



# 2021

## SUSTAINABILITY REPORT



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## Message from the Chairman



### Accelerate to Stride to Become a World-class Enterprise, Comprehensively Enhance Sustainable Value

2021 marks a year of great historical significance for all members in Sinochem Holdings. This year, Sinochem Holdings Co., Ltd. was formally established. We stand at a new starting point for optimizing the structure and layout of the state-owned economy, facilitating China's agricultural modernization, and enhancing the market competitiveness of China's chemical industry.

Over the past year, the new company has firmly followed the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, resolutely implemented the guiding principles of General Secretary Xi Jinping's significant

instructions and the major decisions and deployments of the Party Central Committee, focused on production and operation on the one hand, management integration and business integration on the other, and highlighted the drive for innovation, continuously deepened reform, kept improving risk prevention and control, carried out high-standard Party history learning and education, fully achieved annual performance goals, and made latest significant progress on the journey to building a world-class chemical conglomerate. Each member of Sinochem Holdings has been greatly inspired.

The establishment of Sinochem Holdings is of vital significance. It is a very valuable strategic starting point, which is also a remarkable opportunity to uplift the industry status and competitiveness. This enables us to rank among the world's leading chemical companies. More importantly, it renders us to find a clear development direction and goal that closely aligns with the national strategy and demands, and is determined to build a technology-driven innovative, and world-class chemical conglomerate, each member should fully recognize our responsibilities, missions, and undertaking. How to continuously improve our technological innovation capability, core

competitiveness, and sustainable development capability? How to better and sustainably create maximum value for society, clients, shareholders, and employees? How can Sinochem Holdings contribute to the development of the industry and social progress? These questions of the times await our answers.

**Increasingly adhering to the concept of sustainable development.** Confronted with great changes unseen in a century, the reform of the global governance system and the international order keeps reshaping, multiple risks are intertwined, and challenges are increasing. However, it cannot be ignored that promoting stronger, greener, and healthier global development remains the theme of the times and a consensus. On a global scale, SDG (United Nations Sustainable Development Goals), CSR (Corporate Social Responsibility), and ESG (Environment, Society, Governance) all see transitioning from concept to action, shaping a more creative and productive common approach for enterprises to embrace further growth. As a multinational state-owned enterprise with global layout and international operation, we have continuously developed and put forward the four-element management concept integrating "society, customers, shareholders, and employees", released the HSE forerunner strategy and the FORUS system, and implemented China's "dual carbon" policy with responsibility and commitment, and will be more innovative while following global rules, leverage higher standards and more advanced technologies to balance the relationship between growth, employment, economy, environment, etc., and create more sustainable value.

**Increasingly believing in the creative power of business.** In the past decades, we have witnessed significant progress in the history of humanity, including the growth of GDP, the improvement of standards of living and education, the reduction of impoverished

population, and prolonging of human life expectancy. The business activity and the free movement of goods, people and capital bring remarkable value to world prosperity and demonstrate great creativity and resilience. All great companies are those that bring changes to an industry or even human history. We should adhere to a positive and confident business attitude and practice, and capitalize on every opportunity to promote more global innovation and development, deeper international cooperation, and more sustainable growth, so as to enhance the achievement of global sustainable development goals and jointly build an open and inclusive world economy.

**Increasingly striding towards the "In Science We Trust" approach.** Sinochem Holdings constructs a blooming peony flower as its corporate logo, which reflects our unremitting pursuit of harmonious coexistence with nature and promoting social sustainability. The chemical industry aims at exploring the material world, focusing on the exchange of humanity and nature, and various reactions and aggregations in nature, so as to create new substances and bring a better life. As the only central SOE (State-owned Enterprise) with comprehensive chemical industry as its main business and the largest chemical conglomerate in the world, Sinochem Holdings is unwaveringly upholding "In Science We Trust" and innovation-driven development philosophy. No investment without technology, no expansion without techniques, and no scale-up without innovation. This is our one and only way out and a never-ending process.

At present, we must galvanize the key technological research in provenance, chemical industry, and arenas alike with the spirit of "time and tide wait for no man", and act against the clock, create more "strategic products", and strive to foster the "source" of original technology and "head of the chain" of

the modern industrial chain, to drive quality and sustainable development with high-level scientific and technological self-reliance and self-improvement capability.

2022 marks the year of the convening of the 20th National Congress of the Communist Party of China, which is a significant transitioning year for the implementation of China's "14th Five-Year Plan", and also a crucial year for Sinochem Holdings' integrated development. Being at a new starting point and looking into this new journey, challenges and opportunities coexist ahead. We will carry forward the true entrepreneurial spirit, pragmatic spirit, and striving spirit, promote business integration and collaborative value creation with more calmly and steadfastly strategic confidence and vigorous spirit, strengthen the approach of "In Science We Trust" and the innovation-driven strategy, prevent and resolve major risks, complete various tasks, to celebrate the convening of the Party's 20th National Congress with outstanding results, and fulfill the high expectations placed on us by the Party and the people!

Chairman and Secretary of the Leading Party Group of Sinochem Holdings

宁高宁

# Sinochem Holdings Embarks on a New Journey

## Company Profile

Sinochem Holdings Co., Ltd. (hereinafter referred to as Sinochem Holdings) is a joint restructuring of Sinochem Group Co., Ltd. and China National Chemical Corporation Ltd, a state-owned backbone enterprise supervised by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, with 220,000 employees.

After the completion of the restructuring, Sinochem Holdings becomes the world's leading chemical conglomerate, and its line of business involves eight fields including life science, material science, petrochemicals, environmental science, rubber tires, machinery and equipment, urban operation, and industrial finance, with leading advantages in agrochemicals, animal nutrition in the scientific business and silicone-fluorine based materials, engineering plastics, rubber additives and other sub-sectors in the materials science business; its petrochemical business has distinctive features and has built a development model for the entire petrochemical industry chain; its environmental science business focuses on industrial environmental protection and still in the process of rapid development; its high-end tire business is world-leading; its plastic machinery business is world-class; in the field of urban operation, the Company is one of the first 16 central SOEs with real estate as a main business identified by SASAC; its subsidiary company - China Jinmao, is an excellent city operator; in the arena of industrial finance, the company has multiple financial business licenses, and enjoys significant edges in trust, leasing and businesses alike.

Sinochem Holdings has production bases and R&D facilities in more than 150 countries and regions around the world, as well as a complete marketing network system. After the restructuring, Sinochem Holdings owns 17 domestic and oversea public companies, including Yangnong Chemical (600486.SH), Adama (000553.SZ), Adisseo (600299.SH), Sinochem International (600500.SH), Luxi Chemical (000830.SZ), Haohua Technology (600378.SH), Elkem (ELK.OL), Pirelli (PIRC.MI), China Jinmao (00817.HK), and Jinmao Services (00816.HK).

Looking into the future, Sinochem Holdings will follow the philosophy of "In Science We Trust", and is determined to build a technology-driven innovative, and world-class chemical conglomerate, and continuously improve the enterprise's technological innovation capabilities, core competitiveness, and sustainable development capabilities, so as to create maximum value for society, clients, shareholders, and employees, and contribute to the development of the industry and social progress.



## Brand New Debut

Sinochem Holdings' brand identity consists of a graphic logo, the characters "中化 Sinochem" and the brand philosophy "In Science We Trust". Taking peony as the creative starting point, its blooming state and natural color deliver that Sinochem Holdings adheres to the "In Science We Trust" philosophy, innovative growth, excellent management, and the enterprise spirit of infinite vitality, embodies harmonious coexistence with nature, and promotes sustainable social development, as well as the unremitting pursuit of creating a better future for mankind.

Chemistry belongs to nature. It should be like a flower in nature, beautiful and fragrant, used by human beings, and returned to nature. Therefore, Sinochem Holdings has selected China's national flower - peony, which is highly recognized by the public, as the representative and symbol of the chemical industry we are engaged in.

—Chairman Frank Ning

# The Restructuring and Integration Usher in a New Chapter

Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, Sinochem Holdings resolutely implements the guiding principles of General Secretary Xi Jinping's important instructions and the major decisions and arrangements of the CPC Central Committee. It has reached a new level and presented a refreshing image in the course of solidly promoting the restructuring and planning the new development dynamics of Sinochem Holdings with its new philosophy; it has yielded new fruits and achieved breakthroughs in the continuous in-depth reforms, seizing market opportunities, finding synergistic value, and managing current operations, and it has laid a solid foundation for building a world-class chemical conglomerate.

Indicators	Unit	2021
Revenue	100 million yuan	11111.35
Total assets	100 million yuan	15356.21
Total profit	100 million yuan	357.03
Total tax	100 million yuan	704.95



2021 Operation performance appraisal of the central SOE level A

2019-2021 Performance appraisal Level A

2019-2021 "Excellent Performance Enterprise"

Contribute to SDGs



## Implement the Restructuring

On March 31, 2021, with the approval of the State Council, Sinochem Group Co., Ltd. and China National Chemical Corporation Ltd. implemented joint restructuring. On May 8, 2021, the inaugural meeting of Sinochem Holdings Co., Ltd. ("Sinochem Holdings" for short) was held in Beijing. Li Keqiang, a member of the Standing Committee of the Political Bureau of the CPC Central Committee and Premier of the State Council, made important instructions. State Councillor Wang Yong attended the inaugural meeting and delivered a speech.

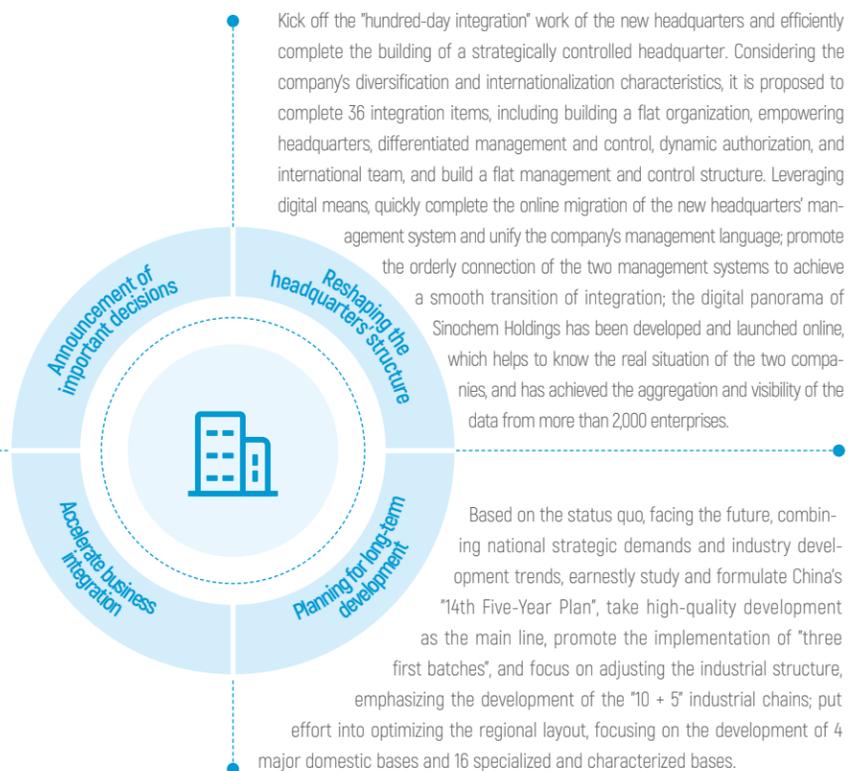
The restructuring of Sinochem Holdings Co., Ltd. is of great significance for optimizing the structure and layout of the state-owned economy, facilitating China's agricultural modernization, and enhancing the market competitiveness of the chemical industry. It is imperative to adhere to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, conscientiously implement the decisions and arrangements of the CPC Central Committee and the State Council, solidly fulfill restructuring, integration, and deepen reforms, strengthen international cooperation, give full play to the role of leading enterprises in the industry, and galvanize the technological research in key areas of provenance and chemical industry, etc., embrace innovation in management and operation models, and achieve continuous improvement of business quality, efficiency, and comprehensive competitiveness, and renew its contributions to maintaining the stability of the industrial chain and supply chain as well as promoting the sustainable and healthy development of the economy and society.

—Li Keqiang, Member of the Standing Committee of the Political Bureau of the CPC Central Committee and Premier of the State Council, delivered important instructions



After the founding of Sinochem Holdings, the Company has made well-planned arrangements, and various restructuring and integration work has been steadily pushed forward. The Leading Party Group issued the *Sinochem Holdings' Decision on Reshaping Organizational Strength and Building a World-Class State-owned Holding Enterprise Group*, pointing out the direction for restructuring and integration.

The business integration plan has been reviewed and approved by the board of directors in accordance with the five integration principles of full business coverage, professional integration, flat management, steady and orderly advancement, and rational allocation of assets and personnel, forming the overall integration plan featuring "1 holding company + N listing companies" and the first batch of implementation plans.



## Party Building Leads Development

The Sinochem Holdings Leading Party Group has thoroughly studied and implemented the guiding principles of the Sixth Plenary Session of the 19th Central Committee of the Communist Party of China and the guiding principles of General Secretary Xi Jinping's "July 1st" important speech, resolutely supported the "two establishments", and effectively implemented the "two maintenances" to serve the development landscape of the Party and the country, adhered to the leadership of the Party, strengthened Party building, and ensured the high-level development of the Company with high-quality Party building. It was rated as Grade A in the 2020 responsibility assessment of the Party building of central SOE.

### Strengthen the theoretical guidance

Continue to focus on the theoretical guidance by means of study seminars, reading classes, study union, exchange meetings on research results, and other forms of themed Party-education. Party members can better follow the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era to guide practices, facilitate work and continuously improve the Party officials' political judgment, comprehension, and execution capability.

The Leading Party Group conveyed and studied the instructions and articles of General Secretary Xi Jinping's important speech **47** times

The central Party Group held **4** special reading classes, **6** intensive studies and seminars, and **1** joint study association

Hold **2** training courses for key positions to study Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era

The company carried out **156** intensive studies and seminars on the "July 1st" speech, **29** reading classes, **227** Party lectures, and **57** special training sessions

The company carried out **105** seminars on the guiding principles of the Sixth Plenary Session, **48** reading classes, **27** special counseling reports, and **132** grassroots lectures



The Theory Learning Center Group of Sinochem Holdings Leading Party Group held a themed reading class

## In-depth development of Party history learning and education

Conscientiously implement the decisions and arrangements of the Party Central Committee and SASAC, highlight the characteristics of the enterprise, the integration of learning and doing, the benefits to the masses, the role of responsibility, high-level planning, high-standard promotion, and high-quality implementation, and promote the Party history learning and education, make well-planned deployment, vigorously move forward the organization, embrace distinctive innovations, strengthen publicity and education, and effectively integrate learning and doing. The Party cadres have received profound political education, ideological influence, and spiritual uplift.



Convening a meeting to celebrate the 100th anniversary of the founding of the Communist Party of China, dedicated to deeply studying the guiding principles of General Secretary Xi Jinping's "July 1st" important speech. Frank Ning, Secretary of the Company's Leading Party Group and Chairman of the Board, delivered a special Party class report, commending outstanding individuals and collectives, and greeted the centenary of the Party's founding



Solidly promoting the practice activity of "Do practical things for the masses"; Li Fanrong, President and Deputy Secretary of the Leading Party Group of the Company, visited the front line

The whole system carried out

**2994**

intensive seminars on Party history learning and education, held

**1092**

reading classes,

**752**

special training sessions, more than

**80**

special tutorial sessions, special Party classes, and

**2525** lectures.

## "Review" on the implementation of the guiding principles of the Party Building Committee of SoEs

Carry out the initiative of "reviewing" the implementation of the guiding principles of Party building meeting of state-owned enterprises with high standards, in accordance with General Secretary Xi Jinping's important instructions on "one general objective", "two consistent principles", "three benefits" and "four cardinal principles" etc., seriously review and summarize the Company's party building experience over the past five years, finding gaps, inheriting the development of Party building work, and improving quality through innovation, so as to provide a strong guarantee for building a world-class chemical conglomerate.

## Implement "Icebreaking" Initiative

Focusing on the restructuring, the "Icebreaking" initiative has been actively implemented, in-depth research on ideological dynamics has been carried out, and the "Sinochem Holdings Lecture Hall" icebreaking communication meeting for headquarters' staff has been held. The company has also timely established the Party working group organization, and continuously improved the Party building mechanism.

## Carry out the theme activity of "Overcoming Difficulties and Waving the Party Flag"

Guide Party organizations at all levels and Party members to plan and carry out activities tapping enterprise management, safety production, scientific and technological innovation, and major projects, and encourage Party organizations, members, and cadres to take on responsibilities, perform their duties, and give full play to the role of a battle fortress and vanguard role in promoting the production, operation, reform, and development.



# Deepening Reform and Transformation

Sinochem Holdings regards deepening reforms as an important enabler for responding to transformation and opening up a new landscape, actively explores the goal of becoming a world-class chemical conglomerate, makes bold breakthroughs, and effectively promotes the integration, industrial transformation, and upgrading by deepening reforms.

The overall progress of Sinochem Holdings' 101 reform tasks has reached

90.1%

the completion progress of 1,126 key sub-tasks has achieved

93.4%

and the overall goal of "basically completed" has been reached

In 2021, the key task appraisal of the three-year action of central SOE reform was rated Grade

A

## Three-year action to tackle the reform of state-owned enterprises

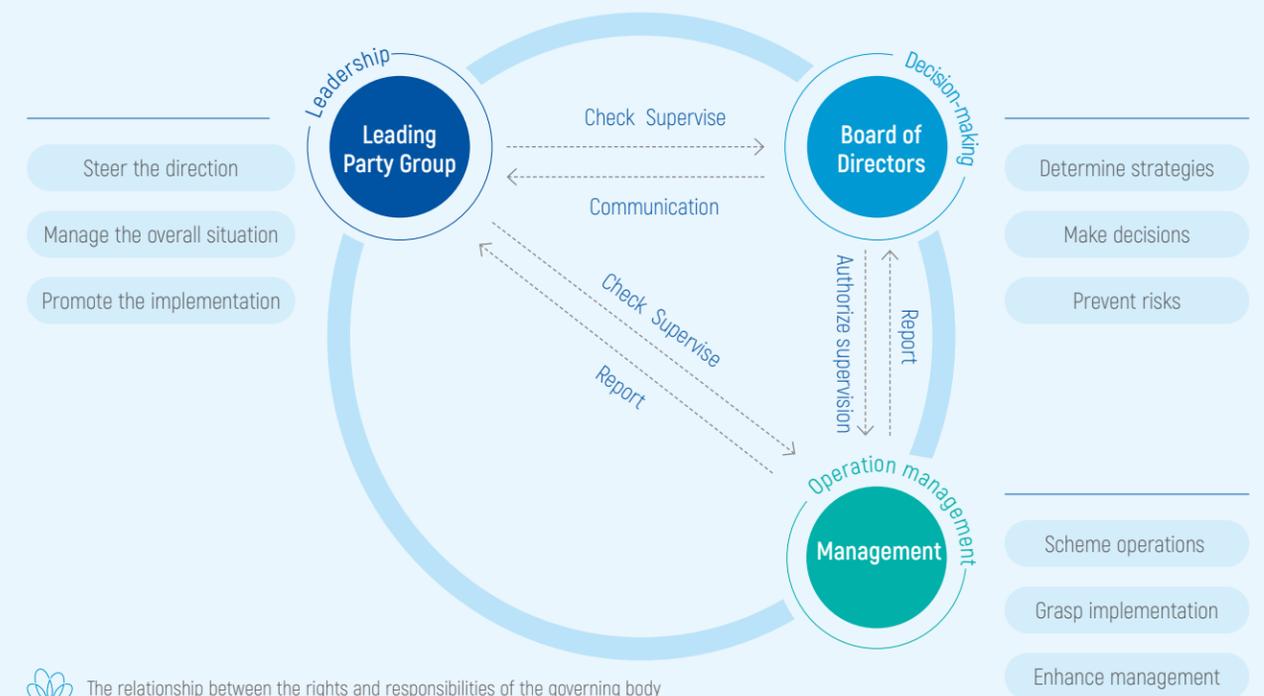
Conscientiously implement the decision-making and deployment of the three-year action for the reform of state-owned enterprises, seize the time to advance various tasks. The overall progress of 101 reform tasks has reached 90.1%, the completion progress of 1,126 key sub-tasks has achieved 93.4%, and the overall goal of "basically completed" has been achieved. For the 12 key tasks assessed by SASAC, the progress of each task has reached more than 95%, of which 7 of them have been completed. The company was selected to participate in the SASAC reform project research and was selected as an exemplary enterprise, whose reform results were publicized and reported by various state media.

