company Law, special training on compliance in international engineering contracting, criminal compliance training, etc., to broaden employees' horizons, and it also adheres to the principle of applying what one learns, promoting learning through application, and combining learning and application for growth, so as to improve personal qualities and professional abilities of its employees.

Audit System and Its Implementation

In 2023, Sinochem Holdings firmly strived to meet the general requirements of building a "centralized, unified, comprehensive, authoritative and efficient" audit supervision system, and continued to strengthen internal audit supervision. The Company revised and improved seven internal audit systems and procedures, including Sinochem Holdings’ Management Measures for Economic Responsibility Audit, Sinochem Holdings’ Management Measures for Internal Control Evaluation, Sinochem Holdings’ Management Measures for Post-Evaluation of Investment Projects, and Sinochem Holdings’ Management Measures for Follow-up Audit of Engineering Construction Projects. It also issued the Implementation Plan for Comprehensively Improving the Quality of Audit Work, strengthened the construction of the audit team of the headquarters and tier-2 units, established a mechanism to coordinate the "audit plans, projects, resources, and rectification", and deepened the reform of the internal audit system. Through economic responsibility audit, special audit, internal control evaluation, post-investment evaluation and other means, the Company focused on audit supervision in major business areas and key procedures, proactively promoted rectification and strictly investigated and dealt with violations of laws and regulations, provided strong audit guarantee for the Company's high-quality development.

Sinochem Holdings’ Achievements in Audit Work in 2023

The Company's Leading Group and Board of Directors approved 123 audit projects at the beginning of the year. Due to changes in the organizational structure of some units, 9 projects were cancelled and 20 projects were added. A total of 134 audit projects were actually carried out, 1,417 problems were found, and the execution rate of the projects was 100%.



Focusing on major strategic issues and the execution of investment projects, Sinochem Holdings conducted 9 process tracking audits and 11 post-evaluations to continuously improve its project management capabilities.



Focusing on asset quality, operational efficiency and internal control effectiveness, Sinochem Holdings conducted 44 special audits, 20 internal control audits and operational audits, and continuously strengthened the awareness of compliance operations.



Focusing on the performance of business unit leaders, the Company conducted 50 economic responsibility audits to steadily improve the quality and efficiency of the Company's operations and management.



In order to fulfill its overseas supervision responsibilities, Sinochem Holdings has carefully studied the SASAC's requirements for audit supervision of overseas enterprises and assets. In accordance with the Company's management principles on overseas enterprises and taking full account of the characteristics of overseas enterprises, the Company has used overseas audit projects as a pilot and continued to explore differentiated audit supervision methods. It has made initial progress and helped prevent operational risks of overseas enterprises.

Developing a new model for overseas audits

Sinochem Holdings viewed the special audit of supply chain management of Prometeon's Brazilian factory as a pilot project. The shareholder proposed the audit requirements and formulated the audit plan, which was implemented by the overseas internal audit team. The domestic and overseas teams collaborated to develop a new overseas audit model.

New breakthrough made in on-site overseas joint audit

Followed the Syngenta Nantong site supply chain audit which conducted by the auditors of Syngenta Group, the subsidiary of Sinochem Holdings, in 2022, they took the compliance investigation opportunity of Syngenta Group's seed sales in Brazil, sent the staffs to Brazil to conduct joint audits with Syngenta Group's compliance team in 2023.

To cultivate a good audit team and expand the strength of its audit professionals, the Company continuously improves the professional capabilities and work quality and efficiency of its audit teams through horizontal "internal promotion + external supplementation" and vertical "two-way exchange", so as to promote the high-quality development of its audit work.

Sinochem Holdings’ Audit Management Performance in 2023		
Indicators	Unit	2023
Audit related training sessions	Number	3
Audit-related training hours	Hours per person	42.5
Audit-related training	Number of participants	1,006

"Two-way Exchange" of audit talents

In 2023, the Company sent 3 audit talents to its subordinate tier-2 units, Sinochem Bluestar, China National Chemical Equipment, and Sinochem Information Technology, meanwhile, 15 audit backbones from tier-2 units were transferred to participate in the Company's major audit projects through secondment and job rotation, optimizing audit resources and cultivating audit talents through on-the-job training.

Internal audit earns honor

The Selection Committee of “Advanced Collectives and Exemplary Individuals” of the China Institute of Internal Audit awarded the Audit Department of the Chemical Business Unit of Sinochem and the head of the Audit and Compliance Department of Sinochem’s Strategic Business Unit of Chlor-Alkali the titles of Advanced Internal Audit Collective and **Exemplary Individual** in 2020-2022 respectively, and the Company’s audit work was fully recognized by the institute.

Audit Rectification and Implementation

In 2023, Sinochem Holdings clarified the principles for rectification of problems discovered during audits, formulated standards for rectification based on the grading and classification, and laid a solid foundation for the comprehensive and effective rectification of audit issues. The Company strictly implemented the rectification measures of "drawing inferences about other cases from one instance, publicizing cases, looking back inspections, major projects, follow-up reporting, and same-direction supervision"; audit teams at all levels firmly followed the principle of "three no-tolerances", strengthened the tracking and rectification of problems discovered during internal audits, adhered to the integrated promotion of revealing problems, standardizing management, and boosting reform, and took multiple measures to ensure that problems discovered during audits are truly rectified, so as to ensure the Company’s legitimate, compliant, and efficient development.

Audit and Rectification Achievements in 2023

100%

The completion rate of rectification of problems (before the deadline)

289

New & revised regulations

93%

The remaining issues need long-term rectification and will be rectified on time

32

Number of people held accountable

Cut spending in investment projects with audit

Audit teams at all levels of the Company summarized ten experiences and ten lessons to improve quality and efficiency and optimize investment through post-project evaluation and process tracking audits, and shared problems and analyzed cases at the Company's special investment management meetings to further strengthen synergy and promote the closed loop of investment management. Through audits on investment project, the Company helped recover unreasonable expenditures and cutting the spending on projects by "deduction via audits" (deduction amount = amount submitted by the construction unit for review - amount approved by the audit team), totaling 65.34 million yuan.

4. Business Ethics

As a leading chemical conglomerate with businesses all over the world, Sinochem Holdings has always adhered to business ethics and complied with domestic and local antitrust, competition and trade related laws and regulations in foreign countries. The Company upholds legal operations and fair competition, opposes any form of monopoly, bribery and other illegal behaviors, and conducts business activities in a responsible manner.

Antitrust

The Company has formulated the Sinochem Holdings’ Antitrust Compliance Manual. From the connotation and extension of monopoly behavior, the Company is required to properly handle relationships with its competitors, suppliers, customers, and industry associations, planning and implementing investment and M&A transactions and properly responding to investigations by law enforcement agencies. The manual interprets and guides antitrust compliance, and clarifies relevant work requirements.

Anti-corruption

The Company has formulated institutional documents such as the Sinochem Holdings’ Anti-Commercial Bribery Compliance Manual to interpret the connotation of commercial bribery and put forward compliance requirements for business practices. At the same time, the Company continues to improve the effectiveness of supervision and intensify efforts in case handling, and resolutely investigate and deal with issues such as relying on enterprises to make profits and doing business in violation of regulations. It also focuses on deepening rectification in key areas and procedures such as project construction, major investments, material procurement, and grain purchase and sales, and resolutely and severely deals with disciplinary offences, so as to facilitate the Company to make new achievements in its anti-corruption work.

5. Overseas Governance

In 2023, Sinochem Holding’ overseas employees accounted for more than 40% of its total headcount, overseas assets accounted for more than 50% of its total assets, and overseas revenue accounts for 60% of its total revenue. To enable good operation, development, and management of overseas enterprises and good collaboration with them is of great importance to the overall development of the Company.

50%+

Contribution of overseas assets to total assets

60%

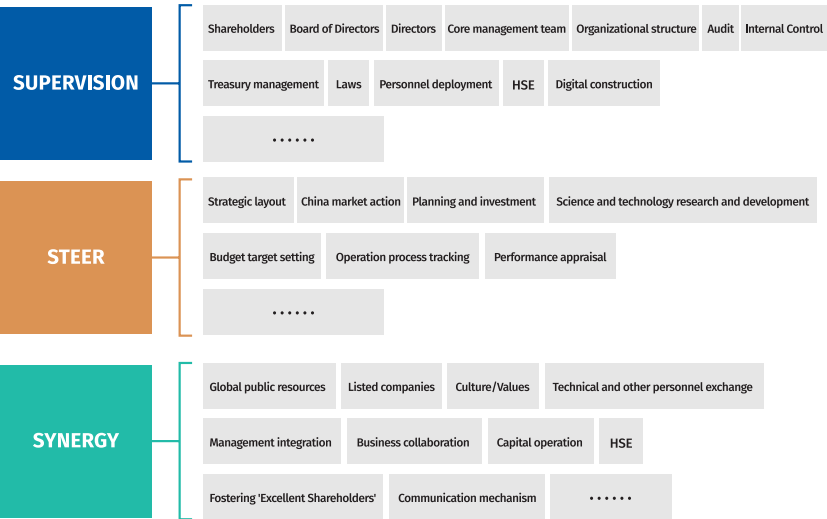
Contribution of overseas revenue to total revenue

Sinochem Holdings takes board governance as the main line, overall strategy as the orientation, authorization and entrustment as the support, assessment and incentives as the means, scientific and technological innovation as the focus, international talent capabilities as the guarantee, cultural integration as the foundation, and fully combines the common rules of MNC governance with the requirements for SOE governance to explore and form a "3S" governance framework for its overseas enterprises from the three dimensions of shareholder governance and supervision, strategic guidance, and offering of support, further improving the Company’s cross-border business management efficiency and risk prevention capabilities.

Sinochem Holdings’ “3S” Governance Framework for Overseas Enterprises

Sinochem Holdings’ “3S” Governance Framework for Overseas Enterprises

consists of governance in three dimensions: Supervision, Steer, and Synergy, each of which includes several governance elements. The governance framework features both a broad spectrum and openness (broad spectrum: Shareholders determine the corresponding factor indicators based on their staged concerns, and then implement classified policies and differentiated governance; openness: the governance keeps pace with the times. As Sinochem Holdings' overseas corporate governance needs change, the indicator elements under each "S" segment can be dynamically adjusted, with new updates on the contents.



Sinochem Holding' overseas corporate governance enters a new stage

In 2023, Chairman Li Fanrong and his delegation visited Switzerland, France and Norway to conduct on-site investigations of the Company's Syngenta Group, Adisseo and Elkem factories, R&D centers, and corporate headquarters, and had cordial exchanges with overseas employees.

Participate in the CIIE to promote global trade exchanges:

The Company participated in the CIIE for the sixth consecutive year in 2023, reporting a record high of total procurement (>US\$13.5 billion); its four overseas subsidiaries participated in the exhibition, with total sales exceeding US\$1.8 billion.

Overseas companies continue to increase their investment in the Chinese market:

Syngenta Group continues to expand its presence in the Chinese market, with its two core businesses of crop protection and seed industry seizing absolute leading market shares in China. Prometeon tires are used in public transportation systems in cities such as Chongqing. Adisseo enables rapid growth in the global liquid methionine business, and will build a solid methionine plant with an annual production capacity of 150,000 tons in Quanzhou, Fujian. Elkem Silicones has upgraded its Asia-Pacific flagship R&D center in Shanghai to provide more efficient and flexible R&D and application support for the Asia-Pacific region.