## Improve the level of corporate governance

Strictly implement the "two consistent" requirements, effectively unify the strengthening of the Party's leadership and the improvement of corporate governance, and accelerate the improvement of the modern enterprise system with Chinese characteristics. The Company has comprehensively clarified the power and responsibility boundaries between the leading Party Group, the board of directors, and the management, continued to optimize the operation of high-level meetings, standardized the decision-making procedures and authorization mechanism of the governance body, "dynamically" improved the corporate governance system, and established the corporate governance system which is based on the Company's regulation, reliant on the Leading Party Group rules, procedure of the Board of Directors, the working rules of the President, and the authorized management methods of the Board of Directors, etc., effectively promoted better transformation of institutional advantages into governance efficiency, and continuously improved the company's decision-making efficiency and the level of governance standardization.

- 1 **mechanism for determining standards** ..... released the operation plan for a high-level meeting
- 1 **system for formulating specifications** ..... released 11 items on corporate governance system and 91 items on specific management system
- 1 **list for ensuring operation** ..... clarify the agenda of each governance body

The Company's board of directors has been rated as "excellent" for two consecutive years in the comprehensive evaluation of the board of directors of central SOE



## Promote the improvement of legal compliance

Build an international compliance management system that conforms to the strategic positioning of a world-class chemical conglomerate and best practices, continuously improves the Company's legal governance, compliant operation management, and proactive compliance execution capabilities, continuously optimizes the international competitive environment, and prevents legal compliance risks and provide solid legal support and guarantee for Sinochem Holdings' high-quality development.

In 2021

the Company carried out

151

internal audit projects and put forward

1,242

management recommendations.

Taking "continuous evaluation, matching, and effectiveness" as the guiding ideology, with the general goal of "risks that are knowable, controllable, and bearable", combined with the requirements of the regulatory authorities and the Company's actual situation, benchmarking against world-class enterprises, covering the system, mechanism, culture and arenas alike, to further improve the risk management and internal control system, and continuously improve the systematization of mechanism and the effectiveness of the operation.

**Foster a culture of compliance**

- Formulate the *Compliance Obligation Convention*, carry out the action of signing the *Compliance Responsibility Letter* among all employees, publicize and implement compliance training for key links and personnel, cultivate a compliance culture, and comprehensively improve employees' compliance awareness

**Improve compliance system**

- Formulate Sinochem Holdings' compliance management system development plan, set up a compliance management committee, issue compliance management regulations, and trade compliance management measures, proactively carry out trade compliance inspections and related training, and effectively deploy the compliance system through an integrated management approach.

**Develop the operation mechanism of compliance management**

- Issue the *Compliance Commitment Letter* and *Model Contract Clauses*, etc., emphasizing the "three-step" compliance with the emphasis on trading partner management, trading link investigation, and trading contract terms guarantee, guide and supervise the front-line to implement the specific requirements in their daily business, build a solid barrier against defense; issue the *Notice on Strengthening the Compliance Review of the Company's Publicity Content*, etc., to enhance the compliance management of the Company's publicity and control risks

**Strengthen audit supervision**

- Focus on the implementation of major economic policies and decisions of the central government, as well as the rectification effect of problems identified in the audit, emphasizing the implementation of major strategic issues and investment projects, asset quality, operational efficiency, and internal control management effects, and the performance of key managers, etc., as well as conduct internal audits and make management recommendations

**Improve the institutional system**

Formulate and release relevant systems such as risk management, internal control, and operational risk event reporting, establish a collaborative division of labor mechanism for risk management, and compile the *Sinochem Holdings Internal Control Standards* in both Chinese and English to clarify the bottom line and mandatory requirements of common management areas for domestic and foreign enterprises at all levels

**Enhance identification and evaluation**

Closely focus on the strategy and business objectives, carry out the annual major risk assessment, formulate risk response measures, and promote the integration of risk management into the closed loop of strategy and performance management

**Strengthen tracking and monitoring**

Track and monitor the changes of major risks and risk classification indicators on a quarterly basis, report on the disposal and new business risk events monthly, and strengthen the pre-judgment and early warning of business risks

**Organize learning and training**

Organize experience sharing and learning exchange activities, carry out special training on risk management and internal control, interpret regulatory policies, identify job requirements, and improve professional competence

## Abide by business ethics

Strictly abide by the law, obey business ethics and market rules, continue to strengthen uprightness, discipline and anti-corruption, oppose any form of unfair competition, and maintain a clean and upright corporate ecology.

### Build grand supervision

Attaches great importance to the work of general supervision, establishes and improves the general supervision system integrating various types, and provides guarantee for the building of a world-class chemical conglomerate. Formulated the *Measures and Division of Responsibilities of Sinochem Holdings on Further Strengthening the "Four Supervisions" Coordination*, improved the supervision and coordination system and mechanism, held a joint meeting on supervision work, and initially formed coordination and linkage, overall planning, information sharing, and a landscape of professional complementarity, and supervision on anti-corruption has been further strengthened.

### Play a supervisory role

Focus on "two maintenance" to strengthen political supervision and ensure that the guiding principles of the General Secretary's important instructions and the Party Central Committee's decision-making and deployment are resolutely implemented. Solidly carried out the "Improving Supervision Efficiency Action", adopted three key measures of "reviewing" the implementation of supervision and inspection recommendations, full-coverage integrity risk investigation, and proactively conducting "targeted" supervision, and promoted 480 enterprises to sort out 15,826 integrity risk points; carry out supervision and inspection around the error-prone and frequently occurred problems and key links, and discover high-quality problem clues. Intensified efforts have been made to enforce discipline and handle cases, and the number of cases registered increased by 78% year-on-year, achieving a breakthrough of "zero" in the investigation and handling of major and important cases. By holding a system-wide warning education conference, the company has deepened reform and governance with real cases, and done a solid job in the second half of investigating and handling cases.

### Implement measures of inspection and rectification

Continue to play the role of political inspection and supervision, coordinate and promote the linkage of supervisors and subordinators, and the combination of inspections and investigations. Carry out three rounds of internal inspections of four enterprises, instruct the Party committee of secondary units to inspect 13 enterprises, and complete the inspection tasks of full coverage during the 19th National Congress of the Communist Party of China ahead of schedule. Special self-inspection and self-correction of the implementation of rectification were carried out, and the completion rate of the central inspection and rectification measures reached 97.83%.



2021 Sinochem Holdings Warning Education Conference

# Innovation Drives Development

Sinochem Holdings thoroughly implements the innovation-driven development strategy, adheres to the philosophy of "In Science We Trust", strengthens top-level design, builds a high-level innovation platform, enhances independent innovation capabilities, reshapes the technological innovation system, intensifies efforts to tackle the core technologies, and deploys the innovation chain around the industry chain, mapping out the industrial chain around the innovation chain, striving to be the source of original technology and the length of the modern industrial chain, and propelling the company to achieve high-level scientific and technological self-reliance and self-improvement.

## Launch the building plan of the Central Research Institute

To solve the problems of scattered innovation entities, duplication of R&D fields, and vacancies in some strategic fields, Sinochem Holdings has formulated the building plan of the Central Research Institute and put it into operation. The Institute categorizes innovation entities into "common and cutting-edge technology platform" and "enterprise R&D platforms", and has set up 21 professional research centers to conduct matrix management in the fields of life science, materials science, environmental science, petrochemical, etc. on key items including scientific and technological planning, annual scientific research, R&D project approval, and leading scientific and technological talents, identified the development direction of major scientific research institutes, forming a main structure of innovation with a clear division of labor and distinct layers, and strengthening the overall planning of the company's scientific and technological innovation resources.

## Promote the transformation of scientific and technological achievements

Continuously improve and strengthen the protection of intellectual property rights, deepen the integration mechanism of research, production, and sales, and promote the effective transformation of scientific research results. The Company has a total of 29,783 patents, including 19,018 patents for invention and 14,146 high-value invention patents. In 2021, 2,451 patents were filed, including 1,561 patents for invention.

In 2021

the investment in scientific and technological research and development exceeded

**20.88** billion yuan,

**862**

projects were under research

and there were

**26,719**

scientific and technological personnel



Tianhua Institute's complex raw material million-ton ethylene complete technology R&D and industrial application project won the first prize of the National Award for Science and Technology Progress

The key technology and engineering application project of large-scale hydrogen purification and high-pressure storage equipment of Southwest Research Institute won the second prize of the National Award for Science and Technology Progress

A high-performance polyurethane elastomer and its preparation method of Liming Institute won the Silver Award of the 22nd China Patent Award

Two patents of China Bluestar Chengrand Institute and Yangnong Group won the 22nd China Patent Excellence Award



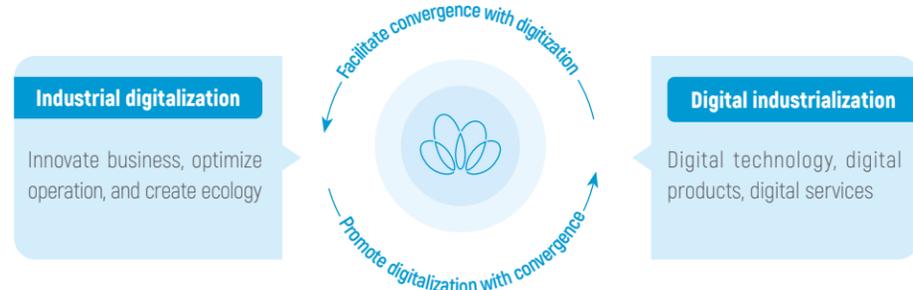
## The production project of high-performance polyurethane elastomer material implemented

Sinochem Holdings has developed a high-performance polyurethane elastomer material with independent intellectual property rights, breaking the long-term foreign technology monopoly and successfully solving the problems of poor rebound, large permanent deformation, poor mechanical and heat resistance, and short service life in the original technology. The Company has accelerated the transformation of this technology, and used this patented technology to build a 2,000-ton/year polyester polyol production unit, a 3,000-ton/year prepolymer production unit, and one set of elastomer production lines, which has further promoted the downstream application of high-performance polyurethane material.



## Promote digital transformation and upgrading

Seize the new opportunities of the new round of technological revolution and industrial transformation, vigorously promote the "online Sinochem" digital transformation, and dedicate itself to the deep integration of digital technology and production, operation, and management, so as to build a world-class chemical conglomerate that is fully digitalized. Adhere to the "customer-centric" service philosophy, connect more than 90 subsidiaries in the Sinochem Holdings' e-commerce platform system, covering more than 8,000 products and over 60,000 trademarks, forming 12 major industry solutions and six types of thematic services, gathering nearly 100,000 customers, which fully reflects the synergy effect brought about by the integration; focus on the chemical industry scenario, compile a white paper on the construction guidance of "smart factory + smart HSE", and promote the implementation of the "smart factory + smart HSE" special improvement action, to enhance the Company's refined management capability and the level of HSE risk prevention and control. Actively cultivate digital industrialization capabilities, use 5G, big data, and other digital technologies to empower enterprises to improve quality, reduce costs and increase efficiency, and facilitate the domestic chemical industry to further upgrade and develop.



Form an "organic integrity", transform from leading in scale to leading in competitiveness, and become a world-class chemical conglomerate

Take advantage of the scale advantages and rich scenarios of comprehensive chemical companies to accumulate digital solutions for the process industry and promote digital transformation and innovation in the chemical industry

**Honor**

HSE digital solution was selected in the *Application Scenario Project Manual* of Beijing State-owned Assets Supervision and Administration Commission

The intelligent device management solution was selected as the "2021 Excellent Industrial Internet APP Solution" by the Ministry of Industry and Information Technology

### In 2021

Sinochem Holdings' built an e-commerce platform,

Connecting

**90+** subsidiaries

Covering

**8,000+** products and **60,000+** trademarks

Forming

**12** major industry solutions and **6** types of thematic services

Bringing together nearly

**100,000** customers

## Leverage synergies

Establish a synergistic regime, continuously create and tap synergy value through relevant mechanisms and process specifications of systematic and digital management, and build synergy into Sinochem Holdings' business model and corporate culture.

### Product process collaboration

Syngenta Group and Adama have collaborated on products, market entry platforms, supply chain, procurement, logistics, etc. Syngenta Group has gained the distribution profits previously obtained by third parties, and Syngenta's product portfolio sales see an increase of more than 50%; Adama leverages the collaboration among the subsidiaries of the Syngenta Group to save procurement and operating costs, and generates additional operating income through market complementarity and differential pricing.

### Collaborative project on urban operation

China Jinmao and ChemChina New Materials Co., Ltd. innovatively cooperated to jointly develop the Jinmao Crystal Smart New City Project in Qingzhen, Guiyang. Sinochem Environment gained the pollution control business of ChemChina New Materials, and Sinochem Commercial Factoring gained the financial business of ChemChina New Materials. All parties cooperate to realize the overall development of urban operation projects.

Jinmao Crystal Smart New City Project in Qingzhen, Guiyang



# Innovation and Creation Empower a Better Life

Sinochem Holdings insists on integrating corporate development into the overall situation of social development and meeting people's needs for a better life, proactively serving people's needs, focusing on the main businesses that are closely related to the social economy and people's livelihood, and is committed to providing social production strategic products closely tied to people's lives, relying on its business advantages to ensure energy security, focusing on promoting the progress of the chemical industry, facilitating China's agricultural transformation and upgrading, and continue to contribute to economic construction, social development and improvement of people's livelihood.

Contribute to SDGs





**COLUMN**

**SINOCEM HOLDINGS IS BY YOUR SIDE**

People's livelihood is of greatest significance among all matters. Sinochem Holdings is committed to safeguarding people's good life with quality services and fully meeting the needs of clothing, food, housing, mobility, use, etc.

**Clothing**

**Apparel fabrics:** Production of comfortable, soft, safe and reliable functional apparel and textiles

**Footwear materials:** Manufacture high-elasticity, wear-resistant, waterproof, and stain-resistant shoe materials

**Maintenance:** Provide integrated services for pretreatment and finishing in the process of leather textile production

**Food**

**Crops solutions:** Provide high-quality healthy seeds, fertilizers, crop protection products, and more convenient and efficient field management solutions

**Animal feed:** Provide better quality animal nutritional solutions

**Product big data:** "MAP beSide" quality control and traceability system to achieve whole-process quality control and traceability of agricultural products and deliver high quality and favorable price

**Housing**

**Construction:** Produce high-performing construction chemicals, formulations, and materials through innovation and R&D

**Real estate:** Build green technology residences, high-end hotels, high-quality retail businesses, landmark office buildings, and supporting property, education, and other services

**Horticulture:** Provide lawn gardening solutions and develop pest management solutions

**Environmental improvement:** Carry out environmental governance projects such as wastewater treatment, soil remediation, and industrial waste gas treatment

**Use**

**Life**

**Electronic and electrical:** Provide upstream and supporting products in the electronic industry chain

**Beauty and personal care:** Create personal hair care, skincare, makeup, antiperspirant, and other solutions

**Use**

**Industry**

**Electronic and electrical:** Raw materials for manufacturing semiconductors and other electronic chemicals, industrial environmental protection, new energy, etc.

**Machinery manufacturing:** Support machinery manufacturing, develop complete equipment, and tailor-made technical solutions for feasible machinery manufacturing

**Basic chemicals:** Provide essential chemical substances for various industrial production sectors

**Mobility**

**Transportation:** Provide new material combination solutions for various transportation customers. **Automobile** - Provide a series of innovative plastic products to meet the high-quality demand for vehicle electrification, intelligence, lightweight and high performance; **tires** - Provide high-end passenger car tires, motorcycle tires and bicycle tires, truck tires, construction machinery tires, and agricultural tires; **rail transit** - provide thermoplastics, thermosetting plastics, and rubber elastomers and other products, as well as comprehensive solutions for rail transit exterior parts, interior parts, coatings and rail roadbeds; **aviation** - focusing on aviation exterior parts, interior parts and aerospace coatings, creating a diverse product portfolio; **water transportation** - solutions for integrated transportation systems using underwater facilities, water rubber products and marine coatings

**Energy: Oil** - to ensure energy supply, provide high-quality gasoline, diesel, jet fuel to meet people's travel needs; research and develop new fuels to improve oil quality; **new energy** - develop green and low-carbon new energy business, conduct power batteries innovation, and build new energy vehicle battery swap infrastructure

**Medical**

**Pharmaceutical manufacturing solutions:** Caring for life and health, providing quality pharmaceutical R&D and production solutions

**Nutritional raw materials:** Supporting balanced scientific nutrition, providing systematic and safe nutritional solutions

**Cosmetic medicine and health:** Tailor-made beauty, providing silicone medical beauty solutions

**Medical devices:** Technology benefits life and provides high-quality medical devices

**Finance**

**Licensed finance:** Focus on professional and comprehensive financial services to meet customers' financial needs such as financing, asset management, investment management, risk management, etc.

**Supply chain finance and industrial services:** Relying on financial technology to build core competitiveness, build an open platform for industry and financial services, and provide scenario-based and customized supply chain finance and industrial services

**Industrial investment:** Focus on Sinochem Holdings' industrial chain, aggregate social capital, coordinate industrial investment in quality projects, and explore and cultivate emerging industries



# Safeguard the Bottom Line of Food Security

Food security is of "paramount necessity to the country". Sinochem Holdings firmly fulfills the mission of acting as the "national team" in the agricultural field, deeply implements the national food security strategy, concentrates superior resources and forces, and makes unremitting efforts in seed industry revitalization, modern agricultural services, scientific and technological innovation, and green development, to truly implement the "crop production strategy based on farmland management and technological application".



- Photo by Wang Dongxu, Syngenta Group China

## Facilitate the revitalization of the seed industry

Seed industry is the core of agriculture. Sinochem Holdings brings together the world's leading technologies and resources and continuously strengthens scientific research on key technologies in the seed industry to ensure global food security and increase agricultural income and efficiency.

### Set up a leading group for the strategic development of the seed industry

Sinochem Holdings has comprehensively promoted the implementation of the *Action Plan on the Revitalization of the Seed Industry*, established a seed industry strategic development leading group and a task force headed by Chairman Frank Ning, and set the overall goal of ensuring national food security and driving up China's agricultural income and efficiency, so as to contribute to improving the scientific and technological innovation capability, seed supply capability, and agricultural modernization of China's seed industry. It has also regularly held the leading group meetings to report the situation and review related issues.



 The third meeting of Sinochem Holdings' Seed Industry Strategic Development Leading Group

### Implement the "Prosperity Plan of the Seed Industry" and set up a "Co-Creating Platform for the Seed Industry"

Implement the "Prosperity Plan of the Seed Industry", promote the common prosperity of the biological breeding industry, and create an innovative platform that connects seed industry partners and the vast number of planting farmers - the seed industry co-creating platform, realize the rapid upgrading of China's seed industry; facing China's vast planting areas and scattered planting farmers, provide them customized or integrated solutions to help increase grain production and ensure national food security.



 set up the "Co-creation Platform for the Seed Industry"

### Strengthen the scientific research of the "bottleneck" technology in the seed industry

The National Maize Seed Industry Innovation Center with Syngenta Group as the main body was officially inaugurated in October 2021. The Center will strengthen original innovation and technology integration and achieve major breakthroughs in modern biological breeding technology and germplasm resources innovation in the corn industry. It has vigorously promoted the development of Yangling Breeding Technology Center and breeding stations in Changchun and Xinxiang; among them, Yangling Breeding Technology Center has built advanced breeding greenhouses, which can be bred locally and has greatly improve the speed of generational transformation.

### Actively invest in the construction of "Nanfán Silicon Valley"

China National Seed Group settled in the Science and Technology City of Sanya Yazhou Bay, becoming the first central SOE in the seed industry settling in Hainan. The Group and Hainan Province have worked closely together to build a national seed laboratory, cooperated with the Nanfan Administration to successfully host the 2021 China Seed Conference, and teamed up with key enterprises and R&D institutions to jointly promote the infrastructure for the development of the national seed industry.