6. Investor Relations Management

Sinochem Holdings has formulated the Management Measures for Sinochem Holdings' Listed Company Investor Relations to continuously expand communication with its investors and deepen their understanding and trust in the Company through online and offline interactions.

Open Communication Channels

Sinochem Holdings strives to establish proactive investor relations and improve its multi-level and multi-channel benign interaction mechanism. By encouraging listed enterprises under the Company to communicate with investors through performance briefings, live video broadcasts, telephone conferences, research receptions and other forms, it ensures smooth information exchange between investors and the Company to the greatest extent possible.

Performance briefing of Sinochem Holdings' listed enterprises on Shanghai Stock Exchange

In May 2023, Sinochem Holdings' enterprises listed on Shanghai Stock Exchange (SSE) held a collective performance briefing at the SSE Roadshow Center. The Company's seven enterprises explained their performance to market participants such as investors, the media and industry researchers through on-site exchanges, live video broadcasts and online text interactions.



Standardizing Information Disclosure

Sinochem Holdings has revised and improved the Management Measures for Information Disclosure of Sinochem's Listed Companies, which standardized the information disclosure process, and required listed companies to disclose information to investors in the form of regular reports, interim reports, etc., to ensure that information disclosure is true, accurate, complete and timely, and fully protect investors' right to know.

The Company's Corporate Management Department strengthens the management of information disclosure and requires its listed companies to standardize the preparation of annual reports. In 2023, five subsidiaries of the Company received an A-rating in the stock exchange's annual information disclosure assessment.

Names and Stock Codes of Companies with A-Rating in Information Disclosure	
Sinochem International (600500.SH)	
Yangnong Chemical (600486.SH)	
ADAMA A (000553.SZ)	
Win-All Hi-Tech Seed (300087.SZ)	
Luxi Chemical (000830.SZ)	

(IV) Operational Efficiency Improvement

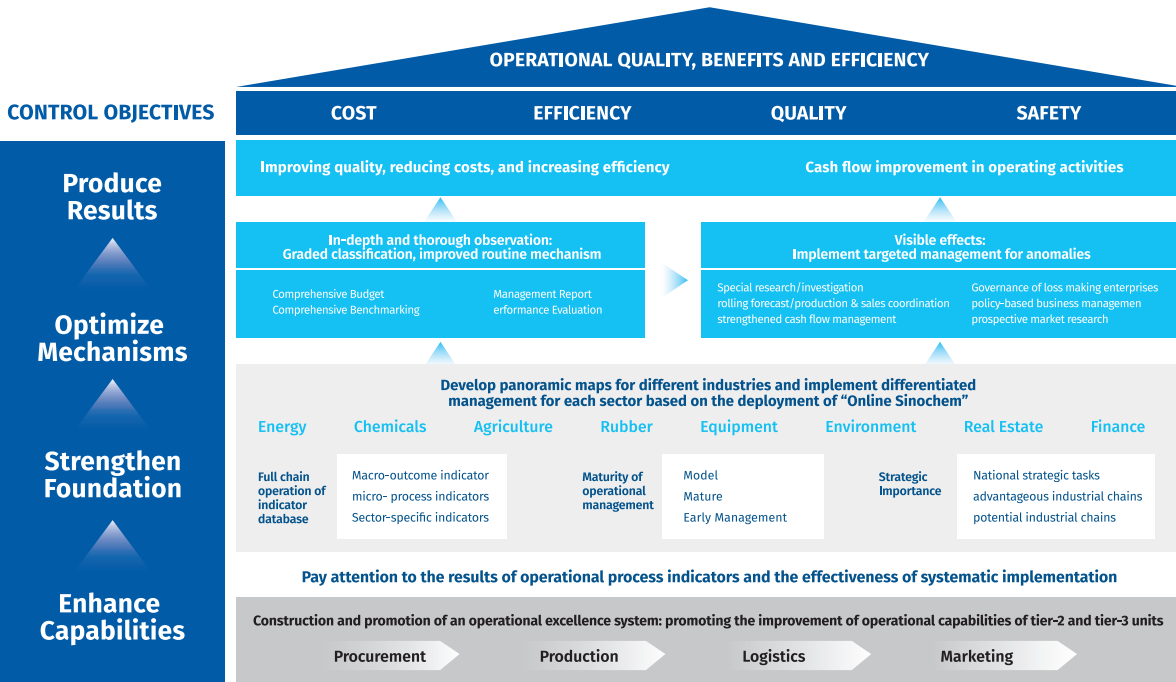
Sinochem Holdings continues to strengthen its operational capability building, strives to create a distinctive culture of operational excellence and collaboration, and promotes the overall improvement of the Company's operational efficiency, quality and capabilities.

1-Objectives	Promote the improvement of the Company's operational efficiency, quality, and capabilities								
2-Culture	Excellent operational culture			Collaborative culture					
3-Levers	KPIs	• Production and operation budget		• Production and Operation Report		• Liquidity forecast	• Production and operation assessment	• Benchmarking management	
	Collaboration	• Collaborative procurement		• Production sharing		• Logistics sharing	• Collaborative marketing		
	Digitization	• Headquarters Production & Operation Management Platform (Key Processes + Core Indicators + Reports)					• Headquarters Production & Operation Management Cockpit (Xiongan Screen)		
4-Professionalism	Loss making enterprises	Procurement		Production		Logistics		Marketing	Policy related business
2-Business		Compliance And Professionalism		Reduce costs, improve efficiency, and control risks		Reduce costs, improve efficiency, and control risks		Promote production & marketing, increase share, improve gross profit margin	
		Compliant procurement Centralized procurement management Supplier Management		Key equipment management Production cost management Process and technology renovation management		Logistics cost management Major risks management Important resources management		Production and sales management Technology Marketing Strategic customer management	
1- Foundation		Unified digital platform		Promote automation and intelligence		Promote the sharing of logistics platforms		Unified Marketing E-commerce Platform	
Excellent operational management system									

1. Operational Excellence

Sinochem Holdings is committed to becoming a leading player in operational excellence. 2023 was the year for Sinochem to enhance its operational excellence capabilities. The Company has improved an operational excellence work mechanism, comprehensively promoted the implementation of an operational excellence management system, focused on process control in key procedures and key elements, and continuously strengthened operational management capabilities at all levels to help the Company achieve high-quality and stable development.

Sinochem Overall work schedule for Operational Excellence in 2023



Management System Construction

Based on the actual situation of the Company, Sinochem Holdings has strengthened the integration and coordination of the excellent operation system with safety and environmental protection, comprehensive benchmarking, supply chain management, 6S management system and other management practices, and promoted the horizontal and vertical connection of the excellent operation and management system. The strategic business units under Sinochem Holdings have accurately formulated differentiated implementation rules based on their management practices and business conditions to promote the implementation and effectiveness of the excellent operation system.

Institutional Construction

Sinochem Holdings benchmarks itself against the world leading enterprises, integrates advanced tools and methods in various management fields, draws on the experiences and practices of external benchmark companies, extracts good practices from internal excellent companies, and formulates 105 institutional documents, including Sinochem Holdings’ Provisions on Administration of Continuous Improvement in 2023, Sinochem Holdings’ Provisions on Administration of operational Excellence Leadership in 2023, and Sinochem Holdings’ Provisions on Administration of Operational Excellence Performance in 2023 in accordance with the framework of the "1+N+1" system. These documents unify the operation management system and process, promote the construction of an institutionalized, process-based, and standardized operation management model, and comprehensively enhance the Company's operation management capabilities at all levels.

Sinochem Holdings’ "1+N+1" System Document Framework	
1 management manual	It is a top-level framework and programmatic document that clarifies core values such as goals and principles, and explains the management logic and core requirements of the PDCA cycle (Plan-Do-Check-Action) in terms of operational leadership, operational processes, operational performance, and continuous improvement.
103 management regulations, methods and guidelines	These are institutional arrangements that clarify the main management requirements and specific tools and methods for the entire value chain operation process from leads to payment collection, including marketing, procurement, production, and logistics.
1 evaluation criteria	It is used to measure the deployment and implementation effect of the system, which conducts a two-dimensional evaluation of the operational management maturity and performance. It is an important tool to promote continuous improvement of operation management and also an important guide for the Company to improve operational management.

Capability Assessment

Sinochem Holdings organized its 79 subordinate enterprises to conduct operation management maturity assessment in the form of "tire-3 enterprises’ self-assessment + tier-2 unit review" and compared the 120 secondary evaluation index standards of the evaluation criteria to find out the current status of the operation management, clarify the rating benchmark, and provide a basis for subsequent operation management optimization.

System Implementation

Using marketing and other key operational procedures as the lever, Sinochem Holdings has found out the real status of the marketing management of strategic business units and key tier-3 BUs through online surveys. The Company organized 36 major tier-3 BUs to share marketing collaboration clues. Moreover, it organized 104 major marketing managers from tier-2 and tier-3 units to carry out a four-week discussion on 10 key marketing modules and held group-level marketing seminars to promote the implementation of system construction and capacity building.

Cultural Construction

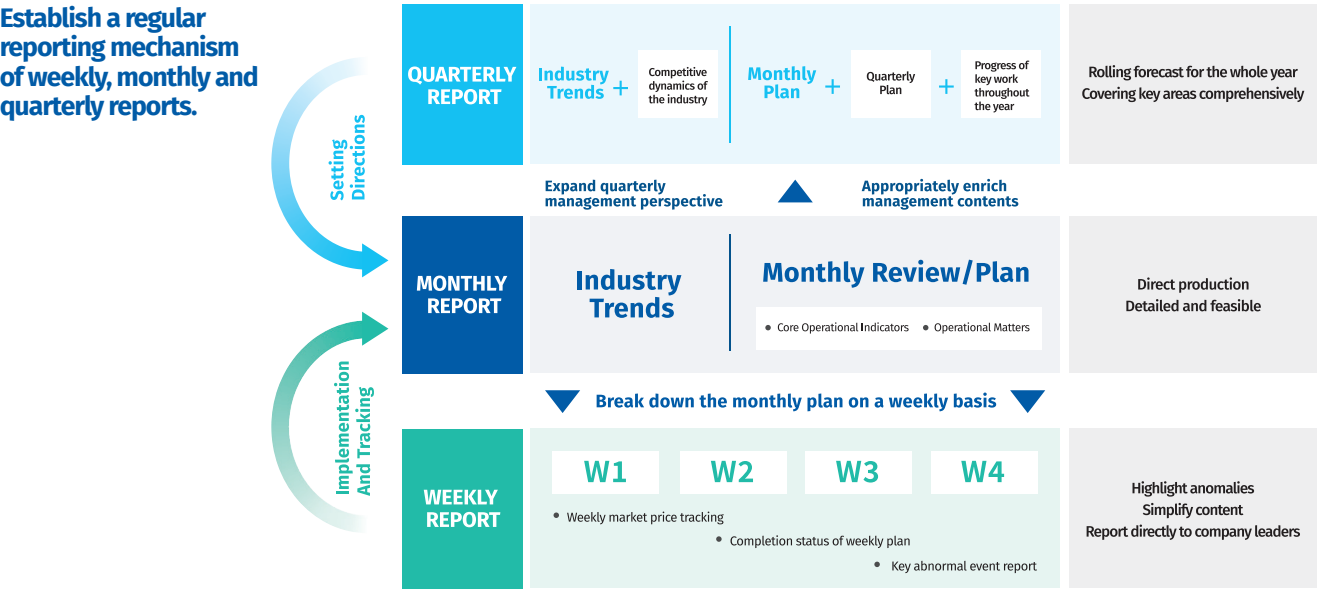
Sinochem Holdings strives to make all its employees to establish the concept of lean management and has organized a full-scale publicity and implementation training covering the headquarters, strategic business units and front-line enterprises. The trainees include senior managers, middle managers and front-line employees in the production and operation lines, and more than 3,000 people have been trained. Sinochem Holdings proactively cultivates a culture of operational excellence, releases posters and micro videos on operational excellence, and conducts multi-scenario visual publicity and takes multiple measures to promote excellence culture into people's minds and hearts.