### Deepen government-enterprise cooperation in the seed industry

Focus on key areas such as modern agriculture and seed industry innovation to carry out in-depth cooperation with relevant government departments, hold discussions and exchanges with the Ministry of Agriculture and Rural Affairs, etc., support the China (Beijing) Seed Industry Conference, and give full play to the role of "national team" and main force for the revitalization of the seed industry, to create a new benchmark for win-win cooperation between government and enterprises.

### Relying on Syngenta Group, continuously improve independent innovation capability

Syngenta Group has world-leading biotechnology and precision breeding technology, high-quality germplasm banks covering all major commercial seed varieties, rich genotype, and phenotype resource data, and world-leading new trait research and development capabilities. Technologies such as high throughput screening, big data, and artificial intelligence drive up the R&D efficiency. Meanwhile, Syngenta Group has the most abundant seed product portfolio in the industry, with more than 6,000 seed varieties with independent intellectual property rights in over 400 product lines. The Beijing Innovation Center of Syngenta Group has developed a number of world-leading corn and soybean biotech trait products, of which the Viptera corn trait is still the only biotechnological trait that can effectively control fall armyworm and provide biotechnology with the broadest spectrum of ground pest control.

## Promote the quality development of the food industry throughout the whole chain

Sinochem Holdings conscientiously implements General Secretary Xi Jinping's important expositions and instructions on food security and promotes the synergetic development and close connection of the entire grain chain of "production, purchase, storage, processing, sales, and use". It has extended the food industry chain, improved the value chain, further consolidated the foundation of stable food production and supply, and enhanced the ability to resist risks.



### Quality food and high yield

Starting from the three major fields of fertilizers, seeds and pesticides, accelerate the construction and improvement of the national emergency guarantee system for agricultural inputs, and continue to carry out the verification, demonstration, and promotion of planting technologies featuring "quality improvement, efficiency enhancement, light simplification, and sustainability", and expand the cultivation scale of advantageous varieties, continuously optimize the agricultural planting structure, and boost the upgrading of the agricultural industry.

#### Fertilizers



- Further reduce the amount and increase the efficiency of fertilizers, promote the upgrading of chemical fertilizer products to new products such as biological and organic fertilizers, and enhance the greening of agricultural inputs through technological innovation
- Accelerate the exploration of key technologies, provide "products + customized services", and widely apply new technologies such as fertilizer reduction and efficiency enhancement, side deep fertilization, intelligent water, and fertilizer integration, soil testing and fertilizer distribution, and spraying to ensure the supply in the domestic market, stabilize prices, and reduce cost for domestic farmers

#### Seeds



- Focus on the five strategic crops of corn, rice, soybean, wheat, and vegetables, consolidate the foundation of germplasm resources, and promote the quality development of the seed industry with the world's leading biotechnology and precision breeding technology
- Simultaneously promote the progress and development of intellectual property protection, personnel training, and fields alike

#### Pesticides



- Build demonstration farms, provide a series of new technology demonstration samples and whole-process scientific prevention and control plans, promote advanced plant protection products and technologies that reduce the use of pesticides, increase efficiency, achieve green prevention and control, and continue to lead the plant protection industry to transit into being green, sustainable and low-carbon.

### Quality food and fair purchasing

Purchasing quality grain by placing orders at prices higher than the market, effectively ensuring farmers' income increases, focusing on encouraging growers, grain brokers, and village collectives who fulfill the contract and deliver grain, and actively guide more farmers to fulfill the contract, so as to optimize the process, simplify the procedures, and speed up the payment. Under the new situation of normalization of the COVID-19 pandemic prevention and control, the "reservation for grain harvest" service has been launched, and the new method of "Internet +" purchasing has been used to help farmers grow and sell better grain and to continuously empower farmers a sense of gain.

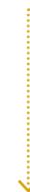


### Quality food and excellent storage

As one of the main purchasers of the "national team", it has participated in the minimum food purchase price project to improve China's food storage capacity since 2018. Strictly follow the separate storage of food varieties, improve the level of refined operations, provide services for grain harvesting, temporary storage, drying, and other links through technical guidance, set up a food storage quality inspection team, and use the grain supervision cloud platform to track each batch of grain in storage by means of informatization and datamation, so as to accurately ensure the quality, and realize the quality control of the whole process of quality grain purchase and storage.

### High-quality food and excellent processing

Be an organizer and service provider of quality grain, guide leading enterprises to settle in grain production bases to build food processing plants, empower local small and medium-sized processing plants to produce quality products, and realize local processing and transformation of quality grain.



### Excellent services

In order to ensure the safety of drug use, the origin of food and agricultural products, and the environmental safety of end-users, Syngenta Group China, a subsidiary of Sinochem Holdings, joined hands with the National Agro-Tech Extension and Service Center to organize public welfare training on scientific and safe drug use for 21 years. In 2021, 14,000 pieces of training on scientific and safe drug use were carried out, covering 3.08 million person-times.

### High-quality food and excellent sales

Build quality grain direct-sale stores, leverage blockchain traceability technology to achieve the full traceability of quality grain, and create a quality grain brand.



Syngenta Group China and the National Agricultural Technology Extension Service Center organized the "Nation-wide Public Welfare Training on Scientific and Safe Drug-use for 100,000 Counties and 10,000 New Farmers"

## Secure the supply of feed grains for the breeding industry

Faced with the gradual increase in the proportion of feed grains in grain consumption, how to reduce the number of feed grains and increase their efficiency by improving the nutritional quality has become an important topic for ensuring food security. Adisseo, a subsidiary of Sinochem Holdings, is committed to developing innovative and sustainable animal nutrition solutions represented by methionine. It improves animal production efficiency by strengthening the nutritional value of basic feed, reduces feed grain consumption, and ensures the safety of meat supply with limited grain consumption.

### Increase animal breeding efficiency

The main product of Adisseo is hydroxy methionine, which is easily absorbed by animals and converted into protein. By adding methionine to the feed, the use of protein raw materials such as fish meal and soybean meal can be reduced, the level of crude protein in the feed can be decreased, costs can be saved, and breeding benefits can be increased.

### Low nitrogen emissions to protect the environment

Compared with ordinary methionine products, hydroxy methionine does not contain nitrogen. The use of hydroxy methionine in its formula can improve the nitrogen utilization rate of the feed and reduce the nitrogen that cannot be completely digested and absorbed by animals, to protect the environment.

### Enhance animal immunity

Protein and amino acids directly affect the immune function of animals. Compared with ordinary solid methionine, increasing the amount of hydroxy methionine added to the feed can effectively improve the anti-stress ability of animals and help animals thrive.

### Innovative aquaculture feed, to protect the natural environment

Adisseo focuses on nutritional solutions for Asian aquafeeds and cooperates with CALYSTA, a California-based biotechnology innovation company, to establish Calysseo company to develop innovative aquaculture feed solutions, FeedKind® Protein. Through innovative technology, a very small amount of water is used to ferment natural gas to produce FeedKind® protein, which consumes fewer resources and contains more protein, truly reflecting the sustainable development philosophy of "More From Less".



## Upgrade the modern agricultural service model

In 2017, it innovatively proposed a comprehensive service platform - Modern Agricultural Platform (MAP model), focusing on the development goals of modern agriculture, innovating farmers' organizational methods and service models, and providing improved seeds for grain farmers through the development of MAP technology service centers and rural service stations throughout the country, providing modern agricultural comprehensive services such as breeding, crop nutrition, crop protection, agricultural machinery application, technical training, smart agriculture, quality testing, brand building, production, and marketing connection, etc., aiming at increasing production and quality, demonstrating and popularizing new concepts required for modern agricultural development, new technologies and new models, and assist farmers in embracing modern agriculture.

### By the end of 2021:

MAP has established

**492**

technical service centers and **3,117** service stations

Works with

**2.39**

million farmers and helps them to reach prosperity

The business covers

**657** counties in

**29** provinces

The digital agriculture platform has

**1.95**

million registered users, covering

**900,000**

farms and

**290** million mu of land

Service area covers

**19.12** million mu

Organized

**3,994**

online and offline technical training sessions,

benefiting

**225,000** people



On this basis, it continues to leverage digital technology to improve the quality and efficiency of modern agricultural production and sales in China, covering important agricultural production scenarios such as ploughing, planting, management, and harvesting, making mobile phones a "new agricultural tool" and helping growers make decisions and embrace smart management, which greatly improves production efficiency and reduces costs.

**Digital soil**

Digital soil offers 200+ sub-category soil type data services throughout the country and provides soil status query services for five basic items and nine trace elements, totaling 21,707 nutrient data.

**GIS remote sensing**

Relying on GIS remote sensing technology, it provides analysis covering crop growth, field inspection guidance, and canopy moisture. The GIS remote sensing service capacity has been increased to 290 million mu.

**Precise weather**

Build a precise meteorological service platform to help farmers adjust operating hours according to the temperature and humidity of the field. The accuracy of the seven-day weather forecast in low-accuracy areas has increased by 5%, reaching an average of 77%.

**Precision planting**

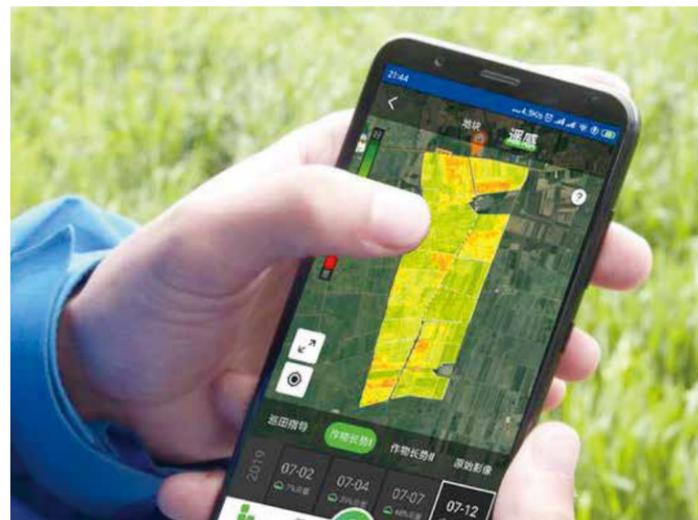
Build a precision planting platform to realize early warning of 72 kinds of diseases and insect pests of the three major staple crops. Meanwhile, combined with the plant protection index model and pesticide database, plant protection reminders have been launched to improve the efficiency and accuracy of farm management.

**MAP beSide**

Combined with MAP's green planting plan and modern management measures, and in accordance with the concepts of quality and safety control, green and clean production, etc., to provide consumers with visual information on planting, harvesting, warehousing, transportation, sales, and other links, as well as safe, high-quality and delicious agricultural products. Through the whole-process quality control traceability service and quality standard assurance, MAP's actions in agricultural low-carbon production have been intuitively conveyed to all customers.

**MAP Model facilitates agricultural modernization**

In Alukerqin Qi, Inner Mongolia, the pairing county of Sinochem Holdings, MAP formulates planting plans for farmers, promotes soil health and crop protection packages, and uses digital tools to provide them with online field inspections, accurate weather, and early warning of pests and diseases. Compared with traditional fertilization, farmers applying the MAP full-service program can reduce the annual nutrient input of alfalfa by 22.5%, oat nutrient input by 16.6%, and save 50 yuan in fertilizer costs; crop protection drugs are reduced by 30%, saving 5 yuan in costs; 10-20% increase in yield per mu, and have an increase of 200-450 yuan per mu. The MAP model solves the "pain points" of "who will farm the land", "how to grow the land well", and "how to make more profit", allowing agricultural development to have a better prospect, farmers to grow with more profit, and to create and share greater industrial value.



**Promote the green development of agriculture**

The sustainable development of agriculture is imperative, and Sinochem Holdings is committed to becoming a leader in addressing climate change in China, integrating cutting-edge technologies, and enabling the food industry to embrace high-quality development from various aspects, including timely research and development, product line structure, soil pollution control, and publicity and training. It strives to explore a climate-smart agricultural model, forms a green and low-carbon whole-process solution, vigorously promotes biological preparations, and reduces the impact of chemical pesticides and fertilizers on the environment.

**Runtian - climate-smart agriculture protects agricultural production in extreme weather**

The Runtian Project, jointly promoted by the United Nations Development Program, the Agricultural Ecology and Resource Protection Station of the Ministry of Agriculture and Rural Affairs, The Nature Conservancy, and Syngenta Group China, aims to improve soil health, reduce water consumption, and promote green agricultural development. A demonstration and promotion platform covering Shandong, Hebei, Henan, Anhui, Liaoning, and Heilongjiang provinces has been built, focusing on scientific straw returning to the field and conservation tillage technology integration, model demonstration, farmer training, and science literacy. In 2021, a demonstration base of 28,900 mu had been established, with a radiation area of nearly 2.66 million mu, and 28,000 farmers received training.



**Rice carbon footprint - MAP's low-carbon pilot program**

In the second half of 2021, MAP conducted carbon footprint accounting for the production of proprietary agricultural products for the first time, identified the calculation boundary and method of carbon emissions, determined the main carbon emission sources of rice production, and obtained the current rice carbon emission data. The accounting boundary starts from extracting agricultural raw materials related to planting and ends before selling agricultural products. By comparing the carbon footprint of rice production in Xiaozhan Rice and surrounding farmers, for different emission sources, the MAP farm reduced methane emissions by 2.0% and nitrous oxide emissions by 4.4% compared to local farmers in Tianjin.

## Provide Robust Energy Guarantee

Sinochem Holdings' petrochemical business relies on over 70 years' experience in the petroleum industry, and has built a petrochemical industry chain development model from upstream crude oil trade to midstream processing and production, as well as downstream petrochemical product sales, providing services covering all aspects of petrochemical industry, striving to enhance the competitiveness of the industrial chain, making every effort to ensure national energy security.

### Build a diversified energy supply system

By optimizing the allocation of "two resources" and "two markets", the domestic energy security capability and flexibility will be further enhanced. Obtain resources through multiple channels and build resource guarantee capabilities for energy security. The upstream exploration and development business improves quality and efficiency, and strengthens management and operation. At the same time, strengthen international energy cooperation, actively access the field of LNG international trade, obtain high-quality LNG resources, strengthen and optimize international oil trade, and promote energy security and guarantee under open conditions.

### Strive to secure a stable supply of oil products

It has formed a strategic oil marketing strategy covering 22 provinces (autonomous regions and municipalities) in six regions including South China, East China, Central China, North China, Southwest China and Northeast China. More than 1,400 gas stations are under construction and operation, with over 50 supporting distribution oil depots. It provides consumers with clean, high-quality fuel, and effectively ensures the stability of domestic energy supply and consumer market.

#### "Mini" gas station in the remote mountains

About 13 kilometers from Dehua County to Leifeng Town, there is a small "mini gas station" - Sinochem Oil Leifeng Gas Station, with an acreage of less than 200 square meters and five employees. It mainly deals in No.92 gasoline and No.0 diesel. It is the only gas station within a radius of 30 kilometers, providing oil supply services for more than ten villages.



### Focus on enhancing energy storage capacity

With an independent petrochemical commercial tank capacity of 5.13 million cubic meters, it has played an important role in safeguarding China's crude oil import and cross-regional allocation and transfer of refined oil products, and the import of energy and chemical products that are in short supply. Subsidiary Sinochem Energy Logistics Co., Ltd. is currently the third-party petrochemical warehousing and logistics service provider with the strongest comprehensive service capability in China. The petrochemical warehousing capacity under construction and under management is 13.56 million cubic meters, with a variety of petrochemical storage capacities ranging from 3,000 tons to 300,000 tons. There are 18 large-scale supporting terminals, with an annual storage and transfer volume of nearly 50 million tons, and a petrochemical storage and logistics network covering China's Bohai Rim, Yangtze River Delta, Pearl River Delta, and other coastal areas has been formed.



- Photo by Ren Yuanxiang, Zhenghe Petrochemical

### Continue to promote the development of refining and chemical integration

Focusing on the development needs of new petrochemical materials and other fields, Sinochem Holdings carries out research and development of petrochemical catalysts, processes, equipment, polyolefin processes, and new products, high-performance carbon materials for power batteries, industrial waste gas and wastewater treatment, chemical low-carbon environmental protection assistance. It actively tackles technical problems, expands markets, efficiently promotes scientific and technological management and the coordinated integration of research, production, and sales, and has achieved multiple progress.

#### Sinochem Quanzhou Petrochemical EVA plant started up successfully

At 8:58 on July 14, 2021, the EVA (ethylene-vinyl acetate) plant of the Sinochem Quanzhou Petrochemical Phase II project successfully started up, and the products have reached the standard. EVA materials are widely used in various fields, embracing broad market prospects. The successful start-up indicates that all 17 units of Quanzhou Petrochemical's 1 million tons/year ethylene and refining expansion project have been put into operation, the chemical production line has been fully opened up, and the integrated refining and chemical production has reached a new level.



### Accelerate the promotion of green energy transition

Implement the in-depth practice of the philosophy of green development and intensified efforts to improve energy efficiency and clean energy replacement, closely focus on market demand, continue to promote clean and low-carbon energy consumption systems and processes, and empower the upgrading of the energy industry structure to achieve the "dual carbon" goal and make a positive contribution.

#### The first domestic oil tanker voyage to reach carbon neutrality

In January 2021, the ISLAND SPLENDOR tanker of Sinochem Oil started a carbon-neutrality voyage from Qingdao. The voyage passed carbon accounting, energy saving and emission reduction, independent third-party carbon emission verification, and purchase and write-off of state-certified voluntary emission reduction (CCER). After these rigorous procedures, the Company finally achieved carbon neutrality and held a "carbon neutrality" certification ceremony at China Beijing Green Exchange. This is the first successful practice of carbon neutrality for a tanker voyage in China.



## Chemistry Creates Infinite Possibilities

Sinochem Holdings is a leading chemical new material service provider, focusing on the development of high-end, differentiated, and specialized high-value-added products around "supplementing, extending, and strengthening the chain", and continuously enhancing the resilience of the industrial chain and supply chain, so as to promote the high-quality development of the chemical industry and consolidate the foundation of the national economy, and contribute to people's better life.

### Deeply rooted in the epoxy resin industry

In the context of the "dual carbon" policy, the global energy mix will undergo significant changes, the wind power industry will usher in rapid development, and the demand for composite resins will greatly increase. Global product upgrades such as communication radio frequency base stations and related products, water-oil coatings, architectural decoration, etc., drive the steady growth of epoxy resin demand. Sinochem International has been deeply involved in the epoxy resin industry for 15 years and is a leading enterprise in the domestic epoxy resin industry chain. The Company currently has an epoxy resin production capacity of 170,000 tons/year in Yangzhou. After the 180,000-ton/year epoxy resin plant in Sinochem Lianyungang Industrial Park was put into operation, the Company's total epoxy resin production capacity reached 350,000 tons, ranking first in China.