Operation Process Control

Sinochem Holdings continues to optimize its production and operation reporting system, optimizes meeting mechanism, Kanban system, and performance appraisal mechanisms to comprehensively enhance its operational process monitoring capabilities.

Type	Main Work Content
Optimize production and operation reporting system	Optimize and upgrade the reporting mechanism: the headquarters will change the analysis perspective "from top to bottom", and strategic business units will optimize the reporting content "from bottom to top", and establish a regular reporting mechanism of weekly, monthly and quarterly reports.
	Realize the transformation from "looking back at the past" to "planning for the future" and from "managing indicators" to "managing actions".
	Optimize the production and operation meeting mechanism by letting the headquarters carry out supervision and organize special reports.
Optimize meeting mechanism and Kanban system	Establish a production and operation Kanban board and notification system, and display the progress of core indicator execution on a monthly basis to encourage each unit to increase their sense of urgency, learn from each other, and continuously improve.
	Adhere to the closed-loop management mechanism of business supervision and promote the resolution of key business management issues.
Optimize performance appraisal mechanism	The 2023 performance appraisal plan emphasizes "benchmarking against industry leaders, benchmarking against historical best performers, and benchmarking against goals."
	Explore the implementation of process assessment and highlight process monitoring and management.
	Fully assess the operating difficulty and level of high-quality development, and study the possibility of introducing operating coefficients.
	Adhere to differentiated assessment and fully consider the characteristics of each enterprise in weight arrangement, indicator content and rule design.



Actions to Improve Quality and Efficiency

Sinochem Holdings released the Implementation Plan of Sinochem Holdings on Improving Annual Quality and Efficiency in 2023, which clearly put forward a series of specific tasks for quality and efficiency improvement, forming a good pattern of joint management from top to bottom, and fully ensuring the Company's high-quality development. In 2023, the Company' production and operation costs dropped by 77.4 billion yuan via efficiency improvement.

Target decomposition

Sinochem Holdings adheres to system concept, pays close attention to process supervision, and refines the overall deployment of improving quality and efficiency into clear and specific management requirements, measures and tasks. The Company has issued a series of documents to promote the true execution of the production and operation plan focusing on key procedures of improving quality and efficiency. It held 18 special themed meetings, issued 18 briefings, and refined the task lists of improving quality and efficiency for each unit. In 2023, Sinochem Holdings sorted out a total of 752 measures for improving quality and efficiency of its tier-2 units, including 92 measures to address key and difficult issues and 20 tasks supervised by the leading group.

Actions to enhance efficiency

Adhering to a goal-oriented approach and focusing on key procedures, Sinochem Holdings continues to make efforts in reducing production costs, expanding markets, cutting expenses, and addressing loss problems with a "one company, one policy" approach, taking multiple measures to increase revenue, reduce expenditure, and maintain stable growth.

Sinochem Holdings' Quality and Efficiency Improvement Actions and Performance in 2023

Costs decrease nearly 3 billion yuan by executing projects to reduce production and operation costs

Luxi Chemical, a subsidiary of Sinochem Holdings, reduced costs by 150 million yuan in centralized procurement of raw materials such as coal by means of website benchmarking and reducing excessive stockup of spare parts. Sinochem Quanzhou Petrochemical, a subsidiary of Sinochem Holdings, reduced comprehensive energy consumption by nearly 100 million yuan through benchmarking with similar equipment for optimization. China Jinmao, a subsidiary of Sinochem Holdings, strengthened cost control of projects under construction and reduced expenses by 350 million yuan.

Revenue increases nearly 1.4 billion yuan by intensifying efforts in expanding market

In 2023, liquid methionine sales of Bluestar Adisseo, a subsidiary of Sinochem Holdings, increased by 63% in China from 2022. The gross margin of PC and BPA business in Cangzhou Dahua, another subsidiary of Sinochem Holdings, increased significantly year-on-year; and the profitability of caustic soda business in the Company's Strategic Business Unit of Chlor-alkali continued to improve in 2023.

Financial expenses decrease significantly in 2023, saving a cumulative amount of 690 million yuan

Strengthen the closed-loop management of "budget - process supervision -assessment" and create a new special loss-control model

Budget: Dynamically adjust and determine the list of 25 key loss-making enterprises that the Company will supervise in 2023, implement "one enterprise, one policy" to improve the governance plan for key loss-making enterprises, and relevant personnel are required to sign governance target responsibility letters. By the end of 2023, the 25 key loss-making enterprises managed to reduce losses by 3.2 billion yuan compared to 2022.

Process Supervision: Created a special team governance model and held 7 special team meetings, which clarified 34 issued to be supervised by the team. The model promoted faster resolution of key issues.

Assessment: Scientifically classified and formulated differentiated assessment plans for each unit in 2023, and provided positive incentives to enterprises that surpass their loss reduction targets.

Good ideas on reducing costs and increasing efficiency bear "golden fruits"

The hydrogenation unit of Sinochem Quanzhou Petrochemical, a subsidiary of Sinochem Holdings, has a 3.3Mt/a production capacity and contains two separate reaction series. The cost of replacing catalyst for five reactors in a single series is more than 30 million yuan per year. In 2023, the technical team of Sinochem Quanzhou Petrochemical analyzed the factors that affect the service life of the catalyst, such as pressure drop, metal content of the raw material, residual carbon content, and asphaltene content, and innovatively proposed a combined catalyst replacement scheme, which reduced the catalyst replacement in two cycles for 10 reactors to 8 reactors (residual oil hydrogenation I series catalyst), saving about 16.35 million yuan in catalyst costs each year.

2. Efficiency Enhancement by Synergy

Synergy System

Sinochem Holdings has established a preliminary "full-cycle collaborative efficiency enhancement system" (TOP-VIP system) to promote the upgrade of collaborative work. To achieve the collaborative budgeting goal, the collaborative efficiency enhancement system is transmitted along the collaborative PMO organization to all the enterprises under Sinochem Holdings, and the the entire process of collaborative projects are tracked through the collaborative digital platform. The collaborative projects are required to produce good results and make profits, and the profits created by the collaborative projects are cross-checked with financial data. Sinochem Holdings continues to expand its collaborative practices, and the core concept of the "full-cycle collaborative efficiency enhancement system" is to systematically promote the continuous upgrading and high-quality development of the collaboration in practice, create collaborative value, cultivate collaborative culture, and build up Sinochem Holdings' lasting collaborative competitiveness.



Maximizing overall benefits 1+1>2 → ∞ Constant collaboration

Achievements in Synergy

Sinochem Holdings proactively explores and releases internal synergy potential, and continuously improves the Company's professional management capabilities through collaborative work. In 2023, Sinochem Holdings achieved remarkable results in the fields of deep business integration, strategic synergy exploration, quality and efficiency improvement in centralized procurement, pilot projects in overseas enterprise management and control, cleanup and exit of inefficient and invalid equities, and guidance on organizational structure optimization. The Company implemented more than 700 collaborative projects in 2023, achieving a revenue of more than 10 billion yuan.

Sinochem Holdings' Achivements in Efficiency Enhancement by Synergy in 2023	
Field	Achievements
Collaborative system construction	Optimized the collaborative system and form a closed-loop management; Released two batches of lists for 30 internal suppliers and 57 categories of internal superior products; Established a mechanism for approval in the event of non-collaboration.
Strategic synergy exploration	Promoted strategic collaborative projects such as automotive materials and building materials.
Quality and efficiency improvement in centralized procurement	The Company carried out special governance on bidding and tendering, conducted on-site inspections on more than 600 bidding and procurement projects, and launched short-, medium- and long-term governance measures and promoted the construction of a digital procurement platform. It also strengthened overall planning, realized centralized procurement of coal, phenol/acetone and electricity, cutting spending by 130 million yuan.

Business Collaboration

Focusing on its core responsibilities and businesses, Sinochem Holdings has actively promoted internal integration and synergy among various business areas to achieve resource sharing, efficiency improvement, complementary advantages, and risk diversification, and to continuously create value for the Company.

Project Synergy

Innovate collaborative mechanism and jointly build collaborative projects

The Pressure Swing Adsorption (PSA) technology developed by the Southwest Research & Design Institute of the Chemical Industry (SWRDICI), a subsidiary of Sinochem Holdings, was used in the hydrogen purification PSA unit of the 200,000 Nm3/h reforming unit, the hydrogen purification PSA unit of the 5,000 Nm3/h dry gas refining unit, and the 1Mt/a ethylene production unit of Quanzhou Petrochemical, another subsidiary of Sinochem Holdings. The construction of the waste gas and waste liquid disposal units of the 260kt/a acrylonitrile project of Quanzhou Petrochemical will be completed by Sinochem Environment, a subsidiary of Sinochem Holdings, to achieve project and business synergy in a broader sense.

Product Synergy

Building a new bridge of collaboration to jointly develop new products

Sinochem Holdings has carried out internal benchmarking and collaborative communication on BPA products. Through a four-week survey, nearly 20 on-site exchanges, and five experience sharing reports, a quarterly collaborative exchange mechanism for BPA products involving 4 units was established, and internal benchmarking tools were used to further explore in-depth collaborative opportunities.

Industry-Finance Synergy

Sinochem Capital makes new progress in its main business of industrial financing

In 2023, Sinochem Capital, a subsidiary of Sinochem Holdings, continued to strengthen its core businesses in accordance with the company's positioning of an industrial financing service provider and an investment platform. In terms of industrial finance, it proactively served core industrial sectors such as agriculture and chemicals, with a cumulative loan of more than 11 billion yuan. In terms of industrial investment, it focused on the "10+9" industrial chain, with an investment of more than 700 million yuan. Sinochem Capital thus further expanded the breadth, depth and precision of its services in the main responsible business segments.

Business and Financial Synergy

Establish and Operate Sinochem Treasury Management System

At the beginning of 2022, the State-owned Assets Supervision and Administration Commission of the State Council issued the Opinions on Promoting Central SOEs to Accelerate the Construction of Treasury Systems and Further Strengthen Fund Management. Sinochem Holdings proactively benchmarked the treasury construction experience of outstanding central SOEs to promot the construction of its own treasury system.