### Automotive

- Elkem Silicones division provides a series of silicone material thermal management solutions for new energy vehicle manufacturers, which can effectively safeguard the waterproof, shock resistance, and flame retardant and heat dissipation of the battery pack, enabling greater safety of new energy vehicles.
- The polyether polyol products produced by Bluestar Dongda are widely used in automotive interiors, featuring high resilience, strong bearing capacity, and good flame retardancy, which is a polyether supplier in the luxury interior field of many domestic high-end automobile brands.
- The DL series refrigerants and YL series fluorinert electronic liquids developed by Sinochem Lantian can be used in the thermal management system of new energy vehicles and can keep the cabins and batteries of new energy vehicles at a constant temperature.
- The FEP resin produced by Luxi Group has the characteristics of good electrical properties, high-temperature resistance, oil resistance, flame retardant, anti-aging, etc. It is widely used in high-end automobiles, new energy vehicles, charging piles, and other fields. Design capacity can reach 12,000 tons/year.
- KraussMaffei provides leading extrusion and injection molding technology solutions for high-performance raw material production and device molding production of automotive lightweight components



### Engineering equipment

- Sinochem International's membrane materials and products such as reverse osmosis membranes, nanofiltration membranes, degassing membranes, electrically driven ionic membranes, and civil water purification equipment are widely used in zero discharge, ultrapure water, sewage reuse, seawater desalination, brackish water desalination, and civil water purification
- With the advantages of high strength and high modulus, Sinochem International's para-aramid products can be widely used in electronic communication, lightweight materials, green environmental protection, human protection, marine development, and other fields
- Yangnong Group's nylon 66 products are widely used in high-end engineering plastics and high-end industrial fibers



### Medicine and medical

- Sinochem Lantian's Fecolar® PVF decorative material is a healthy and safe material for the medical environment
- The protective mask made of e-PTFE film produced by Bluestar Chengrand can deliver a filtration efficiency of 98%
- Elkem Silicones' elastomer and adhesive products are used in cochlear implants, pacemakers, etc., and the level of biosafety reaches the standard for long-term medical implantation
- Silbione™ Soft Skin Adhesive Gel developed by Elkem is widely used in advanced wound care, medical adhesive bandages, medical tapes, eye patches, band-Aids, etc. It is less irritating to the skin, and can reduce skin damage caused by the use of medical adhesives
- KraussMaffei's precisionMolding® all-electric injection molding machine provides efficient injection molding solutions for nucleic acid tubes, pipettes, antigen detection plates, syringes, breathing filters, and other medical consumables



### Clothing and equipment

- The e-PTFE film produced by the dispersion PTFE resin of Bluestar Chengrand has the characteristics of lightness, durability, waterproof, and windproof, and is widely used in medical textiles such as medical protective clothing, fire protection clothing, outdoor equipment, etc.
- Fabrics added with Elkem Silicones' silicone oil and emulsion products are softer and skin-friendly



### Electronic technology

- The FEP resin produced by Luxi Group is widely used in rail transit, aerospace, communication photovoltaic, big data, and others
- The hydrocarbon resin developed by Sinochem International has the advantages of low dielectric loss and dielectric constant, and the application in printed circuit boards (PCBs) of communication base stations



### Daily necessities

- The concentrated polytetrafluoroethylene dispersion produced by Bluestar Chengrand is widely used for non-stick and anti-corrosion coatings on metals or other substrates, such as non-stick pans
- Elkem Silicones' gel elastomer products are widely used in cosmetics



### Food

- Elkem Silicones' food grade solid and liquid silicone rubbers can be used in food baking molds
- KraussMaffei provides plastic production solutions focusing on green energy saving and recycling for thin-wall packaging, bottle caps, PET preforms, cosmetic packaging, logistics packaging, etc.





## Provide All-round Green Mobility Solutions



### Inject green "blood"

Build flexible and diverse sales channels for refined oil products, focus on improving oil product performance, and provide consumers with clean, high-quality fuel. Meanwhile, it promotes the upgrading of petrol stations and introduces photovoltaic installations and environmental protection energy projects such as gas filling and charging, which enriches the businesses and promotes the development of environmental protection.

**"Yuexinqing" - enabling fuel to become more environmentally friendly and efficient**

Sinochem Oil sells and develops a new type of "Yuexinqing" fuel, which realizes the efficient synergy of "fuel-engine-additives", which has the four features of more powerful, flame resistant, protective, and better potential energy. To meet consumers' demand for high-quality fuel that is "more environmentally friendly, more fuel-efficient, and more powerful".

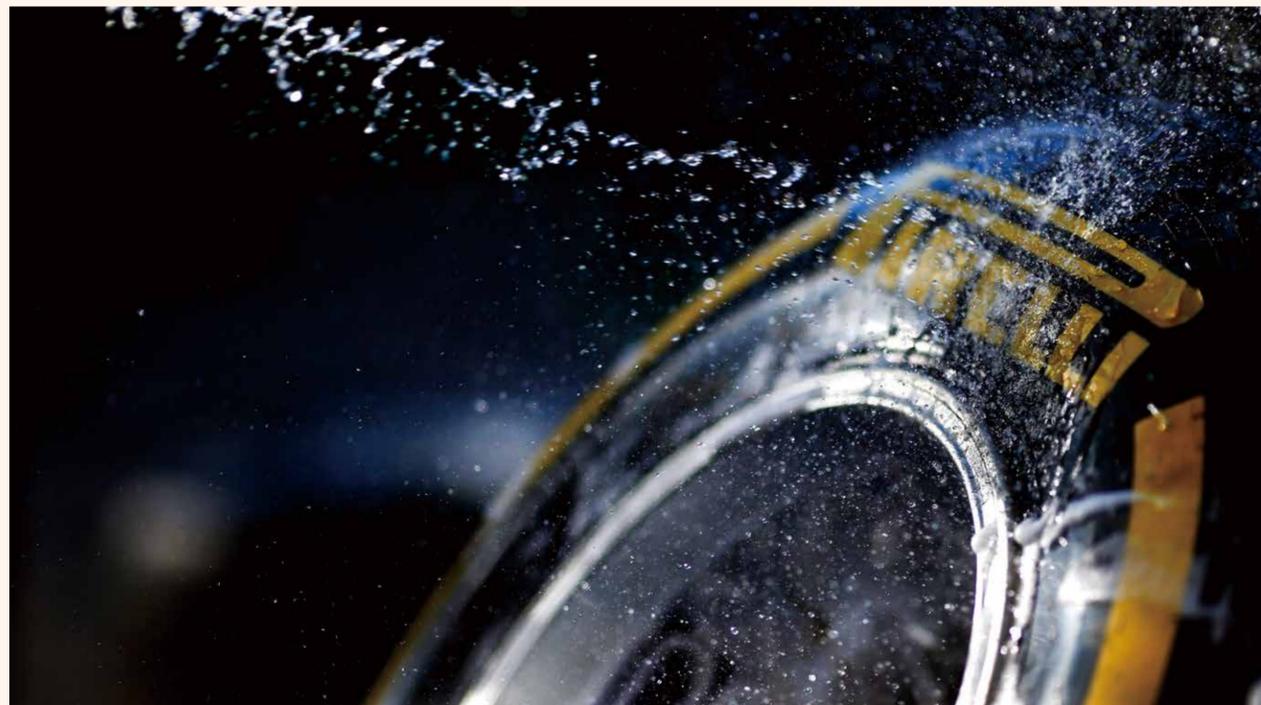


### Add the green "wings"

It owns a number of tire manufacturers such as Pirelli, Aeolus tires, PTG, etc. At present, it has formed two business lines of passenger tires and industrial tires, covering various models. It has 24 factories in 13 countries, and its products are sold all over the world.

#### Digital tires

With its Cyber™ tire range and smart tire sensor technology, Pirelli is embracing digital change. As early as 2019, Pirelli became the world's first tire company to share road information via a 5G network with smart tires equipped with sensors. In February 2021, the McLaren Artura hybrid supercar featured tires with Pirelli sensors as the first in the field



#### Green tires

Pirelli cooperates with car manufacturers to develop the ELECT™ series of tires for electric vehicles. It has a number of technological innovations in materials and performance, reducing tire rolling resistance by 20% to 30% and vehicle energy consumption by 5% to 8%, to extend the life of the car battery effectively

PTG designed and developed 01 e-URBAN series products for urban new energy bus fleets, significantly improving product sustainability, safety, and comfort

Aeolus Tire organically combined electrification, intelligence, and green and low-carbon requirements and launched a new green smart tire solution - AGB23, which was specially developed for new energy electric buses, and this is a new generation of Aeolus green tires with low rolling resistance, low noise, and retreadability



### Equipped with green "chips"

Based on the existing business in the field of new energy vehicles and the advantages of high-performance materials, it has mastered the whole process of R&D and manufacturing of lithium battery materials and core components. It is making every effort to deploy the relevant industrial chain of the new energy automobile industry and support the development of the national new energy industry.

#### Lithium battery cathode material

- Tianhua Institute has developed a ferric phosphate industrial device that uses natural gas as a heat source and has a large processing capacity, which effectively solves the problems of low production efficiency and high maintenance costs in the past.
- Sinochem International Ningxia Zhongwei 10,000t/a NCM cathode material project was completed and put into production, supplying domestic mainstream power, small power, and 3C digital customers in batches

#### PVDF lithium battery binder

- Sinochem Lantian began developing high-performance PVDF products for lithium-ion batteries in 2012, and has achieved continuous improvement in the application performance and product quality of PVDF resins for lithium-ion battery binders. The project has applied for 15 Chinese invention patents, of which seven have been authorized. In 2020, a 5,000-ton/year high-performance PVDF production line was completed.

#### Lithium battery swap facility

- Jinmao Green Building independently develops and invests in the construction of commercial vehicle swapping stations and on-board battery swapping system assemblies with a shared battery nature, providing end customers with charging and swapping energy supply solutions for products such as new energy heavy trucks, mining trucks, loaders, etc., which solves the pain points of charging time, battery attenuation, cruising range and safety hazards faced by vehicle electrification, and have achieved completely independent intellectual property rights for key parts of battery replacement products. Up to now, the Company has submitted a total of 46 patents for battery swapping technology for heavy trucks, and 14 have been authorized

#### Lithium battery recycling

- Sinochem Hebei Lithium Battery, a subsidiary of Sinochem International, dismantles and recycles usable materials from decommissioned lithium batteries called "urban mines" through cooperation with car companies, battery manufacturers, and recycling companies, and cascade utilization companies and utilizes the decommissioned batteries. Valuable metals are prepared into battery materials and used again in battery production, linking the "last mile" of the lithium battery industry

# Fully Enjoy the Modern Life

Adhering to the principle of "Quality shapes a better life", Sinochem Holdings has always insisted on promoting the green development of urban and rural construction, continuously improving the living environment, raising the level of housing, and building a beautiful city where people and nature coexist in harmony, creating the beautiful countryside with green ecology and livability that gives people a green, smart and beautiful future for their lives.

## High-quality city operator

Sinochem Holdings is a central SOE approved by the State-owned Assets Supervision and Administration Commission of the State Council, whose main business includes real estate development and hotel operation. The subsidiary China Jinmao Holdings Group Ltd. has been dedicated to the responsibility of "unleashing future vitality of cities", adheres to the operation logic of "city gathers people, city promotes industry", and has created a number of city operation projects to promote the sustainable development of the city and rejuvenate its vitality and dynamics.

In 2021, six new urban operation projects, and a total of 33 urban operation projects were acquired. Through resource integration and in-depth operation, it has satisfied people's yearning for high-quality life and created maximum economic, environmental and social value for the city.

### Urban renewal and upgrading

In September 2021, China Jinmao officially became the main entity for the implementation of the urban village project in Hengmian Ancient Town, Pudong New Area, Shanghai. By restoring the historical and cultural features of Hengmian Old Street as the core, the project will create a cultural experience area that integrates the functions of ancient town leisure, cultural experience, and ecological livability. Meanwhile, new technologies such as smart city and technology accommodation will be implanted in the ancient town to strike an organic balance between urban development and historical protection.



## Create a livable environment

It gives full play to industrial advantages, empowers urban and rural construction with high-end technology and advanced management experience, creates a high-quality green and livable environment, and promotes the modernization in which man and nature coexist in harmony.

### Green building

Actively promote the development and application of building-integrated photovoltaic (BIPV) technology, increase the proportion of green power applications in buildings, develop low-carbon residential products, and make buildings greener and more environmentally friendly

### "Zero Carbon" operation

Create an industry-leading smart energy system of "combined cooling, heating, and power + sewage source heat pump + chiller + gas boiler" to offer a more efficient and clean energy supply and reduce carbon emissions

### Smart life scenes

Build a complete smart community construction system, create a standard scenario matrix system featuring "6+X" for Jinmao smart community, provide a more convenient, perceptible, and warm living environment, and empower a better life with smart IoT. Implement Huawei's whole-house smart solution with HarmonyOS as the operating system to create a new experience in housing technology

### Environmental governance

Carry out environmental governance in sewage treatment, solid waste disposal, soil remediation, atmospheric governance, environmental monitoring, etc., deeply build a safe utilization and restoration system for cultivated land, create an improved technical system for paddy fields and dry fields, and explore the comprehensive utilization model of saline-alkali land featuring replicable, promotable, and beneficial

### Rural housing renovation

Invest in the renovation of dilapidated houses and infrastructure construction, narrow the gap between rural areas in the field of public services, improve the level of rural public services, and provide stronger support for regional economic and social development

### Rural environment improvement

Promote rural non-point source pollution control, strengthen rural domestic waste and sewage treatment and resource utilization of livestock and poultry manure, and facilitate the improvement of rural living environment and circular economy

## Serving the needs of modern life

Adhere to implementing the new development philosophy, give full play to business advantages, and provide the people with more diversified and intelligent products and services to empower them to fill life with "happiness".



### Financial services

As an industrial financial service platform of Sinochem Holdings, Sinochem Capital takes full advantage of its comprehensive financial service edges in the fields of license finance, supply chain finance, industrial services, and industrial investment to empower a better life with finance.

- Create a professional industrial financial service platform to provide high-quality leasing, factoring, and other financial services
- Offer diversified financial services in the production, operation, sales, and circulation of small and medium-sized enterprises
- Provide securities trust services and asset management business
- Deliver "online + offline" comprehensive wealth management services
- Create a new ecology of "finance + agriculture + science and technology", and provide farmers with targeted financial services in all links from the circulation of agricultural materials to field planting to grain purchase and storage



### Property services

- Provide property management services, including order maintenance, cleaning, greening, gardening, and maintenance of public area operation facilities
- Add value to the community, including interior decoration platform services, community living services, community space operation services, and real estate brokerage services
- Add value to non-owners, including providing filed services to property developers, assisting in marketing activities, providing consulting services, etc



### Hotel service

- Possess mature and complete high-end hotel design, development and operation, and other full-life-cycle asset management capabilities. The overall praise rate of its 11 high-star hotels has reached 90.4%, ranking first in the market
- Officially launched five self-owned hotel brands, creating quality and customized services in the high-end brand hotel market, meeting customers' upgraded consumption needs, and creating a service experience with a sense of technology and quality

# Building the Core Competitiveness of HSE with Cohesion

Excellent HSE management is the eternal pursuit of Sinochem Holdings and the core competitiveness it strives to build. Sinochem Holdings adheres to the "Global HSE Forerunner" vision, establishes the philosophy of "HSE First", anchors the goal of "zero loss", and strives to promote the integration and optimization of the HSE system. It coordinates production and operation and HSE management, strengthens supervision and investigation, controls risks, eliminates hidden dangers, promotes the "dual carbon" initiative, and prevents pandemic, to ensure the stable production and operation of the Company and provide a safe and stable environment for the smooth progress of the restructuring.

Contribute to SDGs

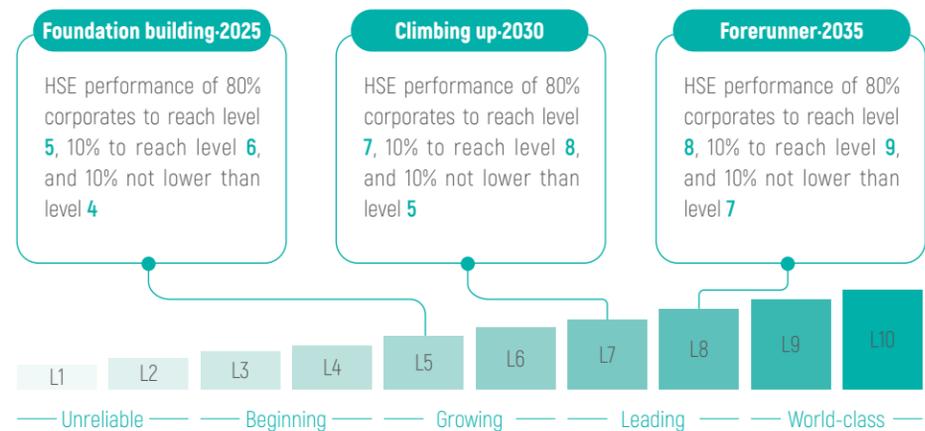


# Release and Implement the HSE Forerunner Strategy and the FORUS System

Released and implemented the HSE forerunner strategy and FORUS system, established Sinochem Holdings' vision of "global HSE forerunner" and the goal of "zero loss", aiming to help the Company to move forward into a world-class enterprise and strive to create a beautiful world of harmonious coexistence.

The HSE forerunner strategy follows the three-step route of "building foundation, climbing up, and fore-running ahead", and through three "five-year plans", to build first-class process standards, equipment and facilities, and industrial team and realize HSE system reconstruction and concept reconstruction, value reconstruction and management reconstruction.

The FORUS system takes HSE risk management as its core, implements comprehensive loss control, and makes systematic arrangements for the entire life cycle of business activities such as projects, equipment, processes, and products, covering safety, environmental protection, health, energy, carbon emissions, security, etc. It unifies the HSE management language and evaluation standards, provides fundamental compliance for HSE management, and a systematic solution for achieving the HSE forerunner vision.



In 2021  
the rate of work injury per million working hours decreased by **42.4** % year-on-year

There were **0** general and above environmental incidents

new occupational diseases

**0**

and

**0** major HSE negative public opinion cases

# Strictly Abide by the Bottom Line of Production Safety

Adhering to the problem orientation, tackling both the symptoms and the root causes, solidly promoted the three-year special rectification of safety production, comprehensively strengthened the safety management and control during the transition period of the restructuring, and focused on the rectification of prominent problems and hidden dangers, which effectively guaranteed the production safety of the enterprise and the life safety of employees.

—Photo by Wang Ya, Sinochem Yunlong



**2.814** billion yuan invested in safety production

The number of dedicated safety management personnel is

**1,473**

Investigate and correct

**93,753** hidden dangers

## Improvement of safety awareness

Attaches great importance to the improvement of safety awareness, widely publicizes safety production-related policies and regulations through activities such as the study of the new "Safety Production Law", conducts safety lectures, safety production month, etc., and has deeply rooted the philosophy of "HSE First" in the hearts of every Sinochem Holdings' member, and put it into practical actions to ensure safety.



The special study activity of "Safety Production Month" was carried out, and watched **2,936** special films on the theme of "Life is weightier than Mountain Tai", and **198,000** members participated.

Carried out **923** safety production "Lectures", "Dialogues", "Open Classes", "Micro Classes", online interviews, and grass-roots publicity sessions, with **46,000** members participating.

Organized all staff to carry out the study and implementation of the new *Production Safety Law* with the theme of "Learning the Law, Understanding the Law, and Practicing the Law". More than **60,000** members participated.

Conducted monthly themed accident warning education, carried out **31,684** warning education sessions, **728,000** people participated, identified **22,700** risks, and rectified **33,800** hidden dangers

## Security risk management

Adhere to the safety risk management and control throughout the whole process of production and operation, further reduce the existing risks and consolidate the foundation of risk management and control through measures such as the three-year special rectification of safety production and measures of the "initiative of annihilation" for illegal operations.



Completed the response safety risk assessment of all **168** sets of equipment and improved **199** risk control measures.

Fully carried out the three-year special rectification of safety production, focused on tackling the key points, and solidly promoted the rectification tasks of "two special topics" and "eight special projects". **100%** of the **10,618** annual key tasks have been completed on schedule, of which two sets of technological processes or equipment have been changed and redesigned. **1,647** emergency shut-off valves were added, and the level of intrinsic safety continued to improve.

Strengthened the safety management of contractors, established **955** contractor HSE whole-process management systems, formulated **612** contractor classification standards, eliminated **4,150** contractor personnel, and **90** contractors were blacklisted and removed.

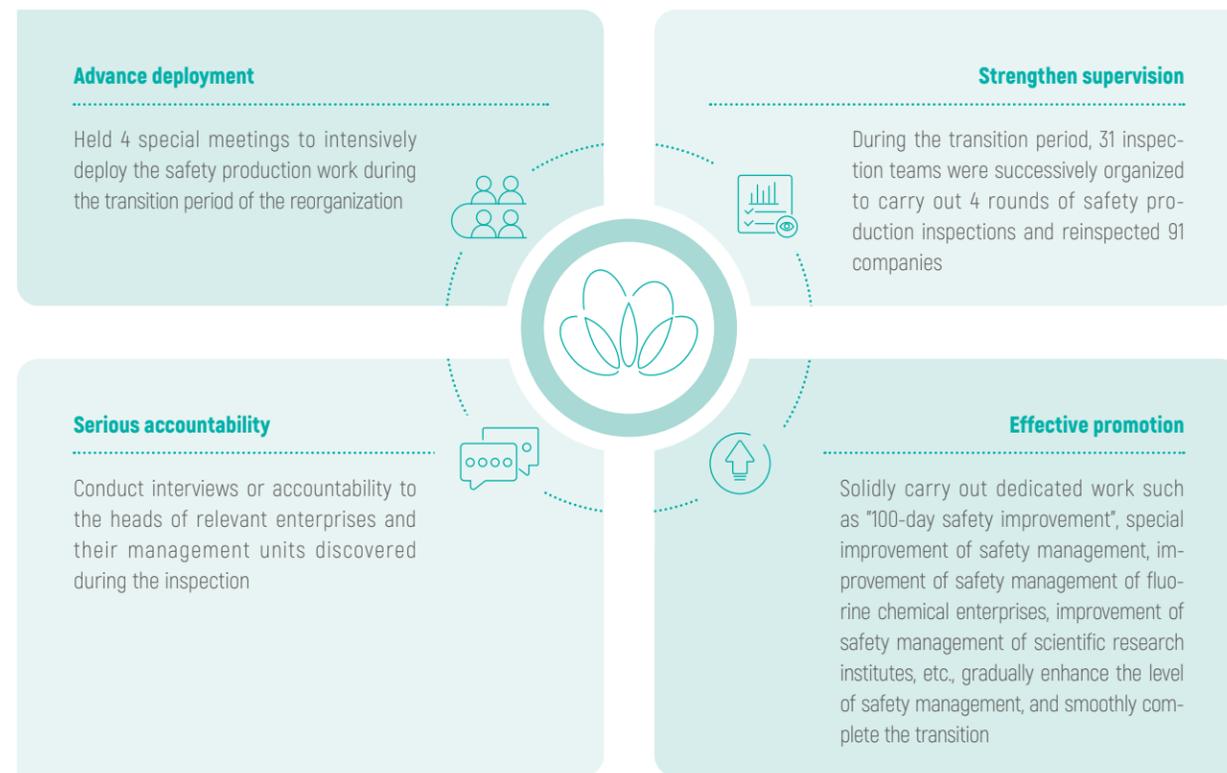
Carry out the "Elimination Initiative" for operation violations, sort out and summarize **21,000** common violations, formulate the "Instruction Manual on Safety of Eight Dangerous Operations and Partial Hazardous Projects", carry out **7,827** education on warning against operation violations and safety training, and **362,000** person-times participated, organized **908** publicity campaigns for limited space operations, **33,000** people participated, and **1,362** accident warning education sessions were carried out, with **46,000** person-times participated.

Adhere to the technology-enabled safety management, the headquarters, and five enterprises were selected as the national pilot units of "Industrial Internet + Hazardous Chemical Safety Production", released the "smart factory + smart HSE" evaluation system, and completed the first self-assessment, built online monitoring platform on major hazards, special operation monitoring platform, and conduct real-time monitoring for more than **130** major hazardous source storage tanks and chemical process devices.

## Management of security risks

Adhere to prevention and control of hidden dangers simultaneously, take the safety production supervision as the enabler, and focus on the investigation and treatment of a large number of hidden dangers, ensuring safety for the Company's restructuring and integration.

Attaching great importance to the safety management during the transition period of restructuring and integration, deploying ahead of time, printing and distributing the "Special Regulations on Safety Production Management During the Transition Period of the Restructuring", strictly organizing and carrying out safety production inspections, promoting the implementation of hidden dangers rectification, and carrying out safety management improvement actions, which has provided a stable environment for restructuring and integration.



Carry out the normalized team investigation and management of hidden dangers, **93,753** hidden dangers were checked, and **91,042** rectifications were completed, with a rectification rate of **97.1%**.

Carry out special rectification of fire safety in rental and leasing sites, check **1,803** sites and **513** hidden dangers, as well as formulate and promote rectification plans for them all.

Carry out the improvement of safety management of fluorine chemical enterprises and scientific research institutes, formulate and publish *Safety Management Standard of Sinochem Holdings Fluorine Chemical Enterprise* and *Safety Management Standard of Sinochem Holdings Research Institute Test (including Experiment)*.

## Capacity building on safety emergency

Focusing on the prevention and control of significant risks and major accidents, we have continuously strengthened emergency infrastructure building, effectively responded to various natural disasters, gradually consolidated the security foundation, and improved emergency rescue and security capabilities.

Improve the emergency management mechanism, set up Sinochem Holdings HSE Accident Emergency Response Headquarters, and revise and release the Company's special HSE emergency plan; enterprises at all levels revised and updated **53,437** emergency plans of various types.

Carry out special firefighting promotion, organize "119" firefighting month activities, publicize **212,000** audiences, **2,151** firefighting training sessions, **907** firefighting drills, **1,771** evacuation drills, and **6,495** hidden dangers for investigation and rectification.

Carry out emergency training drills regularly, organize annual emergency training and desktop drills of "convoy - Sinochem", organize emergency management personnel training. **160** people from **154** hazardous chemical enterprises participated. Each unit carried out **12,034** emergency training drills, with more than **254,500** person-times.

Shouldering the social responsibility as a central SOE, Sinochem Zhoushan Base participated in the "5.25" rescue of the hazardous chemical tanker fire accident in Zhoushan waters, and the Cangzhou Dahua Fire Brigade participated in the "5.31" oil tank fire rescue in Cangzhou, Hebei Province, and won high praise from ministries and local governments.



—Photo by Liu Xuhui, Changyi Petrochemical

# Practice the Path of Green and Low-carbon Development

Sinochem Holdings is guided by the goal of reducing pollution and carbon emissions, focusing on the prevention and control of pollutants, based on clean technology innovation, aiming at supplying green products, developing the ecological and environmental protection industry as the guarantee, and focusing on energy conservation and efficiency improvement as its commitments. It also resolutely follows the path of green and low-carbon development and has achieved remarkable results in efficiently using energy resources, tackling pollution prevention and control, and reducing greenhouse gas emissions. The quality of ecological and environmental protection has continued to improve.

## Strengthen low-carbon management

Turn the goal of carbon peaking and the vision of carbon neutrality into actions, improve the low-carbon management organizational structure and management system, and set up the Sinochem Holdings carbon peaking and carbon neutrality leading group and organization to provide organizational guarantee for the realization of low-carbon development goals; continue to carry out carbon emission verification, organize and carry out dual carbon actions, strengthen low-carbon publicity and implementation training, and provide technical routes and management standards for the steady achievement of dual-carbon goals. Positive progress has been made in green and low-carbon actions.



**We have seen that both at home and abroad, green and low-carbon development has become a global consensus. As a responsible carbon-emitting country, China has solemnly committed to achieving "carbon peaking and carbon neutrality" to the world. For Sinochem Holdings, considering our development goals, our own positioning, our industrial distribution, and other factors, we must take a green, low-carbon, and high-quality development path that is in line with human development trends.**

—Chairman Frank Ning



### Anchor goals, make plans systemically

Based on industrial planning, form a low-carbon development idea with carbon emission intensity control as the core, carry out project carbon emission review, and fully honor the green and low-carbon main line in the development process to ensure the Company achieves both goals of "carbon peaking, carbon neutrality" and high-quality development.

### Conduct in-depth research, benchmark with the advanced

Actively benchmark with advanced enterprises at home and abroad, and national industry standards, examine ourselves, face up to the gap, refine and decompose the indicators, monitor and release regularly, and combine the completion of environmental protection and low-carbon indicators with business objectives, investment objectives, and development directions, which has provided clear guidance for the next step of carbon trading and industrial layout, and helps to realize the high-end, technological and green industrial chain.

### Thorough investigation, know the bottom line

Carry out carbon emission status investigation, organize more than 240 independent legal person enterprises of to carry out carbon emission status investigation, more than 130 enterprises set up low-carbon project teams, sort out the whole process of management and production, carry out carbon reduction risk analysis, and find out 14,274 risks, manage the carbon emission risk base, formulate a risk management and control plan, and stabilize the risk to a controllable state.

In 2021

sulfur dioxide emissions decreased by

**41.9** % year-on-year

nitrogen oxide emissions were down by

**3.8** % year-on-year

and comprehensive energy consumption per 10,000 yuan of output value reduced by

**8.0** % year-on-year

## Coordinate carbon trading and plan carbon management

Straighten out the three-level management team and mechanism of carbon trading, establish a team that understands business and trade capability, and explore and implement services such as data verification, communication with competent authorities, exchange account opening coordination, and corporate performance training. Actively convey the national carbon market, trading, and compliance rules to key emitters, effectively assisting them in completing transactions and fulfillment in a compliant, accurate, timely, and efficient manner.

### Successful completion of carbon asset compliance

According to the *Notice on Managing Settling Carbon Emission Allowances in the First Compliance Period of the National Carbon Emissions Trading Market* issued by the Ministry of Ecology and Environment, the Company delegated Sinochem Energy High-Tech Co., Ltd. to accommodate the carbon emission allowance payment for the eight self-provided power plant companies included in China's carbon market in 2021, and completed the settlement of all carbon emission allowances per unit two weeks ahead of schedule. The Company has achieved 100% fulfillment in the first compliance cycle of the national carbon market, and was awarded the "Certificate of Excellent Service and Management Practice in the First Compliance Cycle of the National Carbon Market".

## Pursue green development

Adhere to the ecological priority, green and low-carbon sustainable development path, scientifically handle the relationship between development and emission reduction, overall and partial, short-term and medium-term, promote green transformation in industrial development, and achieve greater advancement in green transformation.

### Create a model of green industry

Continue to carry out clean production audits, promote energy conservation, consumption reduction, pollution reduction, and efficiency enhancement from the source, and drive new momentum for green development by creating green factories as the enabler.

### Chenzhou base has built a "green mine"

Centering on the efficient development of mine resources, Chenzhou Base has carried out massive basic research and made technical breakthroughs in mining and beneficiation, successfully breaking through the key bottlenecks from "refractory beneficiation" to high value-added fluorine chemical products and achieving comprehensive utilization of the waste rock, waste residue and wastewater in the process, which has created a "demonstration base for green mine sustainable development innovation".

### Promote the development of circular industry

Adhering to advanced clean technologies and green processes, actively seek sustainable growth methods, deploy in industries such as solar thermal power generation and comprehensive utilization of biological resources, build core competitiveness in green development, and promote the development of green circular industries.

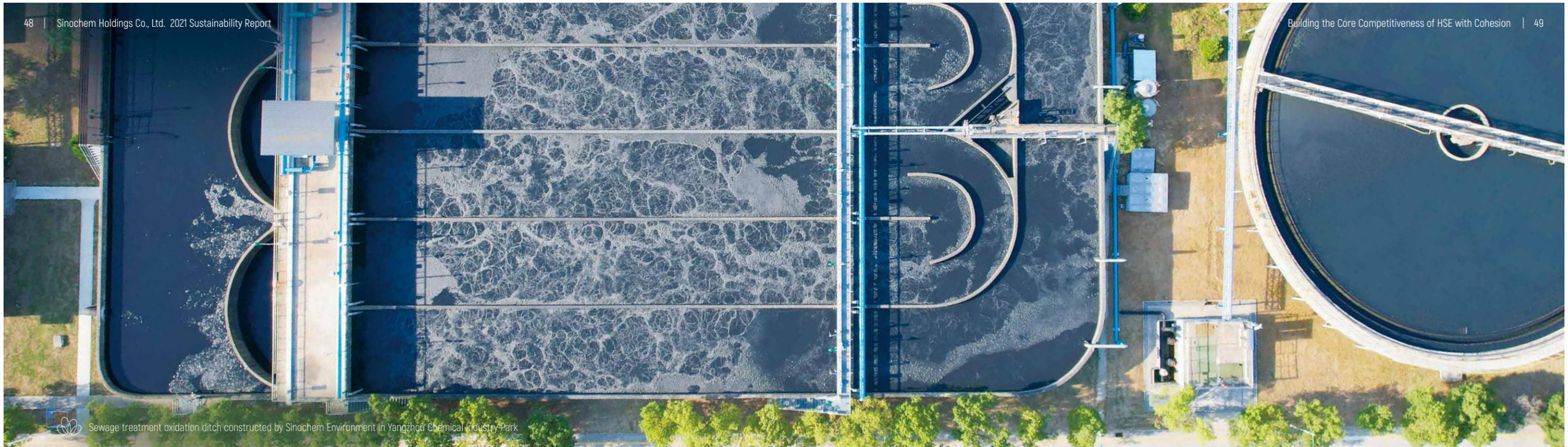
### Explore the extension of the product chain of the circular economy

The new factory of Yangnong Group independently developed the world's first industrialized 150,000-ton/year hydrogen peroxide method epichlorohydrin production unit, successfully extended the circular economy product chain, and made breakthroughs in resource utilization, reduction, reuse, and in-depth treatment, which has substantially raised the level of green development of the industry.

As of 2021

a total of

**25** companies have been rated as green parks, green factories, green products, and green mines



Sewage treatment oxidation ditch constructed by Sinochem Environment in Yangzhou Chemical Industry Park

**Promote green manufacturing**

Adhere to science and technology and innovation as the driving force, achieve breakthroughs in green process technology in the fields of "zero discharge" of wastewater and biodegradable plastics, and provide diversified green innovation solutions for addressing the industry's environmental protection pain points.

**Contributing to a new plan for green smelting**

Elkem uses green electricity in producing silicon metal and ferrosilicon and renewable bio-carbon instead of coal as a reducing agent to promote the development of metal smelting towards climate neutrality. Nearly 20% of biochar is used in production at Elkem's Norway plant, and it is expected to reach 40% by 2030. 83% of Elkem's electricity consumption comes from renewable energy generation.

**Promoting a "sound relationship" between plastics and the environment**

KraussMaffei Group has been deeply practicing in the field of plastic circular economy and biodegradability, and has continuously released new products such as powerMolding™ hydraulic injection molding machine series, iPu™ pultrusion molding system, and the full range of gold power extruder equipment, which significantly improves production efficiency. It has published a white paper on biodegradable plastics and promoted the "I'm Green" activity both online and offline to empower the sustainable development of the rubber and plastics industry.

**Provide green products and services**

Adhere to the goal of providing green and high-quality products, and integrate the full-cycle green philosophy into the full life cycle, including design, manufacture, and use of major products such as agriculture, chemicals, new materials, machinery and equipment, housing, and tires, which has greatly reduced carbon footprint and lead a trendy green life.

**Facilitating the aquaculture industry to reduce carbon emissions**

One of Adisseo's main products - liquid methionine, helps to reduce the ammonia gas produced by animal intestinal fermentation, thereby improving the carbon and nitrogen utilization ratio of anaerobic microorganisms. A rough calculation shows that every 1 kg of liquid methionine added to the feed can reduce about 2 kg of carbon emissions. Meanwhile, the carbon footprint of production services can be minimized through innovations such as decarbonizing processes, using renewable energy and supporting the use of the safest, least polluting and most economical modes of transport.

**Effective development and utilization of resources**

Give full play to the responsibility of the Company as a central SOE, firmly promote resource-saving and intensive recycling, fully explore the green value of processes and materials, enhance innovation capabilities, and comprehensively improve resource utilization efficiency.

**Molten salt energy storage products and technologies access the international market**

Bluestar Beijing Chemical Machinery vigorously develops the Concentrated Solar Power (CSP) technology, and successfully provided the manufacturing, installation, and construction of energy storage systems for the 950 MW CSP project in Dubai, of which the first phase featured a 100 MW molten salt tower. The project is the largest and most technologically advanced tower CSP project in the world, and it is also a key project of the "Belt and Road" initiative.

**The R&D achievements of the Hangzhou water treatment team won the special award "Dayu Award"**

Targeting the problem of lacking freshwater resources on the island, the Hangzhou water treatment research team developed high-boron removal reverse osmosis seawater desalination membrane materials and a complete set of energy-saving integrated reverse osmosis seawater desalination equipment based on localized core components and key equipment. Its indicators such as water production and energy consumption have reached the leading domestic level, providing effective solutions for developing and securing island water resources.

**Southwest Institute of coke oven gas-to-methanol green technology was recommended by the Ministry of Industry and Information Technology**

In response to the need for clean and efficient utilization of heavily polluted industrial exhaust gas, Southwest Institute has developed key technologies such as deep purification of coke oven gas, coke oven gas pure oxygen autothermal conversion process and catalyst, methanol synthesis catalyst, energy saving, and consumption reduction and resource recovery and utilization process. It has developed a 100,000-ton/year to 500,000-ton/year coke oven gas-to-methanol process software package, forming a green technology for coke oven gas-to-methanol, which opens up a new way for the efficient utilization of coke oven gas resources in China.

## Deepen pollution prevention and control

Resolutely assume the political responsibility for ecological and environmental protection, resolutely complete the task of pollution prevention and control, give full play to industrial advantages and continuously improve the level of precise pollution control, scientific pollution control, and law-based pollution control, and fight the three major defense battles of blue sky, clear water, and pure land.

### Focusing on winning the battle to defend the blue sky, and comprehensive management has achieved remarkable results

Since 2015, Sinochem Holdings has implemented and completed 770 air pollution prevention and control projects, focusing on the control of boiler flue gas, industrial furnace exhaust, process exhaust, fugitive emissions, and construction dust.

#### Technological transformation to achieve emission reduction

Dezhou Shihua adheres to the environmental protection policy of "source control, green production, energy saving, and emission reduction" and carries out low-nitrogen combustion and SCR transformation of circulating fluidized bed boilers to reduce the emission of nitrogen oxides in flue gas and the use of denitrification agents. It reduces the use of ammonia water by 500t/a and the polymer denitrification agent by 1000t/a.

### Solidly advance the battle to defend the pure land and build a firm foundation for soil pollution prevention and control

Adhere to making progress while maintaining stability in soil pollution prevention and control, highlighting key areas, key industries, major pollutants, and characteristic pollutants. Since the "13th Five-Year Plan", 245 soil pollution prevention and control projects have been completed, focusing on soil pollution prevention and control, industrial solid waste management, industrial land restoration, etc., and effectively control the soil environmental risks of industrial and urban construction land.

#### Soil remediation brings green back to the people

Sinochem Environment adjusts measures to local conditions and adopts the treatment plan of "comprehensive treatment + ex-situ landfill + soil remediation" to completely solve the problem of solid waste yard pollution left over from the history of Zhangjiaba Chemical Plant. Meanwhile, greening and ecological landscape projects are implemented in the storage area and surrounding areas, and the slag yard that has been preserved for more than half a century has been turned into a residents' leisure park, which has become the first case in Zigong City to transform into economy-lead ecological environment governance and realized mass environmental benefits.

Zhanghua slag field after treatment 

### Further propel clear water protection to ensure stable and up-to-standard discharge

Deeply implement the *Action Plan on Water Pollution Prevention and Control*. Since the "13th Five-Year Plan", 390 water pollution prevention and control projects have been promoted and completed, with a total investment of 1.99 billion yuan, focusing on the control of industrial wastewater, groundwater pollution, rainwater pollution, etc., and proactively enhance the relocation of polluting enterprises in the Yangtze River Economic Belt.

#### Realizing the first zero discharge of wastewater in China

Luxi Group has successfully realized the stable operation of the first zero-discharge wastewater project in China. The project adopts technologies such as reverse osmosis, nanofiltration, salt separation, and MVR evaporation and crystallization. The maximum water treatment capacity is 1,350 cubic meters per hour; it recycles 8.8 million m<sup>3</sup> of fresh water and condensate per year and realizes the recycling and reduction of waste; achieves zero discharge of wastewater in the chemical industry park, and effectively improves the regional water environment.



—Photo by Lin Ping and Liu Chuntao, Honghe Pharmaceutical

### Strengthen the disposal of hazardous waste to ensure the stability of the ecological environment

Through the construction of a hazardous waste collection and transportation system, ERP operation management system, and other facilities, and in cooperation with Sinochem Holdings' high-quality hazardous waste operation and management team, it can ensure the safety, environmental protection, and efficiency of the entire process of hazardous waste disposal, and give full play to its professional advantages to meet the basic green needs.

#### Take the lead to activate the revitalization dynamics

Shenyang Huacheng's service scope covers 14 prefecture-level cities in the province, providing comprehensive and multi-dimensional services for hazardous waste disposal of waste-producing enterprises in Liaoning Province. This project demonstrates Sinochem Holdings' implementation of the important instructions of General Secretary Xi Jinping on the revitalization of the old industrial bases in Northeast China. It is the first to invest in and construct a comprehensive hazardous waste disposal project in Shenyang and even in Northeast China, integrating investment, construction, and transportation. The annual incineration and disposal scale reaches 40,000 tons.

## Promote ecological protection

Always uphold the philosophy of ecological civilization, integrate "harmonious coexistence with nature" into the development philosophy, attach great importance to the ecological protection of the Beijing-Tianjin-Hebei, Yangtze River, Yellow River, Fenwei Plain, and other regional river basins, and promote the prosperity of biodiversity.

### The improvement of ecological environment promotes biodiversity development

In Qingdao Oriental Eden Garden, located in the saline-alkali land area by Jiaozhou Bay, China Jinmao improves the planting soil through physical and ecological measures to provide a suitable ecological environment for plant growth. The project will complete the cultivation, display, and experience of important biodiversity in the core area; rebuild the coastal ecological base in the non-core area, conserve and restore biodiversity; pay attention to biodiversity monitoring and protection around the scenic area, and protect endangered migratory birds and marine habitat.

### The action of black soil pollination improves regional biodiversity

With the strong support of the Bee Research Institute of the Chinese Academy of Agricultural Sciences, Syngenta Group China cooperated with China Agricultural University and the Lishu County People's Government to develop one million mu of green food (corn) at the China Agricultural University Pear Tree Experiment Station in Lishu County, Siping City, Jilin Province. The core area of the standardized base carries out the "pollinating action" project to promote biodiversity and plant wildflowers in the non-functional areas of the corn test field to attract wild pollinators and improve the ecological environment.



# Attentively Protect the Occupational Health of Employees

Sinochem Holdings has always put the safety of employees in the first place, focusing on the control of the source of occupational disease hazards, continuously improving the workplace environment and working conditions of employees, and promoting the occupational health awareness of all employees through the management measures of "prevention, control, management and education", to effectively protect the occupational health of employees and achieve the performance goal of zero new occupational diseases in 2021.

## Strengthen source governance

### Improve occupational health management capabilities

Set up occupational health management organizations, and 16 occupational health-related system standards have been formulated and released. A total of 426 full-time and part-time management teams have been deployed to conduct capacity assessments for management personnel to improve the professional capabilities of the management team. Occupational health management is gradually getting standardized.

### Promote occupational disease hazard management

Adhere to source prevention, and include occupational disease hazard management as an annual priority. In 2021, 46 enterprises implemented 71 occupational disease hazard control projects with a total investment of 60.0353 million yuan, reducing the number of victims by 73, and simultaneously carried out daily monitoring and regular testing of occupational disease hazard factors, and occupational disease hazards have been effectively controlled.

## Strengthen health promotion

Continue to promote the establishment of healthy enterprises and the activities of health experts, organize and carry out the publicity week on *Occupational Disease Prevention Law*, carry out 958 theme lectures, 1,028 publicity consultations, 1,213 warning education, and 108,000 audiences, and take multiple measures to spread the occupational health knowledge, enhance employees' occupational health awareness, and guide the practice of healthy work and healthy life.

### Assess the current situation of occupational health management

Investigate the current situation of occupational disease prevention and control with 165 sampling and testing points, evaluate the current situation of occupational health management and occupational health management on-site, and find out the current situation of occupational health management in the Company.

## Strengthen health monitoring

Organize occupational health inspections, strengthen the review of those with abnormal physical examination results, arrange for transfer of all personnel who have detected occupational contraindications, establish and improve occupational health monitoring files, and effectively safeguard employees' health.

## Strengthen pandemic prevention and control

In the face of the recurrent COVID-19 pandemic, Sinochem Holdings has always been rigorous on the normalization of pandemic prevention and control, adheres to the combination of normality and emergency, makes timely and scientific decision-making and deployment, takes immediate action with full participation, and makes coordinated response to create a safe working environment for employees.

### Strengthen the building of the epidemic prevention organization Improve the epidemic prevention mechanism

- Develop the epidemic prevention mechanism
- Coordinate the deployment of epidemic prevention
- Tighten the epidemic prevention and supervision

### Strengthen the management and control of key links Eliminate epidemic prevention loopholes

- Daily warning and judgment
- Rigorous information reporting
- Strengthen precise prevention and control
- Effective emergency response
- Strengthen the prevention and control of sensitive time points

### Closely follow overseas epidemic prevention and control Zero import of overseas epidemic cases

- Tighten the dispatch of personnel overseas
- Tighten the requirements of overseas epidemic prevention
- Properly handle epidemic events

### In 2021

there were **0** new cases of occupational diseases

the detection rate of occupational disease hazards in the workplace reached

**100 %**

and the coverage rate of occupational health inspection was

**100 %**

### In 2021

there were **0** new confirmed cases in the Company

# Openness and Inclusiveness Build a Stage for Growth

Employees are the core force to promote the development of the enterprise, Sinochem Holdings respect and protect the rights and interests of all employees, improve the talent promotion mechanism, smooth the career development channel, balance the work and life of employees, and achieve self-development of employees.

Contribute to SDGs

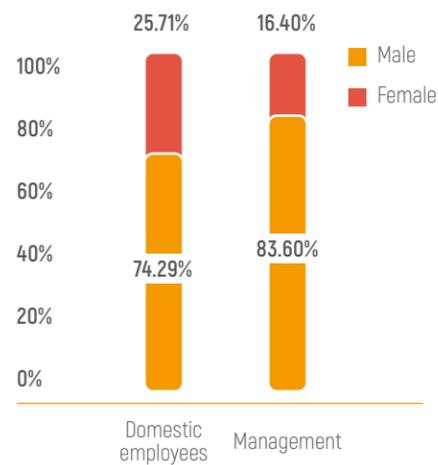


# Create Equal, Diversified, and Inclusive Working Environment

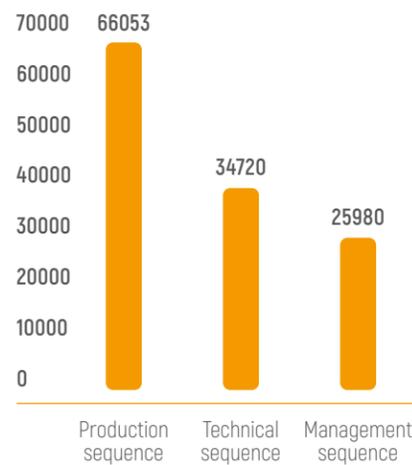
## Equal employment

Strictly abide by the *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China*, and other laws and regulations, respect and safeguard the legitimate rights and interests of employees. Adhere to equal employment, treat employees of different nationalities, ethnicities, races, genders, religious beliefs, and cultural backgrounds fairly, resolutely prohibit the employment and use of child labor, resist all forms of forced and compulsory labor, and establish regular and legal labor relation with employees. Implement employment based on a labor contract system, supplemented by labor dispatch and part-time employment.

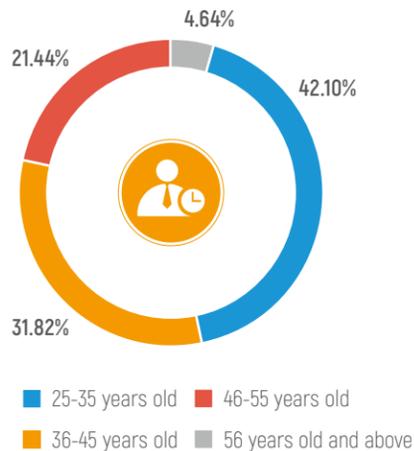
Gender Structure of Domestic Employees



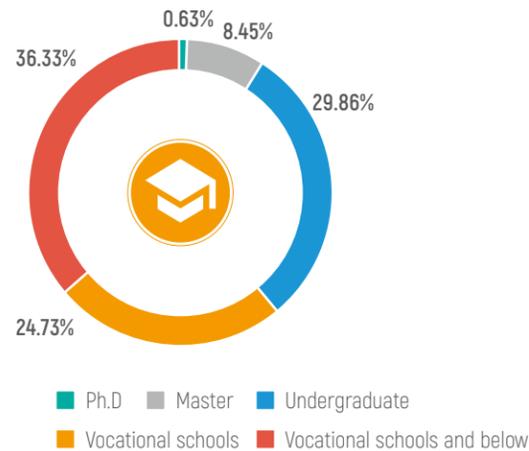
Position Structure of Domestic Employees<sup>2</sup>



Age Structure of Domestic Employees



Educational Structure of Domestic Employees



Total number of **222,203** employees<sup>1</sup>

**15,950** new jobs created

**100%** labor contract signing rate

**3.2%** of minority employees

**8.7%** employee turnover rate

## Salary and benefits

Implementing the basic principle of "common prosperity", in accordance with the incentive orientation of "adhering to the premise of state-owned enterprise attributes, infinitely close to marketization", and adhering to the 3P salary principles with the combination of "paying for the position, paying for the ability, and paying for the performance", continuously optimize the internal income distribution regime, and build a "six-dimensional incentive system" that combines short, medium and long-term, material and non-material. The Company and its subsidiaries pay social insurance and housing provident fund in full in line with national policies and provide employees with supplementary benefits such as corporate annuity. The per capita salary level has steadily increased.

In 2021

**100%** social insurance coverage

**9.86** days of paid vacation per capita

### Fixed compensation

- Take position value as the main salary basis encourage employees to obtain salary returns by undertaking high-value jobs

### Variable compensation

- Emphasize the strong performance orientation of bonuses, fully link bonuses with organizational performance, team performance, and individual performance, and encourage a reasonable widening of the pay gap

### Medium and long-term incentives

- Based on the top-level design of *Sinochem Holdings' Medium- and Long-Term Incentive Guidelines*, 15 medium- and long-term incentive tools have been launched, focusing on technological innovation and performance improvement, to encourage the unification of personal value and corporate value.

### Welfare

- Create a "worry-free" welfare system to solve employees' concerns in the five aspects of "medical care, food, housing, use, and transportation"

### Honor recognition

- Advocate timely incentives, and give recognition to outstanding teams and individuals within the group by creating a group evaluation mechanism with a clear orientation



### Honor

Sinochem Holdings is at the forefront of central SOEs in the exploration of incremental sharing mechanisms such as equity incentives for listed companies, dividend incentives for technology companies, and excess profit sharing. Sinochem Holdings Human Resources Department's medium- and long-term incentive management system project has been successfully selected into the *List of Benchmarking Enterprises, Benchmarking Projects and Benchmarking Models for Management Benchmarking Actions for Key State-owned Enterprises* by the State-owned Assets Supervision and Administration Commission of the State Council

## Democratic governance

Continuously strengthen communication with employees, expand communication channels, actively explore and improve the democratic management system, mainly in the form of workers' union, democratic life meeting, etc., earnestly implement the basic functions and powers such as deliberation, review, and supervision of the workers' union, and maintain the right to know and the right to participate of the majority of employees, and enhance their sense of belonging.



Syngenta Group China held the Chinwag Youth Time Symposium

<sup>1</sup>The statistics caliber of the total number of employees are global employees, and that of other employees are domestic employees.

<sup>2</sup>Management sequence overlaps with technical sequence staff

# Unblock the Development Channels

Sinochem Holdings attaches great importance to the building and uplifting talent team. comprehensively implements the "talents prosper the enterprise" plan, deepens the reform of the talent development system and mechanism, builds a comprehensive talent highland in the chemical industry, and provides targeted training for employees at different career development stages to help them tap their potential and realize their self-worth.

## Career Development

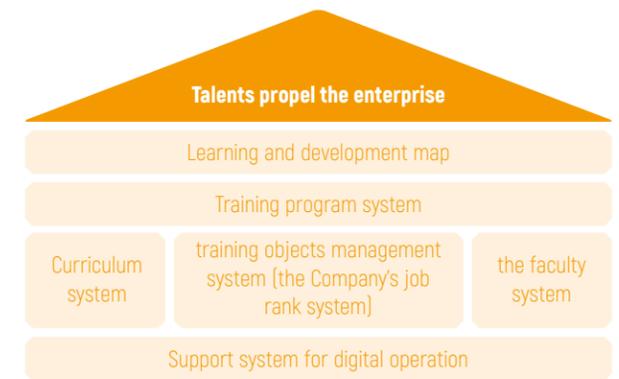
In accordance with the requirements of strategic development goals and talent strategies, reform the talent system and mechanism, continuously optimize the general talents hierarchical system, fully mobilize their enthusiasm and creativity, and realize the full development of employees.

### Deepen the reform of the talent system and mechanism



## Ability improvement

Based on the three major sequences of management, technology, and skills established by the Company's new job rank system, set up a full career training system that matches the new rank system. To carry out education and training for six groups of learners - senior managers, high potential talents, newly promoted personnel, newly recruited employees, professional technical personnel, and professional administrative personnel, including establishing and improving the management system for training targets, learning, and development maps, training program systems, curriculum systems, faculty systems, the support system of digital operation, to promote the development of a learning organization.



Sinochem Holdings' training system

## Carry out industry-university-research cooperation

Strengthen cooperation with Tsinghua University, Beijing University of Chemical Technology, Tianjin University, Chinese Academy of Sciences, Academy of Agricultural Sciences, and other first-class universities and research institutes, take the lead in the establishment of five national industrial technology innovation strategic alliances, promote industry-university-research cooperation, and cultivate more industry talents.

**Sinochem Holdings has been selected as one of the first batch of enterprises integrating production and education in the country**

On July 22, the National Development and Reform Commission and the Ministry of Education jointly announced the list of the first batch of "national industry-education integration enterprises", and Sinochem Holdings was successfully enlisted.

Bring together high-quality resources from enterprises, universities, and society, promote the synergy of the education chain, talent chain, industrial chain, and innovation chain, and create an "ecosphere of production and education integration" of the comprehensive chemical industry. Focus on personnel training of petrochemical safety and emergency skills, chemical industry high-skilled personnel training, modern agricultural technical service training and other fields alike, with Sinochem Emergency, Sinochem Quanzhou Petrochemical, Luxi Group, Yangnong Group, Syngenta Group China, Zhonghao Chenguang, Fujian Tianhua and other outstanding enterprises integrating production and education, which have contributed to the industrial development and personnel training in the national comprehensive chemical and agricultural fields.



## Care for Employees with Sincerity

Sinochem Holdings has always been people-oriented, providing a comfortable, safe and humane working environment for employees, caring about the physical and mental health of each employee, organizing various activities, starting from the actual interests of employees, and being a solid supporter for employees.

1	2
3	4

1. China Jinmao organized a basketball game for employees
2. Sinochem Capital's New Year dumpling-making activity
3. Team building activity for young employees of Tianhua Institute
4. Zhenghe Petrochemical celebrates Women's Day

### Enrich amateur life

- Organize various cultural and sports activities such as long-distance running, table tennis, basketball, and chorus competitions
- Regularly hold employee birthday parties and other activities

### Balance between work and life

- Hold regular employee recuperation activities
- Host family activities
- Organize youth networking events

### Protect physical and mental health

- Pay attention to employees' mental health, and coordinate relevant agencies to provide employees with psychological hotlines and on-site consultation services
- Organizing vaccinations
- Regular employee health check-ups and occupational health check-ups

### Employees' care

- Visit for employees in difficulty, expatriate cadres, and front-line employees, and "bring warmth to them" during the festivals. The headquarters trade union visited 51 employees in difficulty throughout the year and distributed more than 3,100 gifts
- Effectively guarantee the supply of pandemic prevention materials



—Photo by Xu Sheng, China Jinmao



—Photo by Wang Jinyao, Zhenghe Petrochemical

## Cultivate Harmonious Culture

Continuously build corporate culture in the interaction between enterprises and employees, and between employees themselves. The excellent and advanced corporate culture subtly influences the behavior of employees. In order to stimulate employees' enthusiasm for innovation and entrepreneurship, create an atmosphere of catching up with learning and surpassing, enhance corporate cohesion, and cultivate a harmonious and civilized atmosphere, Sinochem Holdings has carried out active and effective practical activities for a long time.

### Role model culture

Organize and carry out various evaluation activities, commend the advanced, establish models, give full play to the demonstration and leading role of advanced characters and collectives, create a strong atmosphere of advocating science, and seeking change and innovation throughout the Company.

### Innovative culture

Promote the application of innovative methods and tools in the Company's scientific research projects through the training method of "combining training and applications".

### Team culture

By carrying out various forms of teamwork and experience-sharing activities, to promote employee exchanges, enhance mutual feelings, as well as team cohesion and collaboration spirit as a whole.



Sinochem Holdings held a seminar on team building at the headquarter



Sinochem Holdings organized the Commendation Ceremony for the outperformed teams

# Collaborative Progress in Driving a Sustainable Industrial Chain

Sinochem Holdings incorporates sustainable development practices into its daily operation and management activities, and the process of communication with stakeholders attaches great importance to strengthening cooperation with governments, enterprises, financial institutions, scientific research institutions, suppliers, etc. It collaborates to build a sustainable industrial chain and actively promotes economic development, social progress, industry upgrading, and quality of human life.

Contribute to SDGs



## Build an Ecosystem of Partners

Adhering to the development philosophy of "win-win cooperation", Sinochem Holdings actively cooperates with the government, enterprises, financial institutions, scientific research institutions, and suppliers, participates in extensive industry exchanges, and gathers resources and strengths from various parties. By building a global industrial resource platform, it leads partners to work together, promote industry progress, and empower regional economic development.



### COLUMN

#### Supporting the construction of Xiong'an New Area

Sinochem Holdings is the No.001 state-owned enterprise registered in the Enterprise Headquarters Area of the Start-up Zone of Xiong'an New Area. On May 10, 2021, Chairman Frank Ning participated in the session held in Xiong'an New Area to implement the coordinated development strategy of Beijing-Tianjin-Hebei and support the construction of Xiong'an New Area and the cooperation between central and local governments and claimed to drive the resource gathering in Xiong'an New Area and give full play to the exemplary role. On December 17, 2021, Sinochem Holdings acquired the land in the start-up area of Xiong'an New Area, which was publicly listed for sale. The headquarters has decided to take Xiong'an as the main direction of future development and actively play the role of central SOEs in driving demonstrations. It is planned to complete the headquarters relocation and promote the implementation of related industries within the "14th Five-Year Plan". It will systematically plan to relieve the stock and actively exert its advantages in reforming the industry, focusing on technology research and development, promoting the organic integration of talents, industries, and capital in the Xiong'an Area, and accelerating the transformation of the "master blueprint" of Xiong'an New Area into the "panorama" of Sinochem Holdings.



Chairman Frank Ning and President Li Fanrong inspected the Xiong'an Planning Exhibition Center



### COLUMN

#### Engaging in the CIIE again to strengthen confidence in international development

Sinochem Holdings is an "old friend" of the CIIE. In 2021, this "old friend" got a new identity. The brand-new Sinochem Holdings adheres to the concept of openness, innovation, and win-win cooperation, and shares China's development opportunities with overseas partners.

At this year's CIIE, Sinochem Holdings signed cooperation agreements worth about US\$12.98 billion with 29 partners from 16 countries and regions. The number and scope of contracts reached a new high. On the procurement side, Sinochem Holdings mainly purchases high-quality crude oil, natural gas, methanol, chemical raw materials, and digital services; on the sales side, it actively organizes its overseas subsidiaries to participate in the exhibition, including Adisseo, Elkem Silicones, Pirelli and KraussMaffei, bringing industry-leading animal nutrition, new chemical materials, high-end tires, intelligent equipment, and other green, low-carbon, energy-saving, and environmentally friendly innovative products, technologies and solutions to Chinese customers.



The Signing Ceremony Hosted by Sinochem Holdings at 4<sup>th</sup> CIIE



During the CIIE, Chairman Frank Ning appeared on the scene in person and led the relevant team leaders to start the "pitching" mode, introducing the Chinese market and the advanced products and green technologies of four Sinochem Holdings' overseas subsidiaries to the global clients in English.

Sinochem Holdings signed cooperation agreements worth about US\$12.98 billion with 29 partners from 16 countries and regions.

## Government-enterprise cooperation

The Beijing Municipal People's Government will carry out cooperation in the fields of modern seed industry innovation, rural revitalization demonstration, etc., through a series of cooperative innovation projects such as jointly building the National Maize Seed Industry Innovation Center, holding the China (Beijing) Seed Industry Conference together, and jointly creating a rural revitalization model, etc., to promote the revitalization of the seed industry and the modernization of agriculture and rural areas together.

## Cooperation with enterprises

Conducting in-depth integration of postal network channel resources and Sinochem Holdings' technical service resources with China Post, strengthening the supply of financial products, jointly building agricultural product bases, creating a one-stop service platform, strengthening the coverage of modern agricultural technical services, and empowering new agricultural business entities with high-quality development.

## Bank-enterprise cooperation

Signed a cooperation agreement with the Export-Import Bank of China and cooperated closely in key areas such as "dual-carbon" green environmental protection, technological innovation, and research and development.

## Supplier cooperation

Strategic cooperation with COSCO SHIPPING in shipping optimization, supply chain cooperation, digital transformation, comprehensive real estate services, centralized procurement, carbon emission reduction, information exchange, etc., committed to providing better products and services, ensuring safety and stability of the industrial chain and supply chain.

## Research institutes

Signed a strategic cooperation agreement with the University of International Business and Economics. The two sides will cooperate on international talent training, academic research and scientific research cooperation, international exchanges and cooperation, etc., to promote the connection of the education chain, talent chain, industrial chain, and innovation chain, and strive to create an integrated development of education and industry.

KraussMaffei Group and the Institute of Plastics and Circular Economy of Leibniz University Hannover have carried out scientific research cooperation on plastic recycling research and development and analyzed and applied research on KraussMaffei Group's technological accumulation and research in the field of plastic circular economy, as well as the combination of scientific research capabilities in process and material development, focuses on the research on plastic recycling processes to enable the sustainability of industrial manufacturing.

Tianhua Institute, a subsidiary of the equipment company, cooperated with Beijing University of Chemical Technology, the Chinese Academy of Sciences, and other institutions to solve the problem of ammonia nitrogen wastewater pollution that has plagued the catalyst industry for decades and successfully built and put polypropylene (PP) meltblown materials into production far higher than the national standard. The deep VOC removal device, including polypropylene meltblown material production technology and equipment" and "degradation method meltblown polypropylene special material VOC deep removal and upgrading technology", are listed as the national pandemic prevention materials.

# Sustainable Procurement

Sinochem Holdings integrates sustainable development into supply chain management, encourages and guides suppliers to abide by laws, regulations, and relevant procurement guidelines, strengthens suppliers' awareness of sustainability, and jointly builds a sustainable supply chain.

### Sinochem International embeds sustainable development in the supply chain

Sinochem International incorporates the principle of sustainable development into the entire procurement business process, refines the supplier sustainability evaluation criteria, incorporates environmental safety, labor rights, social responsibility, and other relevant clauses into the evaluation criteria, conducts hierarchical management and evaluation of suppliers, and promotes full participation and whole process coverage of sustainable supply chain. Besides, Sinochem International has developed a sustainable supply chain training package to carry out various forms of social responsibility management training for suppliers, so as to support them in improving their sustainable development capabilities.

### The 14<sup>th</sup> Five-Year Goals of Sinochem International Sustainable Supply Chain:

The cumulative coverage of the core suppliers' sustainable procurement assessment will increase from **50%** to **95%**

The signing rate of the Supplier Code of Conduct will increase from **26%** to **95%**, and the signing rate of core suppliers will increase from **68%** to **100%**

The cumulative coverage rate of sustainable training for the core suppliers will increase from **59%** to **100%**, and the cumulative coverage rate of sustainable training for suppliers will increase from **3%** to **30%**

### ELIX Polymers and Elkem obtained EcoVadis Platinum certification

Integrate the sustainable philosophy into the Company's mission, culture and values, and incorporate sustainable development practices into daily business management activities and stakeholder communication. In 2021, ELIX Polymers, a subsidiary of Sinochem International, and Elkem passed the EcoVadis audit on a total of 21 standards in the environment, business ethics, sustainable procurement, labor, and human rights, and was awarded the highest platinum medal by EcoVadis, an international corporate social responsibility certification organization.

### Syngenta Group China continues to build a digital supply chain management platform

Syngenta Group China builds an integrated platform for channel ordering, and sales management, strengthens overall inventory management, provides various analysis reports in a timely manner, and offers real-time, accurate, and convenient tools for comprehensive analysis of procurement execution, sales execution, and supply timeliness, which helps achieve efficient and collaborative management of distribution network, sales system, logistics, and warehousing.

In 2021

Sinochem Holdings achieved a synergistic benefit (calculated by EBITDA) of

**2.59** billion RMB



**Sennics joins the "Joining Hands for Sustainable Development" initiative**

Sennics is committed to realizing "green procurement" featuring low-carbon, green, energy-saving, and environmental-friendly, and has joined the "Together for Sustainability" (TfS) initiative, so as to further optimize its sustainability performance.



**Sennics' mid- and long-term goals of sustainable procurement management**

By 2025, the risk assessment rate of raw material suppliers will reach **100%**, and **100%** of suppliers will sign the *Supplier Code of Conduct*

By 2030, the TfS assessment coverage of raw material suppliers will exceed **30%**, and more than **50%** of suppliers will complete sustainable supply chain training.

## Promote Development of the Industry

Adhering to the DNA of openness and cooperation, Sinochem Holdings actively integrates into the new development dynamics, continuously promotes industry upgrading with technological innovation as the enabler, and strives to become a leader in industry development.

**Shenyang SYRICI Testing's international analytical method standards for chlorpyrifos products released for global use**

As the leading developer of China's national standards for chlorpyrifos products and analytical methods, Shenyang SYRICI Testing Co., Ltd. has assisted in solving the quality control problems in the procurement of chlorpyrifos products by the Food and Agriculture Organization of the United Nations and other countries. In September 2021, the national standard method for chlorpyrifos formulated by SYRICIT was verified by 20 laboratories from Germany, Belgium, Denmark, Thailand, and other countries on a large scale and passed the review of the Collaborative International Pesticides Analytical Council and approved to be used globally.

**Revised national standard for industrial liquid chlorine led by Jinxi Institute has been released**

The revised national standard Industrial Liquid Chlorine GB/T5138-2021 led by China Haohua Jinxi Institute was released in August 2021. This standard refines the steps of each detection method and eliminates the identified potential safety hazards in the operation methods and instruments in the previous version, reaching the world-class level. The product indicators reflect the advanced nature of China's industrial liquid chlorine production process and the high quality of the products. The water content index formulated in the standard is stricter than the similar standards in the United States, the United Kingdom, and Russia, and the nitrogen trichloride index is strictly limited. The revision of this standard is of great significance to China's chlor-alkali industry, and helps improve the level of chlor-alkali process control and enhance the quality and competitiveness of China's industrial liquid chlorine products.

**Sinochem Energy undertook the "China International Petroleum Trade Conference" Digital Innovation Forum**

Sinochem Energy undertook a special forum on "How Digital Technology (Smart Energy) Promotes Oil and Gas Trade". With the theme of "Gathering New Momentum and Promoting the Green Innovation and Development of International Oil and Gas Trade", the forum focused on the construction and prospect of digital infrastructure for international trade in bulk commodities, mainly oil and gas trade, and discussed the development and opportunities of oil and gas trade cooperation in the context of the global pandemic.

**Syngenta Group China and Chinese Academy of Agricultural Sciences co-hosted the industry summit**

Syngenta Group China and the Chinese Academy of Agricultural Sciences co-hosted the independent dialogue session of the UN Food Systems Summit on "Innovative Cooperation, Co-Creation of Value", focusing on three topics including food system transformation, food loss and waste, digital innovation, and serving agriculture, rural areas and farmers, discussed building a good ecosystem for green agricultural development and food system transformation, and put forward China's plan to achieve sustainable development and the vision and outlook for common development.



—Photo by Pu Rong, Southwest Institute

# Co-creating and Sharing to Enhance Social Well-being

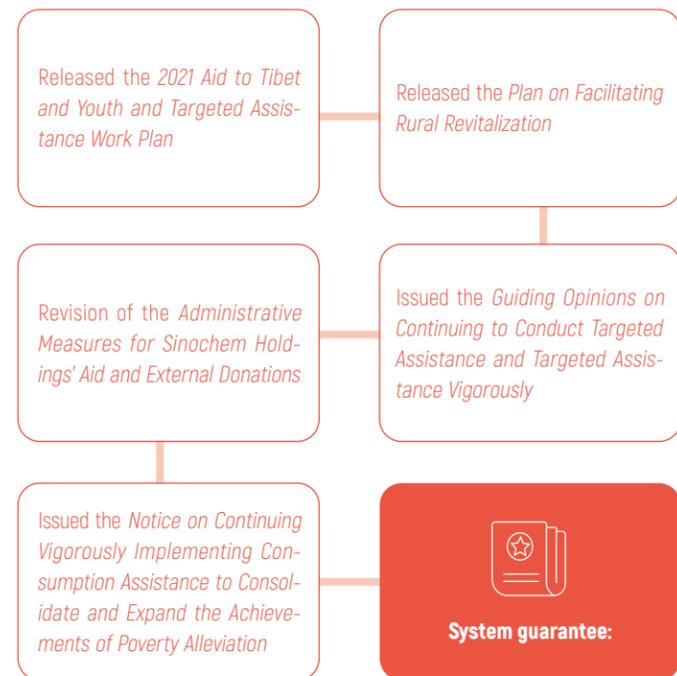
Sinochem Holdings firmly fulfills its political, economic, and social responsibilities, actively serves the needs of the people, participates in social welfare undertakings, conveys warmth of "Sinochem Holdings" to society, improves people's quality of life, and continuously enhances human well-being, which contributes to the prosperity of the country, the rejuvenation of the nation, the happiness of the people, and the promotion of social harmony and progress.

Contribute to SDGs



# Serving Rural Revitalization

2021 is the first year for comprehensively promoting rural revitalization. On the basis of the outstanding completion of poverty alleviation and assistance tasks, Sinochem Holdings fully leverages the advantages of modern agriculture, environmental science, industrial finance, and other main businesses and interprets the mission and responsibility of the agricultural "national team" with practical work and innovation, and contributes strength and wisdom to accelerating rural revitalization, agricultural and rural modernization, and enabling farmers to live a better life.



**Honor**

In 2021, it was rated as "merit" in the assessment and evaluation of the central unit's targeted assistance. One collective and one individual won the National Advanced Commendation Award for Poverty Alleviation, and 5 collectives and five individuals won the Autonomous Region/Provincial Advanced Commendation Award for Poverty Alleviation



### Aided and supported six counties in five provinces

Gulang County, Wuwei City, Gansu Province; Alukerqin Banner and Linxi County, Chifeng City, Inner Mongolia Autonomous Region; Pingshan County, Shijiazhuang City, Hebei Province; Gangba County, Shigatse City, Tibet Autonomous Region; Dachaidan Executive Committee, Haixi Prefecture, Qinghai Province

Invested <b>172</b> million yuan in rural revitalization assistance	Implemented <b>48</b> assistance projects	Purchased <b>60.096</b> million yuan of agricultural products from poverty-alleviated areas	Trained more than <b>3,400</b> technicians and rural revitalization leaders
Dispatched <b>14</b> cadres	Helped assisted areas in cultivating <b>14</b> industries	Assisted in selling <b>75.6497</b> million yuan of agricultural products in poverty-stricken areas	
Introduced assistance funds of <b>28.7875</b> million yuan	Drove <b>750</b> local residents to gain employment and income	Trained more than <b>8,300</b> grassroots cadres	

—Photo by Sun Jian, Syngenta Group China

**Industrial revitalization**

Sinochem Holdings' main businesses, such as agriculture, environment, and finance, align the rural revitalization, forming an assistance dynamics dominated by agricultural assistance and supported by related industries.

**Give full play to industrial advantages, innovate and integrate supporting forces**

In terms of agriculture, MAP assistance has achieved remarkable results in 85 former national-level poverty-stricken counties in 17 provinces/autonomous regions, including four designated counties, which has been recognized by all parties for its performance of assisting and benefiting farmers, robust sustainability, and firm scientific and technological support. In terms of environment, Linxi County promoted the construction of a "global organic waste environmental management and resource utilization demonstration plant", committed to building a model project for ecological revitalization. In terms of finance, the agricultural financial service industry issued more than 3 billion yuan of inclusive loans throughout the year, and the new trust scale of agricultural actively-managed products reached 1.28 billion yuan, serving more than 70,000 farmers, ranking three "first" in the industry. In terms of energy, the gas station convenience store in the oil business facilitated sales, promoted the "industrial support for gas stations in thousands of villages and stores", and built four new rural comprehensive service stations in Fujian, using collective construction land in towns and villages, with a net profit of all 1.481 million yuan, which has been fully returned to the government and addressed employment of 13 residents who have been lifted out of poverty.



**Cultural revitalization**

Organize and carry out civilized practice activities in the new era, strengthen the development of rural spiritual civilization, cultivate a civilized rural manner, and build a civilized village.

**"New Era of Harvest" theatrical performance accesses the households**

The "New Harvest Era" series of theatrical performances, a brand activity of bringing literature and art to the countryside founded by Syngenta Group China, aims to "promote rural revitalization and jointly build rural civilization". In 2021, the "Harvest New Era e" performance was broadcasted live, displaying the Donghai County to the audience. Over 100,000 viewers watched the show and interacted online through the online platform.

**Talent revitalization**

Strengthen the development of rural cultural talent teams, cultivate rural cultural backbones, and helps to promote the revitalization of talents in aided areas.

**"Revitalization Lecture Hall" online cloud training**

The first session of training provided for more than 8,400 grass-roots cadres in the Company's six aided areas through live broadcasts, promoting the effective connection between the achievements of poverty alleviation and rural revitalization. The "Revitalization Lecture Hall" invites internal and external technical experts to carry out on-the-spot training and technical guidance actively and effectively enhance the awareness and ability of grassroots cadres in the aided areas to provide targeted assistance and promote comprehensive rural revitalization.

**Ecological revitalization**

Follow the laws of rural development, implement the rural green development mode, strengthen the improvement of the rural living environment, and build new dynamics of rural development in which man and nature coexist in harmony.

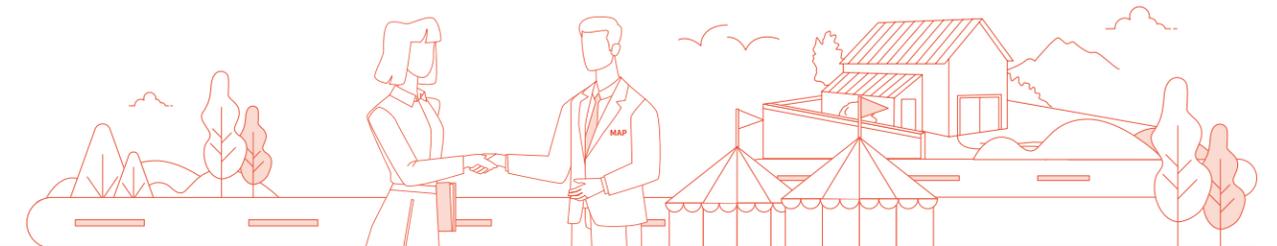
**Carry out toilet renovation**

capitalize **550,000** yuan

to install indoor sanitary and environmentally friendly toilets for

**60** households in

**3** villages in Linxi County and Aqi



**Organizational revitalization**

Guided by grassroots Party building and based on villager self-governance, to stimulate the endogenous power of the masses and strengthen the leading role in rural revitalization.

**Developing the courtyard economy - grasping the economic environment with both hands**

In Xiping Village, Aqi, 8.1 million yuan was invested in purchasing agricultural machinery and equipment with property rights owned by the village collective, focusing on the development of the rural courtyard economy, building 1,000 mu orchard economic forest, covering the key monitoring objects for poverty returning prevention in the whole village, and improving the quality and efficiency of the cooperatives' operation, meanwhile greening and beautifying the environment.

**Sinochem Environment carried out saline-alkali land treatment**

Since March 2021, Sinochem Environment has carried out saline-alkali land treatment experiments in Taonan City and Da'an City, Jilin Province, the former national-level poverty-stricken counties, through saline-alkali land treatment technology and model innovation. The total annual income of the treated land increased by about RMB 8,000 per hectare and has achieved the systematic goal of increasing the production and efficiency of saline-alkali land, which was reported by "People's Daily" and "CCTV News".

**Sinochem Energy facilitates to improve the kitchen and medical environment**

Sinochem Energy has built a "Hundred Houses and Hundred Kitchens" project in Jiru Village, Gangba County, Tibet, helping villagers build modern kitchens and significantly improving their living conditions; building a medical and health station on a plateau at an altitude of 5,000 meters, effectively alleviating the current situation of "difficulty in seeing a doctor" in the local area.

**Build a MAP assistance demonstration farm, lead the Party building, and build a cooperative**

Taking MAP assistance and capital investment as the enabler, it cooperates with Aqi, Chifeng City, and Inner Mongolia and guides and encourages village cadres to take the lead in establishing cooperatives. Based on the principle of "co-construction and co-prosperity, innovation mechanism, leading development, and sharing and win-win", it gives full play to the organization to coordinate and promote the role of Party building to lead the development of modern agriculture and industry and promote rural revitalization.

Paired with **25** Party branches and **18** poverty alleviated villages, including primary and secondary schools in designated counties, villages linked to temporary cadres, and villages where first secretaries are placed, and carried out activities such as voluntary education, donations of money and materials, and business development.

In designated counties **94** new agricultural business entities, including **28** large planting households, and **30** cooperatives **34** agricultural and animal husbandry enterprises, have been cultivated and served

## Promoting High-quality Employment

Sinochem Holdings regards employees as the core force of enterprise development, attaches great importance to talent team building, continuously improves the incentive and promotion mechanism, fully mobilizes the enthusiasm of employees, strives to achieve the full development of talents and high-quality employment, and promotes the common growth of employee value and corporate value.

In recent years, the number of fresh graduates has been increasing year by year, the campus recruitment base is large, and the number of college students in 2021 hit a record high. Sinochem Holdings expanded job recruitment, held 33 campus job fairs, created 15,950 jobs for the society, actively assumed the social responsibility of state-owned enterprises, and consolidated Sinochem Holdings' talent accumulation.

At present, Sinochem Holdings has adopted flexible recruitment methods, strengthened publicity work on the Internet and the cloud, migrated the recruitment process to online, adjusted recruitment methods in a timely manner according to the pandemic policy, and thoroughly implemented the deployment of the Party Central Committee and the State Council to fight the pandemic and stabilize employment.

Sinochem Holdings expanded job recruitment, held

**33** campus job fairs, created

**15,950** jobs  
for the society



plant the seeds of chemical dream in children's hearts

Special topic

The Chemical Industry Museum of China affiliated with Sinochem Holdings is one of the first batch of 100 central SOEs patriotism education bases named by the State-owned Assets Supervision and Administration Commission. In addition to collecting and displaying the development history and important achievements of China's chemical industry, it actively disseminates the civilization of the chemical industry, popularizes science knowledge and ideas, carries out patriotic education, and spreads chemical industry knowledge to the public. Meanwhile, it stimulates the public's interest in scientific exploration, improves scientific literacy, and sows chemical dreams for more young children.

Promote the "Wonderful Chemistry Journey" science literacy initiative in schools and communities, and hold 39 activities in total, benefiting more than 20,000 audiences; team up with the China Science and Technology Museum to jointly organize a large-scale science popularization livestream event with the theme of "children, experts, and science pros"; a total of 45 chemical science shows and popularization activities were carried out in the Chinese Academy of Sciences, benefiting more than 30,000 audiences, and 25 online science popularization activities were carried out, with more than 200,000 people participating in online interactions.



## Supporting Social Welfare

Sinochem Holdings enthusiastically supports social welfare undertakings, is committed to improving social economy, education, environment, etc., actively carries out public welfare and charity activities, organizes employees to participate in voluntary services, gives full play to the collective warmth, actively devotes to the society, and contributes to the happiness of the people and social harmony.

### Strong responsibility for pandemic containment and disaster relief

In terms of pandemic containment, 50 million yuan has been donated to Hubei Province, the hardest-hit area of the pandemic. Enterprises at all levels have donated a total of 57.1937 million yuan to the pandemic area, and more than 61,000 employees participated in the anti-pandemic donation with 12.8706 million yuan. Meanwhile, companies from all over the country have donated 29 sets of special medical equipment, 1,107.52 tons of sodium hypochlorite and medical alcohol, 80,543 liters of disinfectant, 27,249 sets of various protective clothing, more than 750,000 masks of various types, 9,000 ambulance tires, and 39,000 pieces of medical gloves to the affected areas and more than 10,000 pieces of other urgently needed anti-pandemic materials.

In terms of disaster relief, in 2021, the Company donated 10 million yuan to the Henan Charity Federation immediately, and enterprises at all levels donated more than two million yuan to support flood control and disaster relief in Henan.

### From 2020 to 2021

Sinochem Holdings donated a total of

**119.1937** million yuan  
for pandemic prevention and control, flood relief, etc.



Sinochem Holdings provided the first batch of 2,000 tons of national disaster relief chemical fertilizer reserves to Henan

For nine consecutive years, employees have been fully engaged in carrying out an education caring project - "Dream Realization Initiative". From 2020 to 2021, relying on the Xinnuo Foundation, employees have donated a total of 7,111,700 yuan to help more than 5,800 needy students in the recipient areas realize their dreams of studying; the foundation acts as a carrier, organizes caring employees and assisted students to pair up, and simultaneously carries out "scholarships for teaching", "scholarships for learning", "self-improvement classes" and other projects; for many years, it has carried out the study tour, and organized young volunteers to conduct the "Dream Building Initiative" voluntary teaching; continued to build "Dream Building Public Welfare Library", donated a total of 27 public welfare libraries in Tibet, Qinghai and other places to provide free borrowing books for school-age children in areas where educational resources are scarce; the majority of employees focus on rural revitalization, pandemic prevention and control, ecological environmental protection, helping the elderly and the person with disability, etc., carry out normalized, professional and diversified voluntary services, and create a group of highly effective and well-known youth voluntary service brands.



E-reading room donated by Sinochem Holdings



**COLUMN** responsibility fulfillment as a global citizen

Sinochem Holdings adheres to the international development philosophy of "mutual benefit, win-win, and common development", integrates social responsibility into "going out", and establishes a sound image of "responsible Sinochem Holdings, responsible Chinese enterprise" in the countries and regions where its business activities are located, which has fulfilled responsibilities and repaid the society.



**Syngenta** Brand ambassadors leverage their influence to call on the public to pay attention to environmental protection

Aleksander Aamodt Kilde, the brand ambassador of Syngenta Group and the world champion of skiing, has continuously leveraged his influence to call on more people to pay attention to the natural environment and climate change that have a profound impact on ice and snow sports in social platforms, media interviews and various activities at home and abroad. He has repeatedly emphasized: "Athletes and farmers share a common position, winter sports and agriculture both rely heavily on the natural environment and climate, and we should each play our part to contribute to a greener, healthier planet."



In the Swiss ski resort of Klosters, Alexander's huge advertisements as the brand ambassador of the Syngenta Group revolve around the theme of environmental protection and sustainability, attracting a lot of attention from tourists and ski enthusiasts around the world.



**Adama** "Sowing" the seeds of science in children's hearts

Launched in 2013, the "Sowing Seeds of Science" project is Adama's flagship community program in Israel, which aims to build a deep connection between children and nature through educational activities, scientific experiments, and agricultural volunteering services to cultivate sustainable values. Over the years, Adama has invested more than \$500,000 in three educational farms in Ashdod, Beer Sheva, and Lod, and thousands of students visit the farms each week. They carry out science experiments under the supervision of the farm's educators, academic experts, and staff volunteers.



**Pirelli** Virtual exhibitions to convey sustainability philosophy to children

Since 2013, the Pirelli Education Foundation has leveraged interactive classrooms and virtual exhibitions to promote Pirelli's sustainable philosophy. During the activity, children complete a "virtual tour" in Milan to experience architectural changes in the past and present, create a color map of Milan, reform and design new buildings, cultivate children's creativity, and "design" a sustainable future for the city.



**Adisseo** Actively retained the people with disabilities and helped them to integrate into society

In France, Adisseo actively provides business and job opportunities for people with disabilities, makes targeted adjustments to its workstations according to the actual situation of people with disabilities, reminds employees to adopt correct attitudes and behaviors towards people with disabilities, and carries out the Handisseo plan (Adisschemao Disability Program). Each base is equipped with mentor to provide support and assistance to employees with disabilities.

# Sustainability Management

## Philosophy and Mechanism

### The philosophy of sustainable development

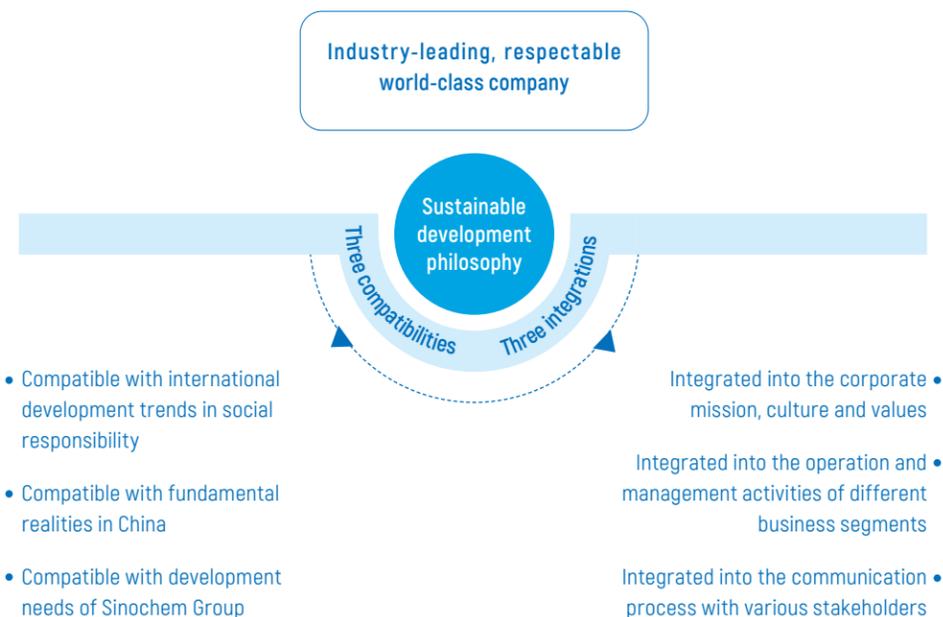
Sinochem Holdings adheres to the philosophy of "In Science We Trust", and has formed a sustainable development philosophy of "Three Conformities" and "Three Integrations". Through innovative development and excellent management, it provides first-class products and services to society, creates maximum value for customers, shareholders, and employees, becomes a model of resource conservation and environmental friendliness in the industry, and realizes the harmonious coexistence of corporate development, social development, and environmental development.

### Promotion of sustainable development

Sinochem Holdings regards sustainable corporate development as part of its corporate DNA, integrates sustainable development into strategic management, promotes sustainable development from top to bottom in terms of concept integration, system construction, and practical guidance, and enhances the continuous integration of the philosophy of sustainable development into the Company's management process and business operations.

### Philosophy integration

Continue to strengthen the sustainable development philosophy of "Three Conformities" and "Three Integrations", organically integrate the philosophy of responsibility into the corporate mission, culture, and values, and provide first-class products and services to society through innovative development and excellent management, and create maximum value for customers, shareholders, and employees, to become a model of resource conservation and environmental friendliness in the industry, realize the harmonious unity of enterprise development, social development, and environmental development, and strive to become a world-class enterprise that is leading and respected in the industry.



### System building

Establish a sustainable development system covering the headquarters and enterprises at all levels, adjust the sustainable development committee, and get the heads of relevant functional departments and key subordinate enterprises on board, so that sustainable development, operation, and management are more closely linked. Enterprises at all levels set up leading groups for sustainable development, identify the person in charge of sustainable development and contact persons and organize the implementation of sustainable development practices.



### Practical guidance

Formulate sustainable development guidelines and management methods, and guide the Company and enterprises at all levels to promote sustainable development. The Company and enterprises at all levels carry out sustainable development practices in various forms, rich in corporate characteristics and with certain social influence according to their actual conditions. Compile a collection of sustainable development cases, excavate exemplary cases, build responsible brands, and enhance the enthusiasm of enterprises at all levels to perform sustainable development and carry out sustainable development communication.

## Communication with stakeholders

Sinochem Holdings maintains proactive and efficient communication with all stakeholders, fully understands their expectations and demands, responds in a timely manner, and works together with all stakeholders for common development.



## Management of substantive issues

Based on corporate strategy and business management, Sinochem Holdings proactively identifies key sustainable development issues, actively understands and responds to stakeholders' expectations and demands, and continuously improves sustainable development performance to achieve common development with stakeholders.



## identification and ranking process of substantive issues



## Outlook

The year 2022 marks a new journey to building a modern socialist China in an all-round way and marching towards the second centenary goal. It is also the first year for Sinochem Holdings to fully operate and move towards the goal of building a world-class chemical conglomerate. We will keep in mind the "two big pictures", remember well the "great one of the nations", fully, accurately, and comprehensively implement the new development philosophy, speed up the construction of new development dynamics, strengthen the confidence and determination in further development, make steady progress, and make progress, forge ahead and strive to create better performance.

Strengthen responsibility undertaking, focus on main responsibilities and main businesses, improve the quality of development, spare no pains to promote the revitalization of the seed industry, lead the scientific and technological breakthroughs in the field of new chemical materials, and give full play to industrial advantages and implement the work of ensuring supply and stable prices in the fields of petroleum, grain, fertilizers, etc., complete the three major transformations - upgrade from a single product to an industrial chain, from providing products to customers to provide comprehensive solutions, from a traditional enterprise to a digital and intelligent one, so as to safeguard people's better life with high-quality development.

Adhere to the philosophy of "In Science We Trust", stick to the self-reliance and self-improvement of science and technology, carry out R&D deployment around key industrial chains, implement the construction plan of the Central Research Institute and kick off operation, and insist on leveraging digital means to empower business, implement the overall plan of "Online Sinochem", and drive up new development momentum by means of technological innovation and digital transformation, and create a source of power for transformation and upgrading.

Strengthen HSE management, build a solid foundation for safety and environmental protection, adhere to the principles of life

first, environmental priority, loss control, and continuous improvement, focus on problems, highlight priorities, make special breakthroughs, and complete system upgrades, fully promote the implementation of the FORUS system, and focus on the three major safety production actions, and actively promote pollution prevention and the "dual carbon" strategy.

Thoroughly implement the new philosophy, new strategy, and new initiatives of talent work in the new era, fully implement the "talents prosper the enterprise" plan, explore enterprise talent management strategies that adapt to internationalization, technology, and marketization, and cultivate a high-quality and professional workforce.

Unify thoughts, build consensus, delve deep into the value of restructuring and synergy, integrate internal and external resources, steadily and smoothly promote the in-depth integration from organization to business, scientifically explore internal synergy mechanisms, and promote strong alliances and synergies between enterprises to maximize the overall interests of the Company. Take maximizing the Company's overall interests as the goal, and work together to seek common development.

Continue to enhance assistance efforts, increase assistance in supporting the improvement of people's livelihood in the recipient areas, stimulate the endogenous power of the recipient areas, and create a

model for rural revitalization. Meanwhile, actively participate in social welfare, and continue to pass on the "Sinochem Holdings' temperature".

New era, new stage, new journey. Sinochem Holdings will renew its adherence to the general work principle of seeking progress while maintaining stability, fully implement the new development philosophy, keep in mind its responsibilities, missions, and undertakings, share the same aspirations, and make concerted efforts to truly build itself into a world-class chemical conglomerate, and to celebrate the victorious convening of the 20th National Congress of the CPC with outstanding results!



## Benchmarking of Report Metrics

Report catalog	GRI Standards	Page
<b>Message from the Chairman</b>	102-14/102-15	02
<b>Sinochem Holdings embarks on a new journey</b>	102-1/102-2/102-6/102-16/102-17	04
<b>The restructuring and integration usher in a new chapter</b>		
Implement the restructuring	102-10	08
Party building leads development	103-2	09
Deepening reform and transformation	203-2/419	12
Innovation drives development	103-2	16
<b>Innovation and creation empower a better life</b>		
Column: Sinochem Holdings is by your side	102-2	22
Safeguard the Bottom Line of Food Security	102-9/103-2	24
Provide Robust Energy Guarantee	103-2	32
Chemistry creates infinite possibilities	102-2/103-2	34
Provide all-round green mobility solutions	102-2/103-2	36
Fully enjoy the modern life	102-2/103-2	38
<b>Building the core competitiveness of HSE with cohesion</b>		
Release and implement the HSE forerunner strategy and the FORUS system	103-2	42
Strictly abide by the bottom line of production safety	103-2	42
Practice the path of green and low-carbon development	203-2/302-4/303-3/304-2	46
Attentively Protect the Occupational Health of Employees	103-2/403-3	52
<b>Openness and inclusiveness build a stage for growth</b>		
Create equal, diversified, and inclusive working environment	102-8/103-2/401-1	56
Unblock the development channels	103-2	58
Care for Employees with Sincerity	401-2	60
Cultivate harmonious culture		61
<b>Collaborative progress in driving a sustainable industrial chain</b>		
Build an ecosystem of partners	203-2	64
Sustainable procurement	103-2/308-2	67
Promote development of the industry	103-2	69
<b>Co-creating and sharing to enhance social well-being</b>		
Serving rural revitalization	103-2/203-1/415-1	72
Promoting quality employment		76
Supporting social welfare	413/415	77

## About This Report

This report is the second sustainability report issued by Sinochem Holdings Co., Ltd. after its establishment.

### Report time frame

From January 1st to December 31st, 2021, partial contents are beyond this period.

### Report release cycle

This report is an annual report.

### Report scope

Company headquarters and enterprises at all levels.

### Compilation basis

This report refers to the Chinese national standard GB/T 36001-2015 *Guidelines for Compilation of Social Responsibility Reports*, *Guiding Opinions on Fulfilling Social Responsibilities of Central Enterprises* by the State-owned Assets Supervision and Administration Commission of the State Council, the *Ten Principles of the United Nations Global Compact*, and *GRI Standards* by Global Sustainability Standards Board, and ISO 26000:2010 *Social Responsibility Guidelines* international standard by International Organization for Standardization.

### Compilation process

- Step 1: Formulate a report proposal and set up a compilation team;
- Step 2: Identify stakeholders and substantive issues, and determine the reporting framework;
- Step 3: Report writing, revision, and improvement;
- Step 4: Review by company leadership;
- Step 5: Publish the report and collect feedback for continuous improvement.

### Report improvements

Compared with the previous year's report, the main improvements of this report include:

- Rebuild the reporting framework based on the understanding of sustainable development from the perspective of the new Sinochem Holdings' corporate development vision
- On the basis of compiling reports in accordance with the GRI standards in the past, integrate ESG-related indicator information disclosure
- Add columns such as "Sinochem Holdings is by your side" to demonstrate the effectiveness of fulfilling responsibilities closer to stakeholders' view
- Enhance data disclosure in the report

### Data sources

The data used in the report comes from the Company's official documents and statistical reports. Due to statistical caliber, the report has made appropriate revisions to the relevant data of previous years. In case of discrepancies, this report shall prevail.

### Appellation description

For the convenience of presentation and reading, "Sinochem Holdings Co., Ltd." is also referred to as "Sinochem Holdings" and "the Company" in this report.

### Report languages

This report is published in both Chinese and English versions. In case of discrepancies, the Chinese version shall prevail.

### How to get the report

You can log on to Sinochem Holdings' official website [www.sinochem.com](http://www.sinochem.com) to browse or download this report online.

## Specification Form of Enterprise Abbreviations

For the convenience of presentation and reading, the abbreviations of Sinochem Holdings' subsidiaries and directly-managed units involved in the report are generally as follows.

Specified abbreviations	Company names
Sinochem Holdings	Sinochem Holdings Co., Ltd.
Sinochem Group	Sinochem Group Co., Ltd.
ChemChina	China National Chemical Corporation Ltd.
Sinochem Energy	Sinochem Energy Co., Ltd.
Sinochem Oil	Sinochem Oil Co., Ltd.
Sinochem Quanzhou Petrochemical	Sinochem Quanzhou Petrochemical Co., Ltd.
Sinochem Energy Logistics	Sinochem Energy Logistics Co., Ltd.
Sinochem Safety	Sinochem Zhoushan Hazardous Chemicals Emergency Rescue Base Co., Ltd.
Sinochem Oil Marketing	Sinochem Oil Marketing Co., Ltd.
Sinochem Nengke Carbon Assets	Sinochem Nengke Carbon Assets Operation Co., Ltd.
Zhenghe Group	Zhenghe Group Co., Ltd.
Syngenta Group	Syngenta Group Co., Ltd.
Syngenta Group China	Syngenta Group China
Yangnong Chemical	Yangnong Chemical Co., Ltd.
Adama	Adama Ltd.
China Seed	China National Seed Group Co. Ltd.
Sinofert	Sinofert Holding Limited
Sinochem International	Sinochem International Corporation
Yangnong Group	Jiangsu Yangnong Chemical Group Co., Ltd.
Yangnong Ruixiang	Jiangsu Ruixiang Chemical Co., Ltd.
Sennics	Sennics Co. Ltd.
ELIX Polymers	ELIX Polymers S.L.
Sinochem Hebei	Sinochem Hebei Co., Ltd.
Sinochem Lianyungang Industrial Park	Sinochem Lianyungang Industrial Park Management Co., Ltd.
China Bluestar	China National Bluestar (Group) Co., Ltd.
Adisseo	Bluestar Adisseo Company
Calyseo	Calyseo Limited
Elkem	Elkem ASA
Elkem Silicones	Elkem Silicones
Bluestar Dongda	Shandong Bluestar Dongda Chemical Co., Ltd.
Bluestar (Beijing) Chemical Machinery	Bluestar (Beijing) Chemical Machinery Co., Ltd.
China Haohua	China Haohua Chemical Group Co., Ltd.

Specified abbreviations	Company names
Sinochem Lantian	Sinochem Lantian Co., Ltd.
Haohua Technology	Haohua Chemical Technology Group Co., Ltd.
Zhonghao Chenguang	Zhonghao Chenguang Research Institute of Chemical Industry Co., Ltd.
Liming Institute	Liming Research Institute of Chemical Industry
Northwest Institute	Northwest Rubber & Plastics Research & Design Institute Co., Ltd.
Southwest Institute	Southwest Research & Design Institute of Chemical Industry Co., Ltd.
Jinxi Institute	Jinxi Research Institute of Chemical Industry
Luxi Group	Luxi Group Co.,Ltd.
Cangzhou Dahua	Cangzhou Dahua Group Co., Ltd.
Aeolus Tire	Aeolus Tire Co. Ltd.
Pirelli	Pirelli & C S.p.A
PTG	Prometeon Tyre Group S.r.l.
ChemChina Equipment	China National Chemical Equipment Corporation
KraussMaffei Group	KraussMaffei Group GmbH
Tianhua Institute	Tianhua Institute of Chemical Machinery & Automation Co., Ltd
Fujian Tianhua	Fujian Tianhua Intelligent Equipment Co., Ltd.
Sinochem Environment	Sinochem Environment Holdings Co., Ltd.
Shenyang Huacheng	Shenyang Sinochem Huacheng Environmental Protection Technology Co., Ltd.
Sinochem Innovation Research Institute	Sinochem Innovation (Beijing) Science and Technology Research Institute Co., Ltd.
Hangzhou Water Treatment	Hangzhou Water Treatment Technology Development Center Co., Ltd.
New Materials Co., Ltd.	China Chemical New Materials Co., Ltd.
Dezhou Shihua	Dezhou Shihua Chemical Co., Ltd.
China Jinmao	China Jinmao Holdings Group Limited (China Jinmao)
Jinmao Services	Sinochem Jinmao Property Management (Beijing) Co., Ltd.
Jinmao Green Building	Jinmao Green Building Technology Co., Ltd
Sinochem Capital	Sinochem Capital Co., Ltd.
Sinochem Commercial Factoring	Sinochem Commercial Factoring Co., Ltd.
Bluestar Chengrand	China Bluestar Chengrand Co., Ltd.
SYRICI	Shenyang Research Institute of Chemical Industry
Chemical Industry Museum of China	Chemical Industry Museum of China
Sunway Chemical	Shandong Sunway Chemical Group Co., Ltd.
Honghe Pharmaceutical	Zigong Honghe Pharmaceutical Co., Ltd.
Sinochem Yunlong	Sinochem Yunlong Co., Ltd.



Sinochem Holdings' official  
Weibo account



Sinochem Holdings' official  
Wechat account

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