As of the end of 2023, the Company built a “Trinitarian” treasury management organization, which will develop a treasury management system and continue to improve it, and build a treasury information system and carry out a full-scale promotion campaign. The Company's treasury management has achieved remarkable results, with indicators such as account concentration and capital concentration achieving double-digit year-on-year growth, and financing costs significantly declined. Especially in debt financing risk management and liquidity risk management, Sinochem Holdings has developed its own characteristics in treasury management, and the treasury management organization has made great contributions to the Company in improving capital management, consolidating the foundation of risk management, empowering and supporting business decisions, and comprehensively promoting high-quality development.

2023 Performance Indicator Table

Category	Indicator Name	Yoy Change in 2022	Yoy Change in 2023
Environmental	Carbon dioxide emissions per 10,000 yuan of output value	↓ 4.03%	↓ 1.39%
	Comprehensive energy consumption per 10,000 yuan output value	↓ 7.63%	↑ 1.40%
	COD emissions	↑ 3.48%	↓ 8.31%
	Nitrogen oxide emissions	↓ 4.63%	↓ 3.84%
	Sulfur dioxide emissions	↓ 7.47%	↓ 6.26%
	Ammonia nitrogen emissions	↑ 2.84%	↓ 12.19%
Social	Total investment in process safety	↑ 22%	↑ 10.92%
	Total Recordable Incident Rate (TRIR) per 200,000 man-hours	↓ 31.4%	↓ 35.42%
	Lost Time Injury Rate (LTIR) per 200,000 man-hours	↓ 30.3%	↓ 22.64%
	Total investment in charity	↑ 9.48%	↑ 5.31%
	Rural revitalization support fund	↑ 10.72%	↑ 10.45%
	Employee donations	↑ 10.3%	↓ 9.01%
	Helping students	↑ 7.5%	↓ 11.07%
Governance	Total operating income	↑ 5.2 %	↓ 13.28%
	R&D investment	↑ 10.5%	↓ 0.43%

Note: The total operating income data for 2023, 2022 and 2021 are derived from the financial statements of each year.

Appendix

CASS-ESG 5.0 Indicator Index

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GRI Indicators Index

Instructions: Sinochem Holdings reported the information cited in this GRI Content Index in accordance with GRI standards from January 2023 to December 2023.

GRI 1 used:GRI 1: Foundation 2021

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TCFD Framework Indicator Index

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b) Describe the role of management in assessing and managing climate-related risks and opportunities	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
Strategy Disclose the actual and potential impact of climate-related risks and opportunities on the organization's business, strategy and financial planning (if such information is important)	
a) Describe the climate-related risks and opportunities identified by the organization in the short, medium and long term	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy and financial planning	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
Risk Management Disclose how the organization identifies, assesses and manages climate-related risks.	
a) Describe the process by which the organization identifies and assesses climate-related risks	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
b) Describe the process by which the organization manages climate-related risks	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
c) Describe how to integrate the process of identifying, evaluating and managing climate related risks into the overall risk management of the organization	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
Indicators and Objectives Disclose indicators and objectives for evaluating and managing relevant climate related risks and opportunities (if such information is important).	
a) Disclose indicators used by the organization to evaluate climate related risks and opportunities based on its strategies and risk management processes	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism
b) Disclose Scope 1, Scope 2 and (if applicable), Scope 3 greenhouse gas (GHG) emissions and associated risks.	Environmentally Friendliness, Green Circulation - Addressing Climate Change - Climate Management Mechanism

Table of Company Name Abbreviations

Abbreviation	Full Name	Abbreviation	Full Name
Sinochem Holdings	Sinochem Holdings Co., Ltd.	Rubber Company	China National Tire & Rubber Co., Ltd.
Elkem Xinghuo Silicones	Jiangxi Bluestar Xinghuo Silicones Co., Ltd.	Xinghuo Aerospace	Jiangxi Xinghuo Aerospace New Materials Co., Ltd.
ADAMA	ADAMA Co., Ltd.	Yangnong Chemical	Jiangsu Yangnong Chemical Co., Ltd.
Adisseo	Adisseo France S.A.S	Yangnong Ruitai	Ningxia Ruitai Technology Co., Ltd.
Anhui Shengao	Anhui Shengao Chemical Technology Co., Ltd.	Yangnong Youjia	Jiangsu Youjia Plant Protection Co., Ltd.
Beijing Cleaning	Beijing Bluestar Cleaning Co., Ltd.	Yiyang Rubber Machinery	Yiyang Rubber and Plastic Machinery Group Co., Ltd.
Beijing Rubber Institute	Beijing Research & Design Institute of Rubber Industry Co., Ltd.	Yangzhou Huayu	Yangzhou Sinochem Huayu Environmental Protection Co., Ltd.
Cangzhou Dahua	Cangzhou Dahua Group Co., Ltd.	Youke Plant Protection	Jiangsu Youke Plant Protection Co., Ltd.
Dezhou Shihua	Dezhou Shihua Chemical Co., Ltd.	China Haohua	China Haohua Chemical Group Co., Ltd.
ELIX Polymers	ELIX Polymers S.L	CNCIC	China National Chemical Information Center Co., Ltd.
Elkem	Elkem ASA	China Jinmao	China Jinmao Holdings Group Co., Ltd.
Aeolus Tire	Aeolus Tire Co., Ltd.	China Bluestar	China National Bluestar (Group) Co., Ltd.
Harbin Petrochemical	China Bluestar Harbin Petrochemical Co., Ltd.	CFETT	China Foreign Economic and Trade Trust Co., Ltd.
Hangzhou Water Treatment	Hangzhou Water Treatment Technology Research and Development Center Co., Ltd.	Zhonghao Chenguang	Zhonghao Chenguang Research Institute of Chemical Industry Co., Ltd.
Haohua Junhua	Haohua Junhua Group Co., Ltd.	SCFC	Sinochem Commercial Factoring Co., Ltd.
Haohua Technology	Haohua Chemical Technology Group Co., Ltd.	Sinochem Finance	Sinochem Finance Co., Ltd.
Heilongjiang Haohua	Heilongjiang Haohua Chemical Co., Ltd.	Total- Sinochem Oil (TSO)	Sinochem Total Oil Products Co., Ltd.
Jinmao Services	Jinmao Property Services Co., Ltd.	Sinochem Orient	Sinochem Orient Shanghai Petrochemical Terminal Co.,Ltd.
Science and Technology Institute	Sinochem Chemical Technology Research Institute	Sinochem Fuling	Sinochem Chongqing Fuling Chemical Co., Ltd.
Krauss	KraussMaffei Company Limited	Sinochem High Performance Fiber	Sinochem High Performance Fiber Materials Co., Ltd.
KraussMaffei	KraussMaffei Group GmbH	Sinochem International	Sinochem International (Holdings) Co., Ltd.
Lantian Fluorine Materials	Sinochem Lantian Fluorine Materials Co., Ltd.	Sinochem Environment	Sinochem Environment Holdings Co., Ltd.
Bluestar Adisseo	Bluestar Adisseo Co., Ltd.	Sinochem Energy Conservation	Sinochem Energy Conservation Technology (Beijing) Co., Ltd.
BCMC	Bluestar (Beijing) Chemical Machinery Co., Ltd.	Sinochem Lantian	Sinochem Lantian Group Co., Ltd.
Bluestar Dongda	Shandong Bluestar Dongda Co., Ltd.	Sinochem Lianyungang Industrial Park	Sinochem Lianyungang Industrial Park Management Co., Ltd.
Bluestar Engineering	Bluestar Engineering Co., Ltd.	Sinochem Energy	Sinochem Energy Co., Ltd.
Bluestar Nanjing Adisseo	Bluestar Adisseo (Nanjing) Co., Ltd.	Sinochem Energy Logistics	Sinochem Energy Logistics Co., Ltd.
Luxi Chemical	Luxi Chemical Group Co., Ltd.	Sinochem Agriculture	Sinochem Modern Agriculture Co., Ltd.
Pirelli	Pirelli & C	Sinochem Quanzhou Petrochemical	Sinochem Quanzhou Petrochemical Co., Ltd.
Prometeon	Prometeon Tyre Group S.r.l	Sinochem Quanzhou Park	Sinochem Quanzhou Park Development Co., Ltd.
Win-All Hi-Tech	Win-All Hi-Tech Seed Co., Ltd.	Sinochem HK	Sinochem Hong Kong (Group) Co., Ltd.
Sennics Shangdong	Sennics Co., Ltd. Shandong	Sinochem Xinbao	Sinochem Hebei Xinbao Chemical Technology Co., Ltd.
Shanna Company	Shanna Synthetic Rubber Co., Ltd.	Sinochem IT	Sinochem Information Technology Co., Ltd.
Shenyang Chemical	Shenyang Chemical Co., Ltd.	Sinochem Assets	Sinochem Asset Management Co., Ltd.
Shenyang Kechuang	Shenyang Kechuang Chemicals Co., Ltd.	Sinochem Yunlong	Sinochem Yunlong Co., Ltd.
Shenyang Institute	Shenyang Chemical Research Institute Co., Ltd.	Sinochem Capital	Sinochem Capital Co., Ltd.
Sennics	Sennics Co., Ltd.	Sennics	Sennics Co., Ltd.
Shuguang Institute	Shuguang Rubber Industry Research & Design Institute, Sinochem	Sinochem Yangzhou	Sinochem Yangzhou Petrochemical Terminal Warehousing Co., Ltd.
SWRDICI	Southwest Research & Design Institute of Chemical Industry Co., Ltd.	China Bluestar Chenguang Institute	China Bluestar Chenguang Research Institute of Chemical Industry Co., Ltd.
Syngenta Group (SG)	Syngenta Group Co., Ltd.	China Seed Group	China Seed Group Co., Ltd.
Syngenta (China) Investment	Syngenta (China) Investment Co., Ltd.	CNCE	China National Chemical Equipment Co., Ltd.

Feedback Form

Dear readers,

Thank you very much for taking the time to read this report. In order to enhance its abilities to formulate ESG report and fulfill relevant responsibilities, Sinochem Holdings particularly hopes to hear your opinions and suggestions. Please feel free to give us your advice!

1.Which of the following categories of stakeholders do you belong to?

Governmental agents	Regulatory Authorities	Shareholders and investors	Staff	Clients
Suppliers and partners	Community residents	ESG practitioners	Peer enterprises	Others

2.What is your overall evaluation of this report?

Excellent	Good	Satisfactory	Unsatisfactory	Very unsatisfactory
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3.What do you think of the quality of the ESG information disclosed in the report?

Excellent	Good	Satisfactory	Unsatisfactory	Very unsatisfactory
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4.What do you think of the structure arrangement of the report?

Very reasonable	Reasonable	Satisfactory	Unsatisfactory	Very unsatisfactory
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5.What do you think of the format design of the report?

Very reasonable	Reasonable	Satisfactory	Unsatisfactory	Very unsatisfactory
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6.What do you think of the readability of the report?

Excellent	Good	Satisfactory	Unsatisfactory	Very unsatisfactory
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7.You are welcome to give your opinions and suggestions on Sinochem Holdings’ ESG work and the report here: