

# Social Responsibility Report

## of China's Textile and Apparel Industry

2022-2023



**CNTAC**

Office for Social Responsibility of CNTAC

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## Foreword

2022 was a year of upheavals and turns. The world economy remained sluggish in the aftermath of the COVID-19 pandemic and geopolitical tensions. The turbulent external environment brought various risks and challenges far beyond expectations. 2022 was a year to build on our past achievements and open up a new future. The successful 20th National Congress of the Communist Party of China (CPC) charted a magnificent blueprint for building a great modern socialist country in all respects and pursuing the great rejuvenation of the Chinese nation on all fronts through a Chinese path to modernization. It showed a bright prospect and provided fundamental guidance for the textile and apparel industry, endowing the industry with fortitude, confidence, and opportunities.

Looking back to the past year, in the face of a grim and complicated international situation and multiple pressures brought by the demand contraction, supply shock, and weakened expectations in the domestic market, the textile and apparel industry forged ahead despite challenges and achieved steady and sound development by continuously optimizing the industrial structure, quickening the pace of innovative adjustments, and expediting the transformation of growth drivers. The future-oriented structural indexes lived up to expectations, global cooperation became wider, and the innovation in textile science and technology continued to go deeper. The textile and apparel industry plays a vital role in stabilizing the economy, balancing international payments, and improving people's livelihoods, and becomes a stabilizer and ballast for China's national economic and social development.

This report, the 18<sup>th</sup> consecutive CSR report of the industry issued by China National Textile and Apparel Council (CNTAC), was presided over by CNTAC, prepared by the Office for Social Responsibility of CNTAC, and supported by the leaders and departments of CNTAC. In addition, many domestic and foreign stakeholders of CNTAC also offered valuable revision opinions during its preparation. The report falls into four parts. The first part outlines the development of China's textile and apparel industry in 2022 and the impact of the industry development trend on social responsibility construction; in the second part, the main CSR efforts and achievements of CNTAC and enterprises in this industry in 2022 are presented; the third part introduces the general framework of the Guide for Social and Environmental Due Diligence of Chinese Textile and Apparel Enterprises and the basic ideas of social and environmental due diligence; and the CSR plan of China's textile and apparel industry from 2023 to 2024 is indicated in the fourth part.

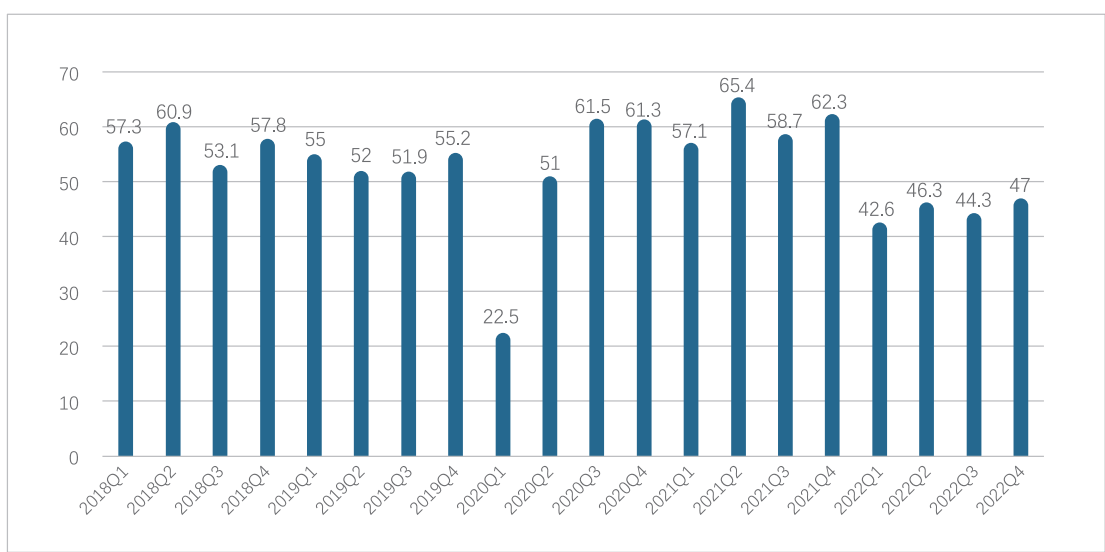


# Development of China's Textile and Apparel Industry and Its Impact on CSR Construction

## 1.1 Development Overview of the Industry in 2022

### 1.1.1 Support the stable development of China's economy

The textile and apparel industry serves as the cornerstone of people's livelihood. In 2022, the added value of China's textile industry accounted for 3.5% of the national total, ranking ahead of food, tobacco, railway and ship equipment manufacturing, and other industries. The composite prosperity index of China's textile industry fluctuated somewhat due to factors such as insufficient market demand and sporadic resurgence of COVID-19 cases. Based on the research data of the CNTAC, the composite prosperity index of China's textile industry in 2022 remained below the boom-or-bust line of 50%, demonstrating 42.6%, 46.3% and 44.3% in the first three quarters. Since China adjusted its epidemic prevention policy and the market consumption saw seasonal growth, the prosperity index rose to 47% in the fourth quarter.



Prosperity index of China's textile industry<sup>1</sup>

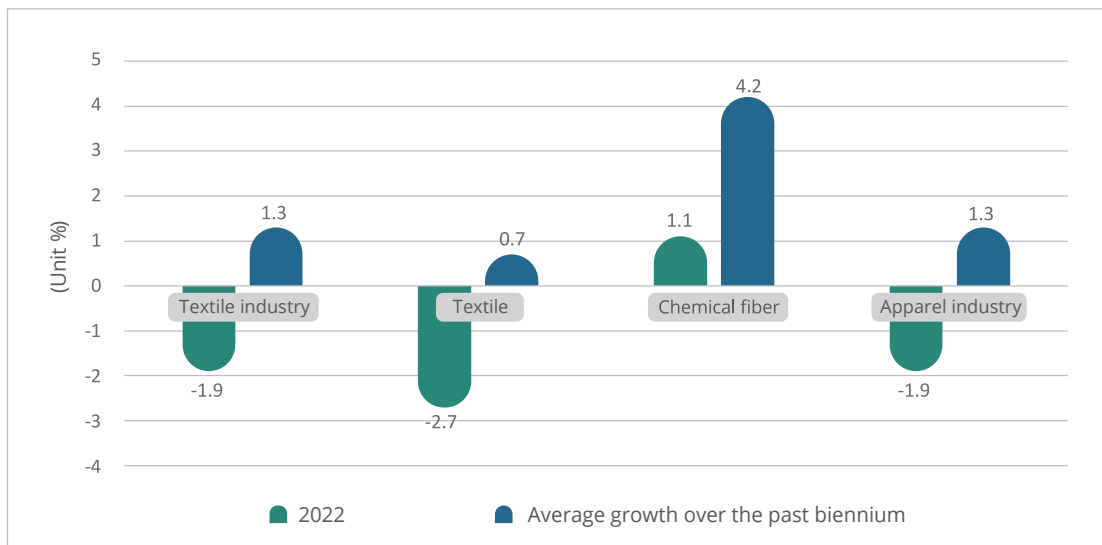
<sup>1</sup> Source: Industrial Economy Research Institute of CNTAC. A prosperity index of China's textile industry higher than 50 indicates a good condition of the industrial business; a higher index shows a more prosperous business.

In 2022, enterprises above the designated scale decreased their industrial added value by 1.9% on a year-on-year basis and realized a growth of 6.3 percentage points lower than the previous year.

**Cumulative quarterly growth on a year-on-year basis of key economic operation indicators of textile industry in 2022<sup>2</sup>**

Key indicators	Q1	Q1 and Q2	Q1, Q2 and Q3	The whole year
<b>Industrial added value</b> (of enterprises above the designated scale)	<b>4.9</b>	<b>0.9</b>	<b>-0.4</b>	<b>-1.9</b>
<b>Operating revenue</b> (of enterprises above the designated scale)	<b>10.6</b>	<b>5.7</b>	<b>3.1</b>	<b>-0.9</b>
<b>Total profit</b> (of enterprises above the designated scale)	<b>-9.2</b>	<b>-17</b>	<b>-23.6</b>	<b>-24.8</b>

The industrial added value of sub-industries such as chemical fiber, wool textile, linen textile, and filament achieved a year-on-year positive growth, while the industrial added value of the apparel industry dropped somewhat.



**Year-on-year growth of the industrial added value of textile industry and sub-industries in 2022<sup>3</sup>**

Major product categories experienced a dramatic slowdown in their output growth in 2022. Among them, the output of the chemical fiber, yarn and cloth declined by 0.2%, 5.4% and 6.9% respectively compared to the previous year; enterprises above the designated scale had a reduction in the output of dyeing cloth and apparel by 7.5% and 3.4% respectively on a year-on-year basis.

<sup>2</sup> Source: National Bureau of Statistics.

<sup>3</sup> Source: National Bureau of Statistics.

### Output growth of major product categories of textile enterprises above the designated scale in 2022<sup>4</sup>

Name of product	Year-on-year growth in 2022 (%)	Comparing with 2021 (percentage points)
Yarn	-5.4	15.2
Cloth	-6.9	16.2
Dyeing cloth	-7.2	19.3
Nonwoven	0.6	3.8
Apparel	-3.4	11.8
Chemical fiber	-0.2	9.7

The operational quality and efficiency of the textile industry slipped. The operating margin of textile enterprises above the designated scale in 2021 was 3.9%, 1.3 percentage points lower than the previous year; the turnover of finished products was 13 times/year, a year-on-year slowdown of 5.1%; the total assets turnover was 1.1 times/year, 4% lower than the previous year; the financial costs, management costs and marketing costs accounted for 6.4%, 0.2 percentage points less than the previous year.

### Main operational quality and efficiency indicators of textile industry and major sub-industries in 2022<sup>5</sup>

Industry	Operating margin		Turnover of finished products		Total assets turnover	
	2022年 (%)	Year-on-year change (percentage points)	2022 (Time/year)	YoY (%)	2022 (Time/year)	YoY (%)
Textile industry	3.9	-1.3	13.0	-5.1	1.1	-4.0
Textile	3.8	-0.8	12.4	-7.0	1.2	-4.4
Chemical fiber	2.2	-4.0	15.4	-2.6	1.0	-2.2
Apparel	5.3	-0.1	12.5	-4.9	1.3	-3.6

The domestic market was restored to be under stress. Due to factors such as decelerated growth in income and restricted restoration of consumption scenarios, residents' willingness to spend on apparel weakened in China in 2022. According to the National Bureau of Statistics, Chinese people spent an average amount of 1,365 yuan (5.6% of the

<sup>4</sup> Source: Industrial Economy Research Institute of CNTAC.

<sup>5</sup> Source: National Bureau of Statistics.

per capita consumption expenditure) on apparel in 2022, with a decrease of 3.8% compared with the same period last year, demonstrating a decline of 0.3 percentage points, the lowest level since the 21st century. The textile industry faced greater stress. Retail sales via brick-and-mortar channels saw continuous negative growth since March, without any visible signs of sustained improvement. The retail sales of apparel, shoes, hats, knitwear and textiles of distributors above the designated scale decreased by 6.5% compared to the previous year, a drop of 19.2 percentage points to that in 2021. The online retail sales grew stably in 2022, as evidenced by the online retail sales growth of clothing products by 3.5% over the previous year, a 4.8-percentage-point faster pullback in growth rate than the previous year and a positive growth trend since June. The integration of online and offline sales led to the innovation of business types. According to the relevant statistics, the sales volume of MCN partners on the Douyin platform in apparel and underwear, sports and outdoors, and household supplies and home textiles demonstrated an increase of 37.7%, 74.9% and 81.5% over 2021 respectively. The sales volume in apparel and accessories was maintained in the first echelon on the live-streaming e-commerce platforms like Douyin and Kuaishou.

#### Cumulative quarterly growth on a year-on-year basis of key economic operation indicators of the textile industry in 2022<sup>6</sup>

Key indicators	Q1	Q1 and Q2	Q1, Q2 and Q3	The whole year
Retail sales of apparel, shoes, hats, knitwear and textiles of distributors above the designated scale in China	-0.9	-6.5	-4.0	-6.5
Online retail sales of clothes in China	0.9	2.4	4.7	3.5

Under the significantly increased pressure of development, the investment situation of the industry remained stable basically. According to the National Bureau of Statistics, in 2022, the completion rate of investment in fixed assets of China's textile industry, chemical fiber industry, and apparel industry increased by 4.7%, 21.4% and 25.3% compared to the previous year respectively. Considering 2019 as the base period, the three-year average growth rate (2020-2022) of the investment volume in the textile and chemical fiber industries was 2.9% and 8.8% respectively, with the newly increased investment volume exceeding the pre-pandemic level; the growth of investment volume in the apparel industry had a three-year average decline of 3.9%, failing to achieve a complete recovery.

### 1.1.2 Optimize the overseas market structure

According to China Customs, in 2022, the export volume of China's textile and apparel industry exceeded 300 billion US dollars for the third year in a row, with the total exports reaching 340.95 billion US dollars, a year-on-year increase of 2.5%, hitting a new record high. Among them, the export volume of textile products reached 156.84 billion yuan, a 1.4% increase compared to the previous year and a recovery in growth rate of 5.5 percentage points over 2021 (accounting for 46% of the industry-wide export volume); the export volume of apparel products was 184.11 billion US dollars, a 3.4% growth compared to the previous year and a fallback in growth rate of 20.7 percentage points over 2021 (accounting for 54% of the industry-wide export volume, an increase of 0.7 percentage points).

<sup>6</sup> Source: National Bureau of Statistics.

In terms of the structure of export products, the textile supply chain of Southeast Asia and South Asia remained resilient, becoming major drivers for the export of supporting products in the industrial chain such as yarn and fabric. In terms of the structure of export markets, the markets along the Belt and Road played a bigger role in driving China's textile and apparel exports. The structure of export markets tended to be more diversified. In 2022, China's exports of textiles and apparel to developed economies were generally curtailed. China's exports of textile and apparel to the US, EU and Japan were 58.54 billion, 48.97 billion and 21.4 billion US dollars respectively, a year-on-year decrease of 5.4%, 1.1% and 0.2%; backed up by the steady recovery of the textile supply chain of the emerging economies, China's exports of textile and apparel to ASEAN countries and other markets along the Belt and Road rose by 14.8% and 11.3% respectively, wherein the contribution rate of ASEAN countries to the industry's export growth reached up to 114.5%.

#### China's export of textile raw materials and products to major countries and regions in 2022<sup>7</sup>

Countries and regions	Export value (Unit: 100 million US dollars)	YoY (%)	Average annual growth over the two years (%)	Proportion of export value (%)
<b>Global</b>	<b>3409.5</b>	<b>2.5</b>	<b>100.0</b>	<b>-</b>
<b>The US</b>	<b>585.4</b>	<b>-5.4</b>	<b>17.2</b>	<b>-56.4</b>
<b>EU</b>	<b>489.7</b>	<b>-1.1</b>	<b>14.4</b>	<b>-13.4</b>
<b>Japan</b>	<b>214.0</b>	<b>-0.2</b>	<b>6.3</b>	<b>-4.9</b>
<b>ASEAN</b>	<b>582.0</b>	<b>14.8</b>	<b>17.1</b>	<b>114.5</b>
<b>"Markets along the Belt and Road"</b>	<b>1303.8</b>	<b>11.3</b>	<b>38.2</b>	<b>202.8</b>

International investment and cooperation boosted steadily. Seeing from outward investment, the industry's enthusiasm for outward investment was not undermined by the pandemic, and the enterprises engaged in overseas operations despite the odds. Over the past ten years, the stock of direct outward investment by China's textile industry approached 12 billion US dollars, involving all links of the industrial chains such as chemical fiber, spinning and weaving, dyeing, apparel, home textiles, and industrial textiles. Relevant investment projects were distributed in more than 100 countries and regions in Southeast Asia and Africa, accounting for more than 80% of the industry's outward investment since the 21st century. Considering the major countries and regions receiving investment, besides international financial centers such as Hong Kong and Singapore, Vietnam has been the top destination of outward investment made by China's textile industry for seven consecutive years.

As one of the most internationally competitive industries in China and a pioneering and demonstrating industry in the industrial cooperation under the Belt and Road Initiative (BRI), China's textile and apparel industry has made innumerable achievements in the economic and trade cooperation with the countries along the Belt and Road and involved in

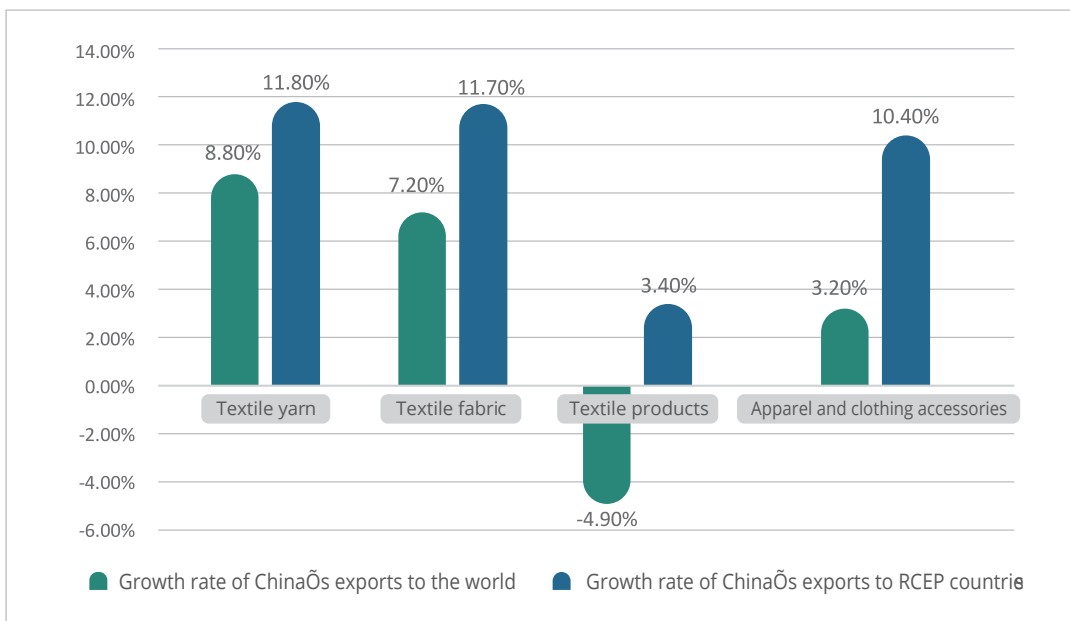
<sup>7</sup> Source: National Bureau of Statistics, China Customs.



the BRI. In 2022, the two-way trade volume of China's textiles and apparel with countries involved in the BRI reached approximately 190 billion US dollars, accounting for over 53% of the total imports and exports of the industry; China's exports of textiles and apparel to countries along the Belt and Road amounted to 126.2 billion US dollars, a year-on-year increase of 11.1% and 8.5 percentage points higher than the growth rate of the industry's exports to the world. The amount of direct investment by China's textile industry to the countries involved in the BRI from 2013 to 2022 reached approximately 6 billion US dollars, accounting for about 50% of the industry's global investment.

The execution and implementation of RCEP promoted the investment, cooperation and development of the textile and apparel industry in Southeast Asia. In terms of outward investment, from 2013 to 2022, China's textile and apparel industry made direct investments in RCEP countries with a total amount of 4.59 billion US dollars, accounting for 39% of the investment worldwide in the same period. In 2022, China's exports of textiles and apparel to the other 14 members reached 95.02 billion dollars, a year-on-year increase of 9.3%, 6.7 percentage points higher than the average growth rate of the industry's exports to the world, and substantial growth of over 30% compared to that before the COVID-19 pandemic in 2019. Seeing from major export categories in the textile industry, in 2022, China's exports to RCEP countries showed a higher growth rate in both upstream (e.g., yarn and fabric) and downstream products (e.g., textile products, apparel, and clothing accessories) than that to the world in products of the same kind.

**Comparison between the growth rate of China's exports to the world and RCEP countries in major textile export categories in 2022<sup>8</sup>**



<sup>8</sup> Source: China Customs.

## 1.2 Major Trends of the Industry and Their Impact on CSR

### 1.2.1 Innovation-driven high-tech industry

The Report to the 20th National Congress of the CPC made strategic deployment on modernizing the industrial system, moving the manufacturing sector toward higher-end, smarter, and greener production, and further integrating the digital economy with the real one. In January 2022, the State Council rolled out the Development Plan for Digital Economy During the 14<sup>th</sup> Five-Year Plan Period. The Plan serves as a guide to action for digital development in various regions and sectors, making clear the guiding ideology, basic principles, development goals, key tasks, and supporting measures to facilitate the sound development of the digital economy during the 14<sup>th</sup> Five-Year Plan period. In June 2022, the Ministry of Industry and Information Technology together with other authorities released the Action Plan to Facilitate the Digitalization of the Consumer Goods Industry (2022-2025) (hereinafter referred to as the Action Plan). Based on the scientific judgment of the transition of the digital technology revolution and the increasingly mature industrial base conditions, the Action Plan provides a clear direction and sound environment for the deep integration and value interaction between the digital technology and consumer goods industry.

In June 2022, CNTAC released the Three-Year Action Plan for Digital Transformation of the Textile Industry (2022-2024), which aims to expedite the digital transformation of the textile industry by focusing on the integrated development of next-generation information technology and textile industry, intelligent manufacturing, and the innovative applications in the Industrial Internet. In the same year, the Catalogue of Innovative Development of the Industry Base led and prepared by the Chinese Academy of Engineering was launched, which involves software in the textile industry, such as the Industrial Internet platform, textile workshop simulation software and the 3D virtual design of clothing. China Textile Machinery Association, in conjunction with other institutions, created a public service platform for intelligent manufacturing standard testing and verification of the textile industry, preparing a series of standards concerning the interconnection, operation and maintenance of textile equipment, smart textile factories, textile maturity evaluation, supply chains, logistics, and visual inspection, and serving as a strong support for the intelligent manufacturing of the textile industry.

**Intelligent manufacturing extends to terminal sectors.** Intelligent manufacturing is the main direction of the digital transformation of the textile industry, wherein intelligent production lines have been the focus of attention. Upstream sectors such as chemical fiber and spinning were the mainstay in the previous stage. Recently, efforts have been extended to downstream terminal sectors such as apparel and home textiles, with a range of advances achieved.



The unveiling of the Action Plan has brought new opportunities for the textile industry to better practice the new development philosophy, integrate into the new development pattern, and achieve high-tech, fashionable and green development with high quality. To better implement the Action Plan, the textile industry should make efforts in the following three aspects: firstly, we should improve the industrial ecology to make digitalization a new pivot in the coordinated development and innovation of the industry; secondly, we should enhance our basic ability to make digitalization a new pivot in the steady development of the industry; thirdly, we should broaden the application scenarios to make digitalization a new pivot in creating a more dynamic domestic market and more unimpeded domestic and international economic flows.

Sun Ruizhe, President of CNTAC



## Case | Digital transformation initiatives of manufacturing in Zhongshan City

In January 2022, Several Policies and Measures for Digital and Intelligent Transformation and Development of Manufacturing in Zhongshan City were officially issued and implemented. Focusing on the integrated development of next-generation information technology and manufacturing and the construction of benchmark enterprises, benchmark platforms, and demonstration industrial parks (industrial clusters), these policies intend to create 40 digital and intelligent demonstration factories and 60 digital and intelligent demonstration workshops and build Industrial Internet benchmark and demonstration projects in 40 enterprises by 2025. Zhongshan supports enterprises engaging in intelligent transformation with policy portfolio by adopting the mode featuring “government policies + intelligent manufacturing suppliers + financing assurance + SMEs in the industrial chain”. Taking the intelligent transformation of the whole industrial chain of home appliances as an example, Zhongshan introduces chip design enterprises and creates intelligent and digital platforms upstream, making home appliances more intelligent and have access to HarmonyOS. Considering the midstream of the industrial chain, Zhongshan endeavors to enhance the overall digital level of manufacturing by building generic factories in polishing and panel beating as well as an array of benchmark digital factories and workshops and promoting SMEs to build cloud platforms. Concerning downstream measures, Zhongshan plans to carry out digital marketing with the regional brand “Menjoy”, thereby improving the competitiveness of home appliance brands.

## Case | The “High-speed Intelligent Cam Weft Jet Loom” project passed the review of scientific and technological achievements

To tailor the requirements of high-speed air-jet looms for short strokes and small openings, Jiangsu Lenado Intelligent Equipment Co., Ltd. independently designed a cam-filling mechanism for the air-jet loom in the “High-speed Intelligent Cam Weft Jet Loom” project. The moving rule of the driven part is optimized, which can satisfy different filling forces and control the residence time of the reed at the rear of the loom, so that it can the weaving demands of different types of yarn and fabric. Moreover, by means of 3D digital design, the company has developed a high-efficiency conjugate cam weft-beating technology, which can effectively reduce the vibration and noise of the loom. The company also developed an industrial control system compatible with digital air-jet looms. The system uses low pressure, multiple-gas-pack independent gas supply and other techniques to achieve closed-loop control during filling insertion, thus increasing the precision of filling initiation and reducing the gas consumption of filling by more than 10%. Besides, the use of an integral wall panel and strengthening process can meet the needs of large-width, heavy, and high-density fabric, while the technology of circling injection lubrication system has realized intensive management, reduced friction, and extended the service life of components. In implementing the project, 12 national patents were acquired.

## Case | Digital transformation of “Smart HOdo”

In early 2022, HOdo Co., Ltd. (stock code: 600400), a listed company of HOdo Group, obtained the updated AAA-level assessment certificate for the integration of informatization and industrialization and successfully passed the system certification according to the Integration of Informatization and Industrialization Management Systems—Requirements (GB/T23001-2017) and the Integration of Informatization and Industrialization Management Systems—Enhanced Capability Grading Requirements (T/AITRE 10003-2020) by the Ministry of Industry and Information Technology. Enterprises under HOdo Group mainly pursue digital transformation through “intelligent factory + intelligent workshop + AI intelligent body measuring cabin”.

**Intelligent factory:** The first 5G intelligent flexible manufacturing factory in the apparel industry. Its production system breaks the tight coupling of traditional production lines and optimizes the combination of production lines dynamically and virtually using the radar monitoring of order processes and workers' skills. It can achieve automated material delivery and dynamic adjustment of production lines, thus completely eliminating the balancing loss of the production lines and upgrading the quality grade. After intelligent transformation and upgrading, the factory has achieved a reduction of 10% in unit consumption cost, an increase of 20% in productivity, and a lessening of 30% in work in process.

**Intelligent workshop:** After the intelligent equipment is put into operation, the overall productivity of the workshop is up by 20%.

**AI intelligent body measuring cabin:** The BANJO-customized AI intelligent body measuring cabin rolled out by HOdo Industrial Internet Co., Ltd. adopts AI intelligent body measurement and remote fitting technology, connecting all links in the apparel manufacturing chain from body measurement at the outlets, manufacturing to delivery, and providing efficient tailored service for consumers.

**The innovative applications of the Industrial Internet prioritize integrated services.** In 2022, the integrated applications of the Industrial Internet made a series of achievements driven by some leading enterprises in the industry, demonstrating the effects of digital transformation.

## Case | Tongkun Group's Industrial Internet platform for the chemical fiber industry was put into use

Tongkun Group's Industrial Internet platform for the chemical fiber industry, covering five business types and 28 factories, was put into use and a digital management system in five horizontal and four vertical directions was built. It achieves cross-domain, cross-region integrated development covering the whole chain through the comprehensive application of big data, AI, 5G, and other technologies and the integration of multiple fields such as R&D design, purchasing and supply, manufacturing, operation and management, and warehousing and logistics.

## Case | Weihai Textile Group Import and Export Co., Ltd. created a digital platform for the apparel industrial chain

Weihai Textile Group Import and Export Co., Ltd. created a digital platform for the apparel industrial chain. Relying on IoT, big data and other technical means, the platform collects upstream and downstream data on procurement, production and sales via multiple industrial software, thereby integrating the resources across the apparel industrial chain and enhancing collaborative competitiveness of all links. The company's Industrial Internet connects the whole production chain including order reception of the factory, material scheduling, production equipment, energy consumption management, emission monitoring, and inventory management, to help increase the management efficiency of the enterprise. Furthermore, it can assist managers to make decisions and support intelligent production through intelligent scheduling, intelligent color matching, and other functions, thus resolving the conflict between large-scale production and personalization. Meanwhile, it effectively links the enterprise with upstream suppliers and downstream customers, giving the enterprise keener insight into the product layout adjustment according to the downstream demands, so that the enterprise can choose suppliers more rationally and respond to the risks of supply chain disruption more effectively.

## Case | Establish benchmarks in technical development of the textile industry

In 2022, five enterprises in the textile and apparel industry were incorporated into the list of the 29<sup>th</sup> batch of National Enterprise Technology Centers to be identified led by the National Development and Reform Commission, including Anhui Yuanchen Environmental Protection Technology Co., Ltd., Fujian Changyuan Textile Co., Ltd., Shaanxi Changling Electronic Technology Co., Ltd., Hunan Zhongtai Special Equipment Co., Ltd., and Zhongfu Shenyong Carbon Fiber Co., Ltd.

Two enterprises in the industry were selected for the list of best candidates and three enterprises for excellent scenarios of intelligent manufacturing demonstration factories in 2022 released by the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Finance, and the State Administration for Market Regulation.

Regions	Enterprises	Tasks	Typical Scenarios
Shanghai	Baowu Carbon Technology Co., Ltd.	Demonstration factory for intelligent manufacturing of carbon-based new materials	1. Pollution monitoring and control; 2. Energy efficiency balance and optimization; 3. Advanced process control; 4. Real-time monitoring and emergency response of security risks; 5. Equipment fault diagnosis and prediction; 6. Digital infrastructure integration; 7. Digital twin factory construction; 8. Network collaborative manufacturing
Chongqing	Chongqing Huaфон Chemical Co., Ltd.	Demonstration factory for intelligent manufacturing of adipic acid	1. Accurate traceability of quality; 2. Digital infrastructure integration; 3. Real-time monitoring and emergency response of security risks; 4. Energy consumption data monitoring; 5. Online operation monitoring; 6. Advanced process control; 7. Pollution monitoring and control; 8. Precision delivery

Regions	Enterprises	Typical Scenarios
Fujian Province	Fujian Eversun Technology Co., Ltd.	Process dynamic optimization
Fujian Province	Billion Industrial Holdings Limited	Intelligent online detection
		Intelligent collaborative operation
		Process dynamic optimization
Zhejiang Province	Zhejiang Petroleum & Chemical Co., Ltd.	Equipment fault diagnosis and prediction

## 1.2.2 Culture-based fashion industry

With the constant innovations, breakthroughs and development of the textile industry, Chinese textile and apparel brands have become an important pivot in leading modern consumption, boosting self-confidence in our national culture, and exerting the influence of Chinese culture. China's textile and apparel industry has continuously enhanced brand building, promoted the establishment of a modern system of fashion brands in the textile and apparel industry, and upgraded the market performance of the brands.

**Fashion empowerment: The inheritance and innovation of oriental aesthetics and national culture.** Creative ideas and personalized consumption with Chinese culture as core elements are rewriting the market structure, and the inheritance and innovation of oriental aesthetics and national culture will become a trend. China National Garment Association, together with SHI SAN YU, a Chinese romantic brand engaging in new-style Han Chinese clothing, Tmall Apparel, and iResearch, issued the 2022 Chinese Modern Hanfu Industry Development Report. The report includes four parts: the basic situation of the modern Hanfu industry, external opportunities for modern Hanfu industry upgrade, drivers of modern Hanfu promotion, and modern Hanfu industry trends. It systematically sorts out the opportunities and challenges faced by the modern Hanfu industry and elaborately analyzes the opportunities for the industry to become popular and its future development trend based on an in-depth survey. This endeavor plays an important role in promoting the deep integration of cultural creativity and the digital economy, steadily building textile and apparel brands, and enhancing the influence of fashion consumption in leading the trend.

### Case | The costumes of Beijing 2022 shows oriental aesthetics

On December 31, 2022, the Victory Ceremony costumes of the Beijing 2022 Olympic and Paralympic Winter Games were rolled out by BTV. The costumes consist of three sets of clothing—titled “Lucky Snow and Cloud”, “Great Landscape” and “Flying Snow in Tang Dynasty”, drawing their inspiration from two Chinese traditional symbols of “snow” and “clouds”, a famous Chinese painting, “A Thousand Miles of Mountains and Rivers”, Chinese traditional fabrics of the Tang Dynasty, and other Chinese traditional cultural elements. The three sets of costumes were used in all snow event competition venues, all ice event victory ceremonies, and at the Medals Plaza, respectively.

## Case | 28 textile intangible cultural heritage workshops were selected for the recommendation list of "Typical Cases of Intangible Cultural Heritage Workshops"

On December 12, the Intangible Cultural Heritage Department of the Ministry of Culture and Tourism released and disclosed the recommendation list of "Typical Cases of Intangible Cultural Heritage Workshops"<sup>9</sup>. A total of 28 textile intangible cultural heritage (ICH) workshops were selected for the list, including "Zanhuang native cloth: Good craftsmanship gives women jobs and increases their income" submitted by the native cloth ICH workshop in Yuancun Village, Zanhuang County, "Miao embroidery in western Hunan: Let mothers return home" submitted by the ICH workshop of Xiangxi Qixiufang, "Yao nationality's indigo dyeing: Bring vitality to the well-off life" submitted by the Fengzhen indigo dyeing ICH workshop in Nandan County, and "Li brocade: Inherit traditional skills and boost rural revitalization" submitted by the ICH workshop of Li's traditional spinning, dyeing, weaving and embroidery skills in Wuzhishan City.

**Fashion collision: A deep integration of cultural creativity and digital economy.** The characteristics and outline of the integrated development of digital and fashion industries have become more distinct during the renewal of elements and resources and scenario reengineering. The new mode of production represented by intelligent and collaborative manufacturing, the new market connection represented by cross-border and live-streaming e-commerce, and the new scenario mode represented by virtual idol and industrial metaverse will lead to a new wave of sustainable fashion.

## Case | Style3D • 2022 China Fashion Forum facilitates the frontier exploration of the apparel industry

In August 2022, the Style3D • 2022 China Fashion Forum was held in Beijing. Themed "Diversification: the Future of Branding", the forum mainly focused on four topics, i.e., metaverse, metadata, meta-innovation, and meta-power, collecting the insights and experience of interdisciplinary thinkers and excellent practitioners and helping apparel enterprises establish a definitive internal system to respond to the diversified market competition. The topic of "Metadata: the Cornerstone and Ecology of Technology" included two parts, i.e., "Digital Pioneers Summit" and "Roundtable Discussion", attracting digital experts and fashion icons to discuss how to make traffic layout effectively, how to bring online and offline omnichannel experience, and how to convert data into productivity efficiently to clarify the strategies, capabilities and values in the era of Industrial Internet for enterprises in an all-round way.

<sup>9</sup> Intangible cultural heritage (ICH) workshops refer to all kinds of business entities and manufacturing and processing sites that protect and inherit intangible cultural heritage based on representative ICH projects or traditional handicraft and drive the local people to work locally and nearby.

## Case | The application of virtual digital humans is reshaping the industry landscape

As an element and interactive carrier of the metaverse, the virtual digital human is becoming the starting point of many brands to explore the metaverse. Brand owners are making efforts to pursue interconnection with the virtual human, get closer to young consumers, and snatch market share in the metaverse concept, aiming to reshape the industry landscape in the parallel universe between reality and virtuality. Among them, Fujian Eversun Jinjiang Co., Ltd. created a virtual digital human named "RONG", serving as the first virtual digital human IP created by textile and chemical fiber enterprises. Through 3D and high-level physics simulation technology, RONG made a stunning debut in costumes made of six types of fabrics, including "water-cooling technology, Jin Yi Cai, Jiangnan Chunyun, Huan Cai Ge, Golden Cicada Silk, and Ice Crack", in a fantastic space. Staying in a canyon or stepping into the universe, RONG dynamically displayed the awarded work to give the users a metaverse fabric show. The launch of "RONG" represents the first time that the virtual digital human expands its presence from "to C" brand owners to "to B" manufacturers, broadening the application scenarios of virtual digital humans and bringing more possibilities for fashion manufacturing.

### 1.2.3 Responsibility-oriented green industry

As pointed out in the Report to the 20th National Congress of the CPC, we should accelerate the transition to a model of green development. This provides guidance and principles for the green development of the industry. As a responsibility-oriented green industry, the textile industry must establish a sound green, low-carbon, and circular industrial system, which serves as an important symbol and baseline for the high-quality development of the whole industry. Meanwhile, with the goals of "carbon peak and carbon neutrality", green development has brought new opportunities and challenges while the integration of digital technology and industry is also accelerating, providing a new engine to drive the development of the textile and apparel industry.

**Promote green transformation of the industry through the recycling of waste textiles.** Promoting CSR construction and sustainable development is a key task for the development of the textile industry during the 14<sup>th</sup> Five-Year Plan period. The Development Direction for the Textile and Apparel Industry in the 14<sup>th</sup> Five-Year Plan Period pinpoints the necessity for regenerative cycle development. Supported by relevant national policies<sup>10</sup>, the textile and apparel industry makes a sustained effort to pursue high-quality development by expediting the recycling of waste textiles, building a resource recycling industrial system and a recycling system for waste and used materials, and synergizing the reduction of pollution and carbon emissions.

**Work together for a green development path.** Themed "Gather the Strength of Industry for Green Development", the 2022 China Textile Green Development Conference & Concluding Meeting of the National Textile Labor Competition reviewed the achievements in green and innovative development of the textile industry in 2022. CNTAC and the Chinese Financial, Commercial, Light Industry, Textile and Tobacco Workers' Union jointly launched the National Textile Labor Competition for Green Development in the 14<sup>th</sup> Five-Year Plan Period in March 2022, to build consensus across the whole industry, meet the people's needs for a better life, and coordinate industrial development with green and low-carbon

<sup>10</sup> See the appendix.



transformation by taking energy and water conservation, and pollution and carbon emission reduction as effective means. As a result, 19 “water-saving enterprises”, 20 “water-saving benchmark enterprises”, 10 “low-carbon enterprises”, and a gallery of excellent teams and individuals emerged. At the meeting, the 2023 National Textile Labor Competition for Green Development kicked off, encouraging industrial parks (clusters), enterprises, groups, and individuals to explore a path to the modern textile industrial system featuring green, low-carbon, and recycling development and promote the green development of the textile industry.

**Green design empowers sustainable development of the industry.** Over the three years since the strategic goals of “carbon peak and carbon neutrality”, China’s textile industry has made positive responses and quick actions to actively explore the modes and paths of sustainable production and consumption from the perspectives of industrial clusters, enterprises, and products and boost green transformation and development.

In November 2022, the Ministry of Industry and Information Technology announced the List of Green Design Demonstration Enterprises for Industrial Products (Fourth Batch), involving nine textile enterprises. This greatly stimulates the textile enterprises to further improve the innovation and development capability and management level of green design and continue to enhance the supply ability and market influence of green products.

#### List of Green Design Demonstration Enterprises for Industrial Products (Fourth Batch)

Enterprises	Industry Segment (Products)
Zhejiang Furun Printing and Dyeing Co., Ltd.	Textile printing and dyeing
Xinfengming Group Co., Ltd.	Polyester fiber
Zhejiang Shinefair Textile Printing and Dyeing Co., Ltd.	Textile fabrics
Zhejiang Mihuang Apparel Co., Ltd.	Cashmere and blended clothing
Zhejiang Haili Environmental Technology Co., Ltd.	Recycled polyester filament
Zhejiang Charming Dyeing and Finishing Co., Ltd.	Knitted printing and dyeing fabrics
Anhui Tianzhu Textile Technology Group Co., Ltd.	Recycled cotton yarn
Fujian Fynex Textile Science & Technology Co., Ltd.	Textile printing and dyeing
Yuyue Home Textile Co., Ltd.	Textile fabrics and home textile products

## Case | China won three awards including the ITMF Sustainability & Innovation Award

Convened in Davos, Switzerland, the International Textile Manufacturers Federation (ITMF) Annual Conference 2022 served as an important platform for further expanding consensus across the industry and strengthening the cooperation of the global value chain, effectively promoting the openness, integration, innovation, and sustainable development of the global textile industry. For further scientific and technological innovation and international cooperation in the textile industry, the Committee of Management approved the establishment of ITMF Awards in recognition of the progress made in international cooperation of the textile industry. In 2022, the complete sets of technology development for bio-based polyamide 56 industrial chain jointly developed by Donghua University and Cathay Biotech Inc. won the first ITMF Sustainability & Innovation Award. The Platform on Sustainable Textiles of the Asian Region (the STAR Network) established by nine industry associations including CNTAC and a cooperative project named “Coloro—creating a universal color standard and global end-to-end workflow” developed by Coloro Co., Ltd., Shanghai were granted the first ITMF International Cooperation Award<sup>11</sup>.

## Case | Two textile technologies were selected for Engineering Fronts 2022

In December 2022, the Chinese Academy of Engineering (CAE), Clarivate, and the Higher Education Press of China jointly released a report—Engineering Fronts 2022, wherein two textile technologies were selected.

### 1. Extraction and development of new natural cellulose fibers

With the increasing shortage of petrochemical resources and the progressive worsening of the environment, natural cellulose fibers, also known as plant cellulose, have received more and more attention due to their green, clean, and environment-friendly characteristics such as abundant resources, unique performance, renewable feedstocks, natural degradability after abandonment, and the poisonless and harmless nature to the environment. The R&D and application of the new natural cellulose fibers are of great significance for the current resource utilization and environmental protection. The green and efficient separation, extraction, and development of new natural cellulose fibers are important research directions for the development of high-value-added functional natural cellulose fiber textiles.

### 2. Recycling of personal protective equipment

Personal protective equipment (PPE) refers to the protective equipment designed to protect the wearer's body from injury or infection, such as protective clothing, helmets, masks, and goggles. Impacted by the COVID-19 pandemic, the recycling and upcycling of waste PPE, especially waste disposable medical masks, become an important topic under the new domestic and international situation. China ranks top globally in terms of investment in research on the development of waste textile recycling. Continuous innovation has been made in the recycling technologies for PPE. Among the key technology patents in recent years, China disclosed 974 patents, accounting for 97.99% of the global patents disclosed.

<sup>11</sup> ITMF Awards are selected annually, including ITMF Sustainability & Innovation Award and ITMF International Cooperation Award. ITMF Sustainability & Innovation Award recognizes sustainable and innovative achievements in the textile industry with focus on innovation, design, development, and production under the strictest standards of sustainability and respect for the environment. The jury will grant this award to a company/organization or person which/who significantly improved textile manufacturing in the combined areas of innovation and sustainability. ITMF International Cooperation Award recognizes progress in the area of international collaboration in the textile industry according to the values of the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. The jury will grant this award to a company/organization or person which/who significantly improved textile manufacturing through the means of international collaboration.



## CSR Construction of China's Textile and Apparel Industry in 2022

### 2.1 Responsibility for People

#### 2.1.1 Build a better workers' team and carry forward the spirit of model workers

As the backbone force to create value, drive innovation, and build a strong country, industrial workers play a crucial role in underpinning the modern textile industrial system. Efforts to build a better workers' team and enhance their skills and quality are beneficial to decent work for all employees, the transformation and upgrading of the enterprise, and the improvement of labor productivity.

In 2022, CNTAC organized extensive labor and skills competitions in the textile industry centering around the new directions and business types for industrial development. CNTAC recommended employees to participate in the selection of the 5<sup>th</sup> Outstanding Engineer Award and the 6<sup>th</sup> China Skills Award in 2022, and declared three national second-category competitions for different professions to the Ministry of Human Resources and Social Security, further arousing the innovative potential of industrial workers and driving the industry to take the initiative to integrate into the scientific and technological revolution and the industrial transformation. The textile labor competition for green development, focusing on water conservation and efficiency improvement, energy conservation and low-carbon, and resource recycling, was included in the database of national leading labor and skills competition projects in the 14<sup>th</sup> Five-Year Plan period of the All-China Federation of Trade Unions (ACFTU). Moreover, CNTAC improved the vocational skill assessment standard and system in the textile industry and completed the revision of relevant professions in the textile industry in the Occupational Classification System of the People's Republic of China, smoothing the career development channels for high-skilled talent and professional and technical talent. Furthermore, CNTAC set up "Online Training Courses for Skilled Workers" and training classes for quality improvement of skilled talent in the Chinese apparel industry, providing a platform and channel for talent training.

To give full play to the leading and exemplary role of outstanding models, CNTAC held the national commendation conference for outstanding groups, model workers, and outstanding workers in the textile industry in 2022, stimulating more outstanding groups and individuals, advocating new trends of the times focusing on "glorious labor, noble knowledge, valuable talent, and great innovations", and laying a solid foundation for industrial development through personal growth.

## Case | “Chinese Textile Craftsman” Qian Qinfang won the National May 1 Labor Medal

Qian Qinfang is a senior engineer and now serves as a team leader in the Production Technology Department of Shenghong Group. She won the title of “Chinese Textile Craftsman” in 2021 and the National May 1 Labor Medal in 2022. In 1992, she was assigned by the enterprise for two-year full-time studies in the junior-college class of dyeing and finishing at Suzhou University as a potential technical backbone. Since then, she has been engaging in the dyeing development of textiles. In 2000, when workers in the branch factory of Shenghong Group encountered problems in production, they sought help from Qian Qinfang at first due to her excellent color-matching technology. To increase the first-attempt success rate in the branch factory, Qian Qinfang, together with her team members, drew designs and made analyses for hundreds of dyes in the company for more than two years. Led by Qian Qinfang, the technology and informatization team overcame obstacles, tackled more than 70 thorny problems concerning the integration of informatization and industrialization in the projects, inspected and introduced over 600 devices, and developed information-based systems such as MES and CRM, bringing earth-shaking changes to the overall degree of automation and informatization of the company. In 2016, the optimized “Textile Color Big Data System” presented by Qian Qinfang successfully solved the incompatibility of the foreign equipment manufacturer’s software with different types of base materials and the inadaptability of tristimulus matching, breaking the long-term monopoly of foreign companies in this field.

## Case | The textile workshop of Alashankou Zhende won the title of “National Workers’ Pioneer”

In the face of the COVID-19 pandemic, Alashankou City implemented a lockdown in August 2021 and all enterprises in the city were subject to suspension of business. As its products are at the forefront of the industrial chain of medical supplies, the suspension of Alashankou Zhende Medical Textile Co., Ltd. (hereinafter referred to as Zhende Textile) led to short supply, making downstream enterprises face supply tensions and partly affecting the sound development of some medical sections. Led by the general manager, Zhende Textile overcame difficulties and resumed work and production to ensure supply in harsh times. Not only the hard work and dedication of workers but also the technical breakthroughs contributed to the resumption of work and production of the company. The differences among cotton fibers from different countries resulted in an unstable production efficiency of the company. Aiming at this, the textile workshop established a special technical research team to conduct process tests of the fiber properties of cotton from Uzbekistan, Kazakhstan, Tajikistan, the United States, Australia, and Brazil. Through continuous research, production efficiency was greatly improved. Moreover, Zhende Textile achieved waste heat recycling through technical transformation by trial and error in production, greatly saving energy use. The “Zhende experience” has attracted other enterprises in the comprehensive bonded areas in Alashankou to learn from this energy recycling technology, helping the administrative committee of the comprehensive bonded area save an investment of nearly ten million yuan. To help new employees master the equipment operating techniques, the textile workshop of Zhende Textile organized and arranged training for new employees by the senior ones, thus accelerating the employees’ growth and ensuring the smooth resumption of work and production.

## 2.1.2 Establish harmonious labor relations and ensure the sound development of industrial teams

China's textile and apparel industry attaches importance to harmonious labor relations. Positive progress has been made in guaranteeing the rights and interests of employees, improving the consultation and coordination mechanism, and pursuing extensive consultation, joint contribution, and shared benefits between the enterprise and employees, which has effectively safeguarded the legitimate rights and interests of workers. Since 2009, CNTAC has continuously organized the campaign to foster national textile enterprises with harmonious labor relations, intending to explore and summarize the advanced experience and cases from enterprises, enhancing the publicity of models among "national textile enterprises with harmonious labor relations", providing a reference for establishing harmonious labor relations across the whole industry and guiding the enterprises in the industry to form standard, orderly, just, reasonable, harmonious, and steady labor relations featuring mutual benefit and win-win results.

### Case | Training on the protection of employees' rights and interests

In 2022, the Office for Social Responsibility of CNTAC, in cooperation with the Business Social Compliance Initiative (BSCI), held four sessions of training on "decent work hours and fair pay", attracting the participation of about 150 enterprise representatives from the textile, apparel, shoe, and light industries. The ILO Convention, applicable Chinese laws and regulations, and the auditing requirements of BSCI were introduced in the training, helping Chinese enterprises increase their responsibility performance ability. Since 2007, the two sides have jointly organized more than 100 sessions of special training, covering nearly 8,000 person-times.

## 2.1.3 Uphold human-centric values and promote decent work

Upholding human-centric values, CNTAC advocates a family-friendly corporate culture and system concerning human rights, gender equality, child protection, and other key issues, enhancing the sense of gain, happiness and safety of the employees and promoting the decent work of industrial workers. Meanwhile, CNTAC vigorously publicizes and promotes the typical examples of fulfilling CSR in the industry to play an exemplary and leading role.

During the annual sessions of the National People's Congress (NPC) and the National Committee of the Chinese People's Political Consultative Conference (CPPCC) convened in March 2022, delegates from the textile industry submitted proposals. Qiu Guanghe, deputy to the NPC and Chairman of Semir Group, proposed to promote gender equality and family-friendly policies in the textile industry. As pointed out in the proposal, facing the persistent shortage of labor resources in the textile industry, enterprises should further protect women's rights and interests, advance equal employment and labor protection of female employees, and foster a more human-oriented corporate culture. This accords with the current reform of fertility policy adjustment and helps create a pleasant employment environment in the textile industry, thereby further promoting the sustainable and high-quality development of the industry and stimulating the competitiveness of China's manufacturing.

## Case | Let the industry and commerce play a bigger role in promoting gender equality and protecting the rights of children

In July 2022, CNTAC, China NGO Network for International Exchanges, and China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCCMC) co-organized an online event on the sideline of the 50th regular session of the United Nations Human Rights Council themed “Business and Human Rights: Gender Equality and Children’s Rights Protection in International Investment and Trade”. Chen Dapeng, Vice President of CNTAC, attended the online event and raised concerns that as the world economy is in a downturn, with the global market and supply chains hard hit by the COVID-19 pandemic, women and children may experience a bigger impact. It is a challenge all sides will meet to build an inclusive and sustainable industry pattern. Further cooperation should be explored to help eliminate poverty, improve women’s leadership, and solve the gender and digital divide, thus working together for the high-quality and sustainable development of the industry and improving global human rights governance.

## Case | Support overseas Chinese-invested enterprises to implement gender equality

To assist in the CSR performance of overseas Chinese-invested enterprises, the Office for Social Responsibility of CNTAC launched the pilot program “Promoting Corporate Social Responsibility and Gender Equality of Chinese-invested Textile and Apparel Enterprises” in Vietnam, Cambodia and Bangladesh in 2019. This program aims to help Chinese-invested textile and apparel enterprises in these countries establish a management mechanism for gender equality and enhance the loyalty of employees to enterprises by improving their abilities, thus raising the sustainable competitiveness of the enterprises. With regular COVID-19 prevention and control measures in place in 2022, the program organizer mainly conducted remote counseling and online exchange in consideration of the epidemic prevention requirements of the enterprises. From February to May 2022, experts in the Vietnam program provided revision suggestions and counseling for the existing system of pilot enterprises concerning gender equality. In June, a concluding meeting of the program was held online. On October 25 and November 4, 2022, program partners in Bangladesh also carried out activities such as the training of managers and employees from local Chinese-invested enterprises. The successful completion of this program has helped raise gender awareness in local Chinese-invested enterprises and laid a solid foundation for creating a more inclusive workplace and corporate culture in the enterprises.

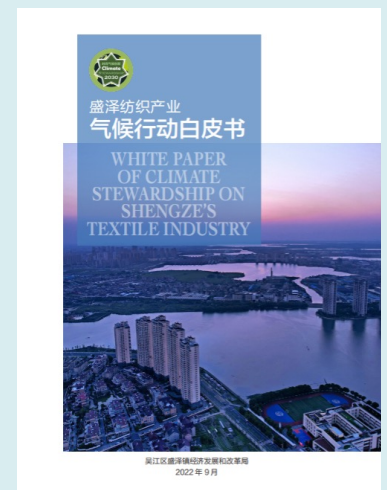
## Case | Implement WEPs in textile and apparel enterprises

On May 30, 2020, CNTAC and UN Women officially signed a cooperative agreement to start the Work Plan for WEPs Projects in the Textile and Apparel Industry. A total of 91 textile and apparel enterprises signed a CEO statement supporting WEPs through active promotion and publicity among industrial clusters, all sub-industries, and CSC9000T members. In 2022, the Office for Social Responsibility of CNTAC completed the development of the Implementation Guidelines for WEPs in the Textile and Apparel Enterprises and introduced the practical methods and examples of seven WEPs to Chinese textile enterprises and relevant upstream and downstream sectors. Three online training sessions were carried out, with more than 26,000 persons attending. Four onsite training and seminars were conducted, covering more than 1,200 persons and effectively driving enterprises to improve women’s rights and gender equality in the workplace, market and community.

## 2.2 Responsibility for the Planet

### 2.2.1 Strengthen enterprise participation and propel climate stewardship

**Climate Stewardship 2030.** Based on the Carbon Stewardship 2020 initiated in October 2017 and the China Corporate Climate Action (CCCA) established by CNTAC as a participator in September 2018, the Office for Social Responsibility of CNTAC launched the Climate Stewardship 2030 with the hope of improving the utilization of clean energy and the application efficiency of carbon emission reduction technologies and accelerating the low-carbon transformation of enterprises through industrial actions such as preparing the climate action roadmap for enterprises in the industry. Moreover, the initiative is intended to create low-carbon brands in the Chinese fashion industry and raise the international competitiveness of Chinese enterprises in the global low-carbon supply chain through industrial cooperation.



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- ① Launch site of the White Paper of Climate Stewardship Under "30•60" Goals of the Textile Industry Wujiang District, Suzhou
- ② Cover of the White Paper of Climate Stewardship on Shengze's Textile Industry
- ③ Sun Ruizhe (left), President of CNTAC, gives an award to the People Government of Shengze Town, and Xu Huilin (right), mayor of Shengze Town receives the award.

The White Paper of Climate Stewardship on Shengze's Textile Industry was issued. In 2022, the China Textile Information Center and Shengze Town, a key town of textiles in Wujiang District, Suzhou City, Jiangsu Province, jointly issued the White Paper of Climate Stewardship on Shengze's Textile Industry. The white paper has outlined the current development and progress in green and low-carbon development of Shengze's textile industry, finished the measurement of the greenhouse gas emission baseline of Shengze's textile industry, identified key emission sources, fields and enterprises, and clarified the goals of achieving carbon peak and carbon neutrality, the carbon emission roadmap, and key tasks for the industry. It has also analyzed the opportunities and challenges that the industry would face when implementing climate action now and in the future. The release of the white paper will bring more textile enterprises and industrial clusters into action and speed up the green and low-carbon transition of the industry, which is of practical significance for China and the world to explore the effective path of carbon peaking and carbon neutrality in the textile industry.

**Important advances were made in the 30-60 Net Zero Accelerating Plan.** The 30-60 Net Zero Accelerating Plan was initiated by CNTAC in 2021, aiming to guide the demonstration work in carbon neutrality of key industrial clusters and focusing on the collaborative research and development, model exploration, technical and product innovation, the R&D and practice of market applications, and talent training under the 30-60 Goals. By the end of 2022, 21 brand enterprises and 41 manufacturing enterprises had joined the 30-60 Net Zero Accelerating Plan, an increase of 4 brand enterprises and 1 manufacturing enterprise compared to the end of 2021. On April 22, 2022, Erdos Group announced its participation in CNTAC's 30-60 Net Zero Accelerating Plan and donated 2 million yuan to the climate stewardship fund of China Green Carbon Foundation to support the climate stewardship work in China's textile and apparel industry and inspire value chain partners and consumers to actively participate in the green, low-carbon, and sustainable development of industries and markets.



## Case | Erdos Group joined the 30-60 Net Zero Accelerating Plan in 2022

Erdos Group joined the 30-60 Net Zero Accelerating Plan in 2022 and devoted itself to climate change governance and low-carbon transition by establishing carbon neutrality goals and implementation roadmap for the enterprise and building a green and low-carbon mode of production and management. At present, the Group is making concerted efforts with the Office for Social Responsibility of CNTAC to comprehensively investigate the carbon emission baseline of the enterprise and further promote sustainable technology and process innovations in the whole value chain covering the management of source pastures, raw material purchasing, selection and manufacturing, product design and production, and brand sales and promotion. These efforts will help Erdos Group reduce carbon emissions, achieve low-carbon and circular development, and meet its sustainable development goals. Meanwhile, the Group will encourage partners in the industrial chain to work together for the application of low-carbon technologies to build a carbon neutrality ecosystem, give full play to the leading role of brands in the industrial chain, and support the green and low-carbon transition and sustainable development of the cashmere industry.



**Deepen the cultivation of climate talent in the industry.** In 2022, the Office for Social Responsibility of CNTAC organized climate training camps in different enterprises. Climate training camps are designed to empower the enterprise's shift towards greenness by integrating theory with practice, mainly geared to the employees. The climate training camps covered four enterprises, namely Embry Form, Erdos, Cabbeen, and Luolai Group, enabling the enterprises to recognize that under the goals of achieving carbon peaking and carbon neutrality, they should focus on improving their capabilities and reasonably applying methodology to make their carbon emission management more scientific and effective.



Site of the climate training camps at Luolai Group

**Set up benchmarks to play an exemplary role.** Since 2020, CNTAC has been making efforts to push forward climate stewardship, receiving active responses and participation from the textile and apparel enterprises. These pioneering practices in climate stewardship have provided valuable experience for the carbon peaking and carbon neutrality work of the industry and made great contributions to guiding and promoting the green and low-carbon development of the industry. To deepen the climate stewardship practices of industrial enterprises and organizations and boost the green, low-carbon, and sustainable development of the industry, CNTAC commended 55 "Pioneer Units of Climate Stewardship in China's Textile and Apparel Industry" and 65 "Pioneer Contributors to Climate Stewardship in China's Textile and Apparel Industry" at the 2022 China Textile Conference held on December 29. The outstanding contributions made by the awarded units to promoting the climate stewardship of enterprises and the low-carbon transformation of the industry in the recent two years were highly affirmed.

**Selection for the Pursuer of Excellence in Sustainability.** The selection for the 2022 Pursuer of Excellence in Sustainability was completed with the China National Garment Association and the Office for Social Responsibility of CNTAC as organizers and China International Fashion Fair (CHIC), China Fashion (the publication of the China National Garment Association), and WWD China (an international fashion media authority) as co-organizers. The selection campaign shows the thoughts and actions of excellent enterprises in the apparel industry in the direction of environmental protection and the transformation and upgrading of the industrial structure, thus contributing to the 30-60 Goals and propelling the overall transformation of the industry.

## 2.2.2 Improve environmental efficiency with a focus on the material application

**China Textile Recycling Innovation Research Project.** Driven by the demands for sustainable and high-quality development, the fashion industry is rethinking the mode to manufacture, consume, and dispose of textiles and apparel. On May 31, 2022, the kick-off meeting of the China Textile Recycling Innovation Research Project was held online. This project aims to deeply investigate the current situation and problems in the recycling, sorting, and reusing of textiles, identify the problems, and search for innovation opportunities to promote the Textile to Textile (T2T) transformation of

China's textile industry. A total of 62 units including brand purchasers, manufacturers of recycled materials, government departments, professional associations, and research institutes attended the meeting. All sides made in-depth exchanges and communication to achieve industrial sustainable development and actively implement the industrial system solution, whereby fibers, textiles, and apparel can maximize their value during design, production, use, and circulation following the principles of circular economy, thus reducing resource consumption and waste generation and reshaping a more responsible, resilient industry.

**Project on the White Paper of Textile Materials for a Sustainable Future.** According to the research of the Office for Social Responsibility of CNTAC on the life cycle assessment of textiles, up to 30%-50% of the carbon emissions of textiles come from materials. The recyclability of textile materials becomes an important factor for the fashion industry to transform into a circular industry. To this end, the Social Responsibility Promotion Committee of CNTAC launched a project on the White Paper of Textile Materials for a Sustainable Future. With a focus on the medium-term goals by 2023 and the sustainability goals by 2050 of the textile and apparel industry, this project is intended to explore the common connotation and evaluation system for materials for a sustainable future and the industrial objectives and roadmap for its development. In 2022, the Office for Social Responsibility of CNTAC initiated an investigation and a call for excellent papers on the White Paper of Textile Materials for a Sustainable Future, to arouse the scientific insights of all stakeholders in the textile industrial chain into sustainable materials and discuss the sustainable development trend and the direction and ideas for technological innovation of the future industrial materials in the textile industry. Furthermore, the Office for Social Responsibility of CNTAC created a platform for exchange and interaction called "Cai Zhi Dao", whereby sophisticated professionals are invited to make in-depth exchanges and discussions about the "Future of Materials Under Sustainable Consumption" and further probe into the interplay between sustainable textile materials and green consumption as well as the interest relevance between sustainable materials and the fashion industry.



Li Lingshen, Vice President of CNTAC, delivers a speech at the 2021 Future Materials Summit



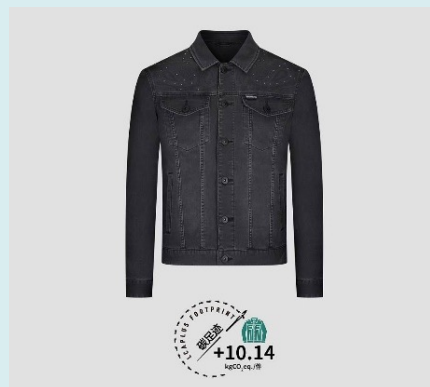
Launch site of the "Materials for a Sustainable Future" project

## 2.2.3 Accelerate the low-carbon transformation through energy conservation and emission reduction

**The CNTAC-LCA working group made significant headway.** In 2020, CNTAC pushed for the establishment of the CNTAC-LCA working group<sup>12</sup> to guide the life cycle assessment and environmental information disclosure of textile products in the industry. In the same period, the working group developed a local carbon footprint database for China's textile and apparel industry, which covers 13 fiber types, 6 spinning methods, 24 yarn count types, 2 fabric weaving methods, and 3 dyeing methods as well as multiple textile and apparel categories such as clothing, bedding, fabrics, and yarn. In 2022, the CNTAC-LCA working group made some achievements in LCA measurement of textile and apparel products in terms of quantity and quality. By the end of 2022, the real data of the whole supply chain of 27 terminal brands and 71 end products had been collected and measured, involving 129 enterprises. Through the investigation of the life cycle data of the industrial chain of textile products, the working group endeavors to explore and study the optimized paths and solutions in supply chain management, energy conservation, and emission reduction of enterprises in the supply chain via scientific tools and methods.



Ellassay Product Carbon Footprint



Septwolves Product Carbon Footprint

**Intensify efforts in the development of industrial standards.** On August 1, 2022, the Standardization Technical Committee of CNTAC issued the Notice on Assigning the Planned Projects of Four Group Standards Including the Technical Specification for Carbon Labels of Textiles and Apparel (Letter of the Standardization Technical Committee of CNTAC [2022] No. 13) to approve and initiate the planned projects of four group standards including the Technical Specification for Carbon Labels of Textiles and Apparel (see the table below for detailed project list). The four standards belong to the fundamental and comprehensive fields involved by the CNTAC and are under the administration of the Secretariat of the Standardization Technical Committee of CNTAC. Among these standards, the Technical Specification for Carbon Labels of Textiles and Apparel, the Technical Specification for Evaluation of Zero-carbon Textile Products, and the Technical Specification for Evaluation of Zero-carbon Factories in Textile Enterprises relate to the evaluation standards for the carbon label of textile and apparel products, zero-carbon products, and zero-carbon factories, which are expected to provide technical basis for carbon labels, zero-carbon products, and zero-carbon evaluation in the textile industry. The ESG Disclosure Guidelines for Textile Enterprises will serve as guidance for the ESG evaluation and information disclosure of textile and apparel enterprises.

<sup>12</sup> The working group has developed a digital SaaS platform for environmental footprint tracing and evaluation during the entire life cycle—the “System for Assessing the Entire-life-cycle Greenness of Textiles” (LCAplus). It aims to provide a credible and scientific platform for analyzing, assessing, and designing green textile products during the entire life cycle for the market, helping trace the greenness of products and dig into their value during the entire value chain from production to consumption.

**Enhance international exchanges and promote green and low-carbon development.** The 2022 International Summit on Green Development and Just Transition in the Textile and Garment Sector was held in Humen on November 17, 2022. This summit was jointly organized by CNTAC, the International Labor Organization (ILO) and relevant international bodies, and Humen Town. Guests from 16 countries around the world including Afghanistan, Bangladesh, Cambodia, and India, discussed the effective paths, policy initiatives, and best practices of green development and just transition in the textile and apparel industry. This summit was held concurrently in the main venue (in Humen) and parallel sessions (in Bangkok, Thailand) online and offline for a special discussion on the just transition in the textile and garment sector (TAGS). Furthermore, guests from the ILO and UN agencies also participated in the meeting in Vienna, Geneva, and other places remotely. Through this summit, China shared its industrial practices in achieving the zero-carbon reduction goal in the textile and apparel industry and conveyed a green, low-carbon industrial image of the industry.

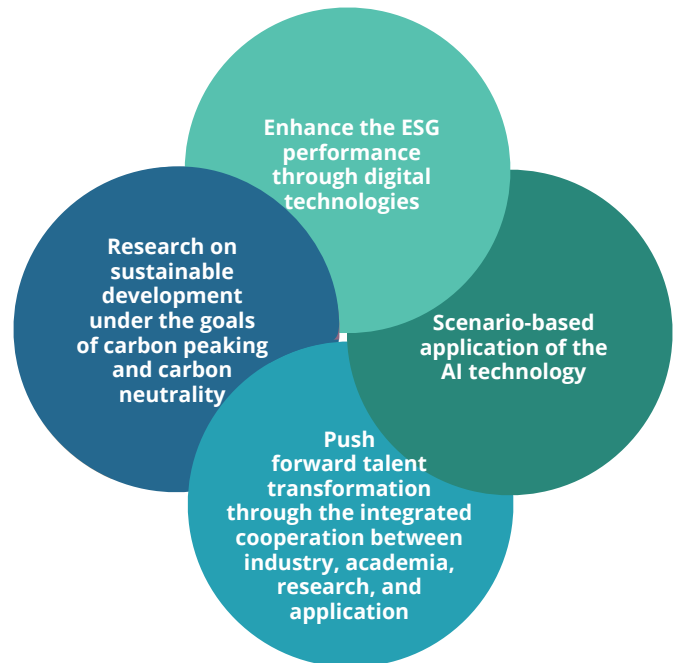


2022 International Summit on Green Development and Just Transition in the Textile and Garment Sector

## 2.3 Responsibility for Prosperity

### 2.3.1 Empower high-quality development with science and technology

The textile and apparel industry is now at a critical juncture of structural reform, transformation, and upgrading. Accelerating the deep integration of next-generation digital, information, and intelligent technology with the textile industry is of positive significance to the high-quality development of the industry. In 2022, CNTAC and Baidu officially signed a memorandum of understanding concerning cooperation in promoting the sustainable development of the textile and apparel industry by digital technology in the future. The two sides will give full play of their advantages to establish a long-term cooperative mechanism and promote the in-depth integration of digital technology and the real economy. Intelligent technologies will be adopted to empower the transformation and upgrading of traditional sectors in the whole chain in an all-around way. New industries, business types, and models will emerge to enhance the technological capability and sustainability of the industry and open up a new chapter for the digital transformation of the textile and apparel industry.



### 2.3.2 Enhance enterprises' ESG performance by offering capability improvement platform

The Office for Social Responsibility of CNTAC officially launched the ESG indicator system and capability improvement platform for Chinese textile and apparel enterprises at the "Innovation Platform Technology Exchange in the Textile Industry & Forum on Industrial Textile Research Achievements and Talent Training and Development" held in Wuxi. This platform integrates the requirements of "CSC9000T China Social Compliance 9000 for Textile & Apparel Industry" and the characteristics of major ESG evaluation and disclosure indicator systems in Chinese and overseas capital markets. It effectively serves enterprises for their self-evaluation, management and disclosure of ESG performance, satisfying simultaneously the industry enterprises' increasing demands for ESG management and capability improvement tools.

### 2.3.3 Ensure stable industrial supply chain through market linkage

Facing the COVID-19 pandemic and the complicated international situation, CNTAC provided multi-channel services to help affected enterprises resume work and production as early as possible and ensure the stable operation of the industrial and supply chain. In 2022, CNTAC, in coordination with the Ministry of Industry and Information Technology, carried out a series of events themed "Optimize Supply and Promote Upgrading" in the textile and apparel industry

spanning four quarters. These events include trade exhibitions and promotion activities in professional markets and e-commerce platforms on the demand side as well as professional exchanges in technology and management on the textile production and manufacturing side. With a wide coverage, these events attracted the participation of about 3,950 enterprises, institutes and schools, including 60 overseas agencies, and involved 18,000 merchants in professional markets. The “Optimize Supply and Promote Upgrading” events have shored up the industry’s confidence and eased the pressure on enterprises; promoted communication and exchange and supported transformation and upgrading; embodied the wisdom of the industry and guided the direction of development; strengthened cooperation in the industrial chain and maintained the resilience of the supply chain; and will play a leading and catalytic role in promoting the high-quality development of the textile industry.

### 2.3.4 Exert an agglomeration effect for coordinated regional development

In 2022, CNTAC completed the fifth review of the pilot area of national textile industrial clusters and specifically rolled out a series of reports on the in-depth action of the fifth review of textile cluster pilots themed “Embark on a New Journey of Industrial Clusters during the 14<sup>th</sup> Five-Year Plan Period”. The reports go deep into a series of industrial clusters in this review, show the new look and new trend of the clusters, and assist the textile and apparel industrial clusters to embark on a new journey during the 14<sup>th</sup> Five-Year Plan period. Moreover, CNTAC also led provinces in Central and West China and Northeast China and those at the borders to undertake industrial transfer according to their resource endowment in the form of projects, meetings, exhibitions, and other activities, to accelerate an industrial development pattern featuring distinctive characteristics, complementary advantages, and coordinated development, and facilitating a virtuous cycle of coordinated development between industries and regions.

#### Case | Boost the high-quality development of the textile and apparel industry in Northeast China by setting up examples

The fashion industry, with textiles and apparel as its mainstay, has become an important support in building consumption center cities and fashion cities, and the promotion of fashion industry development is significant for the high-quality development of the textile industry. In June 2022, CNTAC signed a strategic cooperation agreement with the Jinpu New District Management Committee for concerted efforts to pool resources, gather enterprises, and build stronger brands in the textile and apparel sector of Jinpu New District. Emphasis will be placed on the construction of the “China Fashion Trend Center” and resource sharing, further extending the relevant industrial chains and driving the high-quality development of the textile and apparel industry in Dalian and even Northeast China.

The China Fashion Trend Center is one of the key projects for urban renewal of the southern urban area of Jinpu New District, covering a planned area of 60,000 square meters. The China Textile Planning Institute of Construction (CTPIC) has been entrusted with project planning and operation guidance. According to the plan, the project will create four areas, i.e., a new highland area for Chinese fashion trends, a pioneering area in original fashion design in Northeast Asia, a clothing intelligent production and marketing demonstration area in Liaoning, and a popular fashion consumption area in Dalian. The project serves as an example and trendsetter for transforming and upgrading time-honored brands, empowering the apparel industry of Dalian, and creating new highlights in China’s apparel industry. CNTAC will establish a task force to support the construction of the China Fashion Trend Center and resource sharing and drive the high-quality development of the textile and apparel industry in Dalian and even Northeast China.

### 2.3.5 Enhance sustainable development capacity with multi-party cooperation

**Set up domestic sustainable cotton benchmarks in China.** In 2022, the China Textile Information Center and Solidaridad cooperated to carry out a pilot event of the “Sustainable Cotton Framework” program in Gansu. The pilot work props up the preparation of the “Sustainable Cotton Framework”, providing a platform for boosting cooperation with upstream and downstream participants in the textile and apparel supply chain in the fields of CSR and sustainability. This endeavor is beneficial for creating a sound business ecology that promotes the common prosperity of cotton farmers and enhancing the economic, social and environmental feasibility and sustainability of China's cotton value chain.

**Enhance the sustainable development capacity of Chinese-invested enterprises in Africa.** In response to the initiative of Chinese-invested textile, apparel, and light industrial enterprises in Ethiopia, CNTAC established the “China (Ethiopia) Sustainable Development Alliance for Textile and Light Industrial Enterprises” in June 2022, aiming to create a platform of communication, action and dissemination for Chinese-invested enterprises. The alliance further provides mechanism support and organizational guarantee for sustained investment and business expansion of Chinese enterprises in Ethiopia, promoting responsible, sustainable investment and operation of enterprises. Meanwhile, the Office for Social Responsibility of CNTAC provided a series of ESG capacity improvement training sessions for more than 20 Chinese-invested textile enterprises in Ethiopia, greatly supporting the improvement of the sustainable development capacity of Chinese-invested and local textile and apparel enterprises in Ethiopia. Furthermore, the Office for Social Responsibility of CNTAC researched the ESG status of textile and apparel enterprises operating in Ethiopia and the impact of the COVID-19 pandemic on local industries to further promote the sustainable development of Ethiopian textile enterprises. The research has effectively identified the shortcomings and challenges of the sustainable development of Chinese-invested textile and apparel enterprises operating in Ethiopia and further proposed targeted policy support suggestions and capacity-building measures. Its achievement, “Research on Sustainable Development Capacity of Chinese-invested Textile and Apparel Enterprises in Ethiopia”, won the second prize in the “2022 CNTAC Science and Technology Progress Award”.

**Share experience in sustainable development.** As a forerunner in promoting CSR construction of the industry in China, CNTAC has been making progress in knowledge spillovers and experience sharing, encouraging more industries to be involved in the sustainable development process. In August 2022, bearing in mind the principle of “friendly cooperation for common development”, CNTAC and China National Forest Products Industry Association signed the Memorandum of Understanding on Cooperation in Promoting Sustainable Forestry Development in Beijing. The two sides decided to pursue cross-domain, multi-level, and multi-form cooperation in all respects by giving full play to their strengths, to accelerate the formulation and improvement of the CSR standard and working mechanism of the international forest product industry.



# Introduction of Guidance on Social and Environmental Due Diligence for Textile and Apparel Enterprises in China

## 3.1 Background

Since the United Nations Guiding Principles on Business and Human Rights formally introduced “human rights due diligence”, the basic framework of due diligence has been established at the international normative level. In recent years, due diligence or supply chain due diligence based on human rights and environmental risks has become a core issue in the agenda of responsible business conduct in China and abroad. On the one hand, due diligence has become a policy lever and compliance orientation for an increasing number of public institutions to regulate supply chain responsibility, and on the other hand, it is increasingly becoming a basic practice and common approach for industry to deal with social and environmental risks in the supply chain. In September 2021, the Chinese government released Human Rights Action Plan (2021-2025) and brought forward “Promoting responsible business conduct in global supply chains. It will encourage Chinese businesses to abide by the UN Guiding Principles on Business and Human Rights in their foreign trade and investment, to conduct due diligence on human rights, and to fulfill their social responsibility to respect and promote human rights.” This lays the policy foundation for Chinese companies, including textile and apparel companies, to understand and implement social and environmental due diligence.

At the same time, more and more Chinese textile and apparel enterprises are growing into “chain dominators” in their niche industries or direct-to-consumer brand enterprises, which makes maintaining and promoting a safe, stable, resilient and sustainable supply chain ecology a fundamental part of the enterprise’s longevity. This also means that due diligence based on supply chain and focusing on social and environmental risks must become the basic skills for enterprises to fulfill their social responsibility and promote sustainable development. For a large number of Chinese supply chain companies that rely on domestic and foreign buyers and brands, their customers’ supply chain due diligence based on legal compliance, risk management or value creation has also put forward more detailed and strict requirements, including fully understanding and adapting to supply chain due diligence.

Guidance on Social and Environmental Due Diligence for Textile and Apparel Enterprises in China (the Guidance for short below) aims to meet the needs of the above-mentioned growing number of companies at all levels of the industry to understand and apply due diligence. Based on the UN Sustainable Development Goals (SDGs), the current development of the industry and Chinese laws and



regulations, and incorporating the essence and experience of domestic and international standards and guidelines related to due diligence, the Guidance aims to provide practical, complete and systematic tools for enterprises to carry out due diligence and build a responsible supply chain. This Guidance also aims to enhance the ability of enterprises to identify and manage their own social and environmental risks and those of their supply chain, to take advantage of opportunities of social and environmental value, and to conduct constructive cooperation with stakeholders in the supply chain.

In the research and development process, this Guidance has received strong support from international organizations, including the Organization for Economic Cooperation and Development. The Office for Social Responsibility of the China National Textile and Apparel Council will track and evaluate the use of this Guidance and feedback from enterprises, and organize revisions when necessary.



"In order to identify, prevent, mitigate and account for how they address their adverse human rights impacts, business enterprises should carry out human rights due diligence. The process should include assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed. Human rights due diligence:

- Should cover adverse human rights impacts that the business enterprise may cause or contribute to through its own activities, or which may be directly linked to its operations, products or services by its business relationships;
- Will vary in complexity with the size of the business enterprise, the risk of severe human rights impacts, and the nature and context of its operations;
- Should be ongoing, recognizing that the human rights risks may change over time as the business enterprise's operations and operating context evolve."



—United Nations Guiding Principles on Business and Human Rights



### 3.2 Framework of Due Diligence

The four-step framework of "Identify," "Integrate," "Track," and "Communicate" for human rights due diligence is generally established in the United Nations Guiding Principles on Business and Human Rights. On this basis, the OECD Due Diligence Guidance for Responsible Business Conduct addresses due diligence for enterprises - It is a risk management approach that is commensurate with risks. Risk refers to the possibility of adverse impacts on people, environment or society. To address risks, OECD proposes a six-step management process of policy embedment, identification and assessment, response (cease, prevention, or mitigation), tracking, communication, and remediation (see Figure 1-1). The due diligence approach and process as enshrined in the UNGPs and the OECD Guidance are key reference points for responsible business which outline how companies can act responsibly. They provide practical support, which do not impose additional burdens on enterprises.

As a subfile of CSC9000T, this Guidance is dedicated to providing guidance for China's textile and apparel enterprises in implementing social and environmental due diligence. China has formed the most complete textile and apparel industry chain in the world, covering the process from manufacturing fibers to the final garment. This Guidance is designed to provide effective social and environmental due diligence tools for all the enterprises in the Chinese textile and apparel industry. On the one hand, this Guidance incorporates the due diligence approach established in the United Nations Guiding Principles on Business and Human Rights and the OECD Due Diligence Guidance for Responsible Business

Conduct. Social and environmental risk management are integrated into the business management process. On the other hand, this Guidance is formulated on the basis of the objective reality of Chinese textile and apparel industry, which starts from the requirements of Chinese laws and regulations and integrates the requirements and suggestions of CSC9000T on the social responsibility construction of enterprises in the industry. It aims to realize the localized application of due diligence methods and promote Chinese textile and apparel enterprises to integrate into the international textile and apparel industry value chain with a more responsible attitude and standpoint.

### 3.3 Process of Due Diligence

#### 3.3.1 Embed RBC into Policies and Management Systems

**Develop Responsible Business Conduct management policies.** Enterprises are expected to develop RBC policies that articulate their commitment to RBC in their own operations and supply chains, as well as their plans to manage due diligence in relation to their own operations, supply chains and other business relationships.

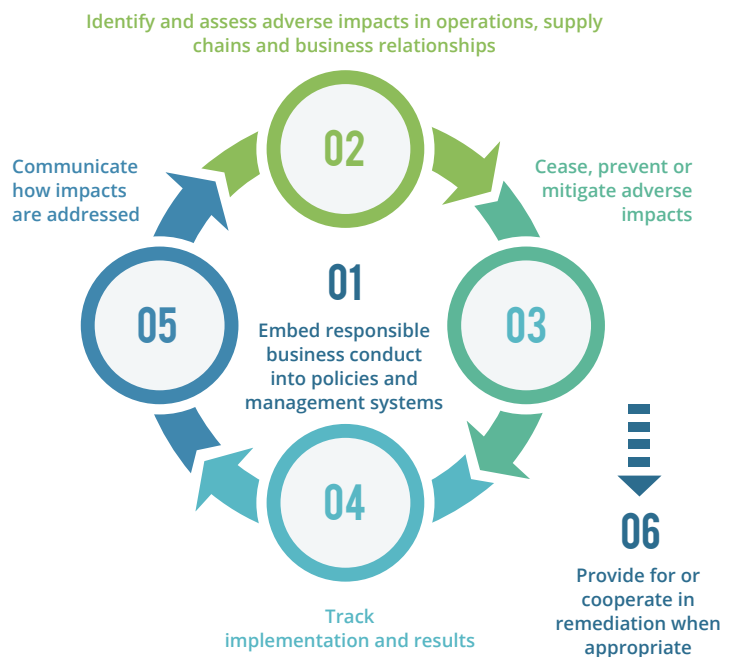
**Embed Responsible Business Conduct into Management Systems.** Enterprises should embed RBC policies into their management systems within the framework of domestic laws and regulations so that due diligence is implemented as part of the regular business processes.

**Embed Responsible Business Conduct into Supply Chains.** Enterprises should incorporate RBC expectations and policies into engagement with suppliers and other business relationships.

#### 3.3.2 Identify and Assess Adverse Impacts in Operations, Supply Chains and Business Relationships

**Carry out a Broad Scoping Exercise.** The broad scoping is multi-layered. First, the scope is determined by all areas of the business, across its operations and relationships, including in its supply chains. Second, relevant elements include, among others, information about geography, different industrial chain links, product, business models, sourcing model and enterprise risk factors. Third, the scope is diverse on time, i.e., it includes known risks the enterprise has faced or is likely to face.

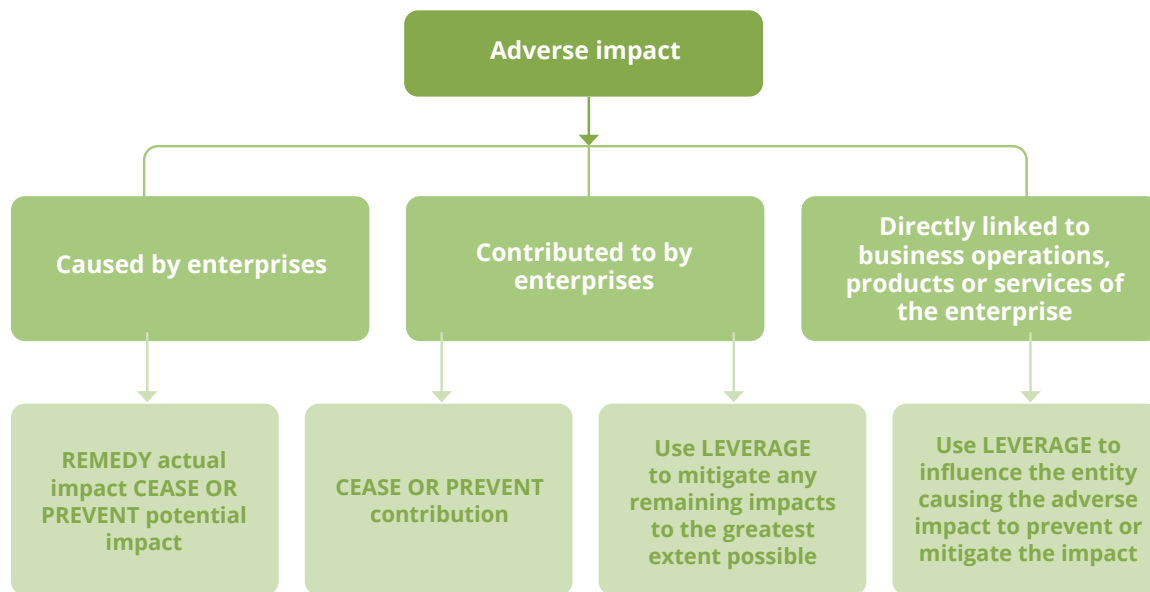
**Identify and Assess Adverse Impacts.** Starting with the significant areas of risk identified above, carry out iterative and increasingly in-depth assessments of prioritised operations, suppliers and other business relationships, ideally at the site level, in order to identify and assess specific actual and potential adverse RBC impacts.



Due Diligence Process

**Prioritization of Risk Factors.** Drawing from the information obtained on actual and potential adverse impacts, where necessary, prioritise the most significant RBC risks and impacts for action, based on severity and likelihood. Prioritisation will be relevant where it is not possible to address all potential and actual adverse impacts immediately. Once the most significant impacts are identified and dealt with, the enterprise should move on to address less significant impacts.

**Determine the Appropriate Responses.** Assess the enterprise's involvement with the actual or potential adverse impacts identified in order to determine the appropriate responses. Specifically, assess whether the enterprise (a) caused (or would cause) the adverse impact; or (b) contributed (or would contribute) to the adverse impact; or whether (c) the adverse impact is (or would be) directly linked to its operations, products or services by a business relationship.



Addressing Adverse Impacts

### 3.3.3 Cease, Prevent or Mitigate Adverse Impacts

**Manage Risks Caused or Contributed to by Enterprises.** Enterprises are responsible to cease the adverse impacts they cause or contribute to, but in different ways. For the adverse impacts caused by the enterprise's own operation activities, the enterprise should immediately cease this activity, and formulate corrective plans in terms of policies, management systems, equipment and facilities, and training. For the adverse impacts the enterprise contributes to, enterprises should immediately cease the contributing activities, and strengthen the due diligence on the suppliers through supplier engagement, control measures, and red flag systems.

**Manage Risks Arising from Business Relationships.** Based on the enterprise's prioritisation, develop and implement plans to seek to prevent or mitigate adverse impacts on RBC issues which are directly linked to the enterprise's operations, products or services by business relationships. Appropriate responses to risks associated with business relationships may at times include: continuation of the relationship throughout the course of risk mitigation efforts; temporary suspension of the relationship while pursuing ongoing risk mitigation; disengagement with the business relationship either after failed attempts at mitigation, or where the enterprise deems mitigation not feasible, or because of the severity of the adverse impact. A decision to disengage should take into account potential social and economic adverse impacts. These plans should detail the actions the enterprise will take, as well as its expectations of its suppliers, buyers and other business relationships.

**Collaborate in carrying out due diligence.** Enterprises can collaborate at an industry or multi-industry level as well as with relevant stakeholders throughout the due diligence process, although they always remain responsible for ensuring that their due diligence is carried out effectively. For example, collaboration may be pursued in order to pool knowledge, increase leverage and scale up effective measures. Cost sharing and savings is often a benefit to sector collaboration and can be particularly useful for SMEs.

### 3.3.4 Track Implementation and Results

Track the implementation and effectiveness of the enterprise's due diligence activities, i.e. enterprises need to assess whether identified adverse impacts have been effectively responded to in the agreed time period, and in turn, use the lessons learned from tracking to review their own due diligence processes and improve them in the future.

Prioritisation for tracking activities should align with prioritisation decisions in the previous steps. In other words, enterprises should prioritise tracking those adverse impacts they assessed to be most significant and took action to cease, prevent and mitigate.

How an enterprise tracks its implementation and results, including whether impacts have been effectively addressed, will vary based on the context in which the enterprise operates, its size, and the risks that it faces through its own activities and in its business relationships. In many cases, an enterprise will need to look across a range of inputs, including assessment data, data from grievance mechanisms, and stakeholder feedback to get a full picture as to whether impacts are being addressed.

### 3.3.5 Communicate How Impacts Are Addressed

For adverse impacts that the enterprise causes or contributes to, be prepared to communicate with impacted or potentially impacted rightsholders in a timely, culturally sensitive, and accessible manner. Engage the views of rightsholders in the corrective plan and make recommendations for remedies. Periodically summarize the improvements resulting from due diligence processes, and communicate externally relevant information on due diligence policies, processes, activities conducted to identify and address actual or potential adverse impacts, including the findings and outcomes of those activities.

### 3.3.6 Provide for or Cooperate in Remediation When Appropriate

**Eliminate and remediate adverse impacts.** When the enterprise identifies that it has caused or contributed to actual adverse impacts, address such impacts by providing for or cooperating in their remediation.

**Address Differences.** When appropriate, provide for or cooperate with legitimate remediation mechanisms through which impacted stakeholders and rightsholders can raise complaints and seek to have them addressed with the enterprise. Referral of an alleged impact to a legitimate remediation mechanism may be particularly helpful in situations where there are disagreements on whether the enterprise caused or contributed to adverse impacts, or on the nature and extent of remediation to be provided.

### 3.4 Key Topics in Due Diligence Management

This guide provides a comprehensive overview of risk exposures and countermeasures on important topics for each stakeholder, and innovatively uses case studies such as industry scenarios to provide graphic explanations for enterprises to understand and manage relevant risks.

#### Key risk topics

<b>Employees</b>	Equality, Democratic right, Child protection, Forced labor, Sexual harassment, Labor contract, Working hours and the right to rest, Recruitment, Salary and social insurance, Occupational health and safety, Personal information protection
<b>Clients and Customers</b>	Product quality, Consumers' right to know, Personal information protection, Marketing ethics
<b>Community</b>	Localized operations, Vulnerable groups, Government relations , Non-profit organization relations , Information disclosure
<b>Environment</b>	Waste water, Waste gas, Waste, Chemicals, Energy Conservation and Emission Reduction, Adapt to climate change, Biodiversity conservation
<b>Anti-corruption</b>	Agent corruption , Procurement corruption , Internal capacity

### 3.5 Promotion and Application

To promote the localized application of social and environmental due diligence in China's textile and apparel industry, and help Chinese textile and apparel enterprises integrate into the global value chain of the textile and apparel industry in a more responsible posture and position, the Office for Social Responsibility of CNTAC, together with the Embassy of Sweden in China and the China Cotton Textile Association, held an online training session on the Guidance in December 2022, which has provided a strong support for the high-quality, sustainable development of China's textile and apparel industry. During the training, senior insider experts explained the Guidelines comprehensively and extensively, analyzed and commented on many business cases in the industry, and showcased the concepts of responsible management and the methods and strategies presented in the Guidelines to the enterprises in an all-around and multi-dimensional way. This will help Chinese textile and apparel enterprises better identify the potential negative impacts on the environment and society in their business operations and enhance their management level of businesses and risks associated with the entire supply chain by incorporating responses to risks and opportunities in their management system and business processes through responsible management. In this way, the management ability and CSR performance will be fully enhanced.



## China's Textile and Apparel Industry During 2023-2024 Plan of Social Responsibility Construction

From 2023 to 2024, the social responsibility construction of China's textile and apparel industry will focus on the key target of serving and facilitating the high-quality development of the industry, strengthening the soft power of the industry in sustainable development, supporting and reinforcing the synergy of software and hardware, promoting the high-end, intelligent, green, and integrated development of the industry, raising the resilience and security of the industrial chain and supply chain, upgrading the quality of the textile industry, and consolidating the leading position of the industry in the world.

### 4.1 Continuously Integrate Social Responsibility into Governance by Relying on the Information-based Service Platform

**Intensify efforts in CSC9000T membership pilots.** Promote and apply the online information platform for CSC9000T members and improve the services and support for member enterprises; develop the CSC9000T Guidelines for the Implementation of Social Responsibility System for Textile and Apparel Companies, and revise and optimize the management indicator system; and continue to promote CSC9000T membership pilots with the support of the Responsible Supply Chain Association (RSCA) of CNTAC and key textile and apparel companies.

**Improve the transparency management of ESG of listed companies in the textile and apparel industry.** Continue to build the ESG public service platform of China's textile and apparel industry, improve the industrial ESG disclosure tools and the ESG information disclosure quality of listed companies in the textile and apparel industry, conduct annual ESG performance evaluations, increase transparency and trust of the textile and apparel industry in the financial market, and co-build a sound industrial ESG ecosystem with all stakeholders; encourage various investors to fully consider the ESG disclosure level and performance level of the invested organizations during industrial investment, guide investment to lean to enterprises and projects with excellent ESG performance, and play the role of financial leverage in optimized allocation of elements and sustainable development.

## 4.2 Make an Active Response to Climate Change and Accelerate the Low-carbon Transformation of the Industry

**Develop industrial standards geared towards the goals of carbon peaking and carbon neutrality.** Complete the preparation and release of four group standards including the Technical Specification for Carbon Labels of Textiles and Apparel, the Technical Specification for Evaluation of Zero-carbon Textile Products, and the Technical Specification for Evaluation of Zero-carbon Factories in Textile Enterprises, and select outstanding enterprises as the pilots of standard application.

**Promote the construction of world-class climate action demonstration zones in the textile industry.** Continue to strengthen support in professional services, basic capacity improvement, and platform construction, and promote the construction of world-class climate action demonstration zones in the textile industry such as Shengze and Keqiao.

**Promote and apply climate-friendly technologies.** Carry out the collection and promotion of "climate-friendly technologies in the textile industry" together with the Science Technology Development Department of CNTAC to provide technical support for pollution control, carbon emission reduction, and green development of textile enterprises.

## 4.3 Strengthen Product Lifecycle Management to Lead the Industry in Contributing to Sustainable Development

**Make sustained efforts to promote the circular development of China's textile and apparel industry.** Continue to promote the circular development of China's textile industry and actively explore systematic solutions for the circular development of the textile industry. Establish platforms for further cooperation and exchanges and boost the research on industrial circulation, resource value accounting, innovative application of circular technologies, and industry-finance cooperation in circular development.

**Improve the LCPlus construction and its application pilots.** Continue to enhance the construction of the existing LCPlus system; guided by the CNTAC-LCA working group, arrange pilots for the system and promote its application among member enterprises of the Carbon Stewardship 30•60 Net Zero Accelerating Plan, and achieve the delivery and conversion of market value.

#### 4.4 Improve the Resilience of Supply Chain with a Focus on Social and Environmental Risks

**Develop and popularize responsible management tools suitable for industrial enterprises.** Based on the Guide for Social and Environmental Due Diligence of Chinese Textile and Apparel Enterprises, enhance industrial training and deepen the cognition and application of responsible management in industry enterprises; enhance the traceability and research of the responsible management legislation of overseas supply chains, and develop tailored responsible management tools suitable for Chinese textile and apparel enterprises to enhance their capabilities to manage social and environmental risks.

**Step up dialogue and cooperation with international institutions.** Optimize dialogue and cooperation with relevant UN agencies, international standards bodies, and international NGOs in the field of responsible management in the supply chain of the textile and apparel industry, and build consensus and coordinated actions among upstream and downstream sides of the supply chain to enhance the resilience of the supply chain of the textile and apparel industry in response to non-commercial risks at home and abroad.

#### 4.5 Support Going-global Businesses to Conduct Responsible Overseas Investment

**Enhance the awareness and ability of responsible overseas investment.** Continue to speed up the promotion and application of the Guidelines for Responsible Investment Overseas of China's Textile and Apparel Industry, increase the frequency and times of online training, and conduct local training according to local conditions. Such efforts include conducting further investigations on the sustainable development situation of textile and apparel companies in Lancang-Mekong Cooperation (LMC) countries and African countries, and improving the competitiveness of Chinese-invested textile and apparel companies overseas in the aspect of social responsibilities, especially those running their businesses in Southeast Asia and Africa.



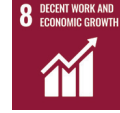



**Shore up network building and experience sharing.** Strengthen communication and contact with textile and apparel manufacturers' associations in Asia based on the STAR (Sustainable Textile of the Asian Region) network to discover and summarize the experience and challenges of industrial sustainable development; give full play to the local advantage of China (Ethiopia) Sustainable Development Alliance for Textile and Light Industrial Enterprises to serve Chinese-invested textile and apparel enterprises in Africa, improve the layout of international capacity for Chinese textile and apparel enterprises, and provide support for the improvement of multi-phase and multi-dimensional capabilities such as pre-investment due diligence, stakeholders' engagement in operations, social and environmental due diligence.



# Appendix

## Appendix 1 SDGs Index

### Part I. Development of China's Textile and Apparel Industry and Its Impact on CSR Construction

1.1 Development Overview of China's Textile and Apparel Industry			
1.2 Major Trends of China's Textile and Apparel Industry and Their Impact on CSR			

### Part II. CSR Construction of China's Textile and Apparel Industry in 2022

2.1 Responsibility for People								
2.2 Responsibility for the Planet								
2.3 Responsibility for Prosperity								

### Part III. Introduction to the Guide for Social and Environmental Due Diligence of Chinese Textile and Apparel Enterprises

### Part IV. China's Textile and Apparel Industry During 2022-2023 Plan of Social Responsibility Construction

## Appendix 2

# CSR Chronicles of China's Textile and Apparel Industry (2022)

April 2022

The development of the online management platform for CSC9000T member enterprises was finished and the relevant implementation plan was promoted.

April 2022

An investigation and a call for excellent papers on the White Paper of Textile Materials for a Sustainable Future were initiated.

May 2022

The China Textile Recycling Innovation Research Project was launched. Brand purchasers, manufacturers of recycled materials, government departments, professional associations, and research institutes were united to study the key issues and innovative opportunities for the circular transformation of China's textile industry and explore systematic solutions for the circular development of the industry.

June 2022

CNTAC pushed for the establishment of the "China (Ethiopia) Sustainable Development Alliance for Textile and Light Industrial Enterprises", which is the first cross-regional sustainable development enterprise alliance in the industry.

June 2022

The Office for Social Responsibility and the Science Technology Development Department of CNTAC jointly initiated the collection for "climate-friendly technologies in the textile industry" to collect, sort out, and promote a series of advanced and practical innovative technologies, engineering cases, and solutions with a high sci-tech level, good pollution control effects, and low consumption of resources, providing technical support for scientific decision-making, precise pollution control, and carbon emission reduction of textile enterprises.

June 2022

The China Textiles Development Center (CTDC) cooperated with the China National Institute of Standardization to launch the Switch-Asia Grant Project—Transition to Circular Economy Practices in Textile and Apparel MSMEs along the Lifecycle in Huzhou and Shaoxing.

July 2022

The development of the ESG evaluation system and information platform for the industry was finished and the ESG rating of the industry was officially started.

#### July 2022

CNTAC officially signed a memorandum of understanding with Baidu to reach a cooperation plan that promotes sustainable development through the combination of intelligent technologies and industries at the industry, especially cluster, level. The investigation of enterprises from three clusters was finished.

#### August 2022

The planned projects of four group standards including the Technical Specification for Carbon Labels of Textiles and Apparel, the Technical Specification for Evaluation of Zero-carbon Textile Products, the Technical Specification for Evaluation of Zero-carbon Factories in Textile Enterprises, and the ESG Disclosure Guidelines for Textile Enterprises were officially approved.

#### September 2022

The Sustainable Cotton Framework program kicked off and a pilot project in Gansu was started in cooperation with domestic and foreign partners such as China Cotton Textile Association and Solidaridad.

#### October 2022

The China Textile Information Center and the People's Government of Shengze Town, Wujiang District, Suzhou City, Jiangsu Province prepared and issued the White Paper of Climate Stewardship on Shengze's Textile Industry.

#### November 2022

CNTAC cooperated with the Humen government to organize the 2022 International Summit on Green Development and Just Transition in the Textile and Garment Sector, where guests from 16 countries around the world discussed the effective paths, policy initiatives, and best practices of green development and just transition in the textile and apparel industry.

#### November 2022

The family-friendly enterprise project was supported by the All-China Federation of Trade Unions (ACFTU), the United Nations International Children's Emergency Fund (UNICEF), and national and international brand enterprises and started implementation.

#### November 2022

The development of the Guide for Due Diligence of Supply Chain of Chinese Textile and Apparel Enterprises and the training of relevant international brands, their suppliers, and Chinese enterprises were finished.

## Appendix 3

# Directory of Environmental Protection Policies in the Textile Industry

### Policy Directory on Recycling of Waste Textiles

Document	Description
Guiding Opinions on Accelerating the Construction of Waste Materials Recycling System (Department of Resource Conservation and Environmental Protection of NDRC [2022] No. 109)	Textile and other production enterprises are encouraged to develop an integrated model of recycling, processing and utilization.
Guiding Opinions on Accelerating the Construction of Urban Environmental Infrastructure (Letter of the General Office of the State Council [2022] No. 7)	In terms of improving the regional recycling system of renewable resources, it is necessary to promote the classified utilization and centralized disposal of wastes such as waste textiles.
Implementation Opinions on Accelerating the Recycling of Waste Textiles (Department of Innovation and High-Tech Development of NDRC [2022] No. 526)	Nine specific measures have been defined from the three aspects of production, recycling, and comprehensive utilization, namely promoting the green design of textiles, encouraging the use of green fibers, strengthening the social responsibility of textile producers, improving the recycling network, expanding recycling channels, intensifying recycling management, standardizing and implementing reuse, promoting the development of recycling industry, and implementing key breakthroughs in standard clothing.
The 14 <sup>th</sup> Five-Year Plan for Bioeconomic Development (Department of Innovation and High-Tech Development of NDRC [2021] No. 1850)	It is required to promote the application of biodegradable material products, with a focus on the application demonstration in the fields of daily use products, agricultural mulch, packaging materials, textile materials, etc.
Implementation Plan for Carbon Peaking in Industry (Ministry of Industry and Information Technology [2022] No. 88)	Efforts will be accelerated to promote the recycling of waste textiles.

## Policy Documents on Promoting High-quality Development of the Textile and Apparel Industry in 2022 (Part)

Document	Description
Guiding Opinions on High-quality Development of Industrial Textile Industry (Ministry of Industry and Information Technology [2022] No. 44)	Efforts will be accelerated in the transformation and upgrading of high-end, digital, green, and service-oriented industrial textiles.
Guiding Opinions on High-quality Development of Chemical Fiber Industry (Ministry of Industry and Information Technology [2022] No. 43)	Efforts will be focused on the high-end, intelligent and green transformation of the industry to achieve high-quality development.
Notice on Consolidating an Upturn and Redoubling Efforts to Revitalize the Industrial Economy (Ministry of Industry and Information Technology [2022] No. 160)	Efforts will be made to support the green development of the textile and apparel industry, increase publicity and promotion of recycled fiber products, stabilize the export of labor-intensive products such as light industry and textiles, and promote the smooth operation of traditional industries.

## Policy Documents on Synergizing the Reduction of Pollution and Carbon Emissions in 2022 (Part)

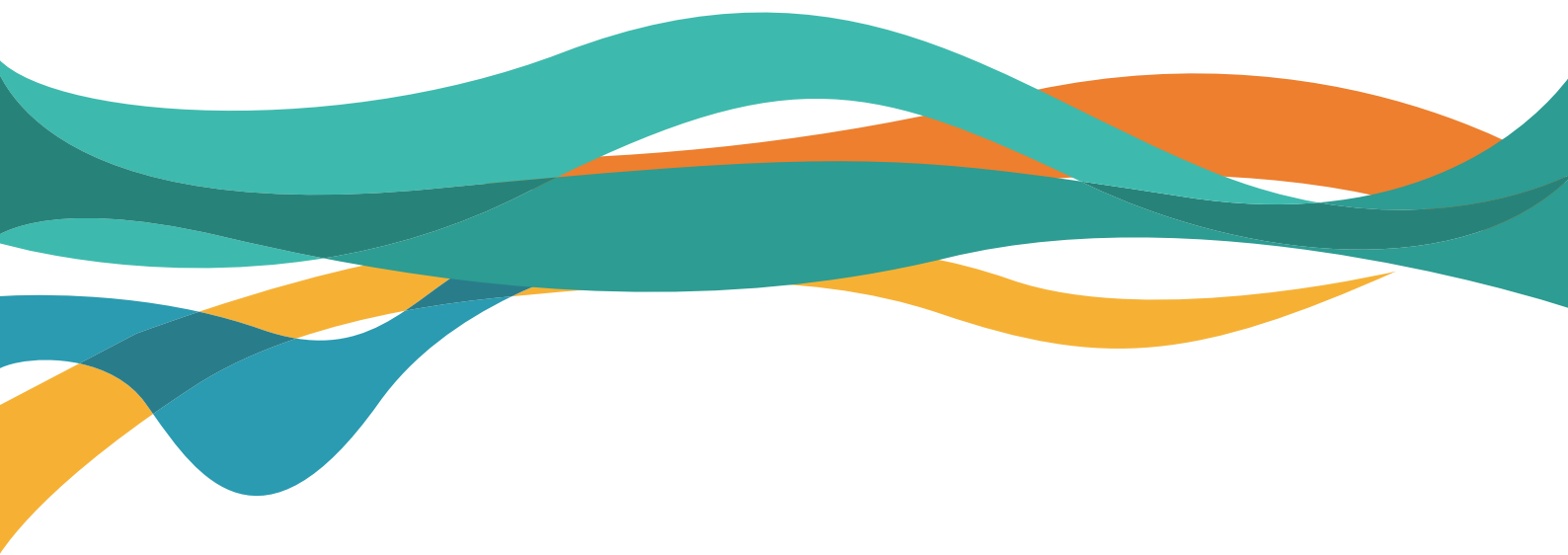
Document	Description
Action Plan for Industrial Water Efficiency Improvement (Ministry of Industry and Information Technology [2022] No. 72)	<ol style="list-style-type: none"> <li>1. By 2025, the unit water withdrawal of the main products of the textile industry will be reduced by 15%;</li> <li>2. The key technology research directions of the textile industry are as follows: dip dyeing with online addition of dye liquor, efficient treatment and reuse of printing and dyeing wastewater, and near-zero discharge of wastewater from the water jet loom;</li> <li>3. The key directions of water efficiency improvement and upgrading in the textile industry are as follows: continuous dyeing of polyester fabric with less water, low-bath-ratio batch dyeing, continuous open-width dyeing of knitted fabrics, digital jet printing, reuse of process water according to compositions, printing and dyeing wastewater treatment according to compositions and technology integration application, and efficient wastewater treatment and reuse of the water jet loom;</li> <li>4. Emphasis will be placed on key industries with large wastewater discharge, relatively mature transformation conditions, and obvious demonstration and driving roles, such as iron and steel, petrochemical and chemical industries, textiles, paper making, food, and non-ferrous metals. Priority will be given to enterprises leading in water efficiency, green factories, green industrial parks, and new industrialization demonstration bases. The transformation and upgrading of wastewater recycling will be steadily promoted, and several wastewater recycling demonstration enterprises and industrial parks will be created to increase the water reuse rate.</li> </ol>

Implementation Plan for Synergizing the Reduction of Pollution and Carbon Emissions (Ministry of Ecology and Environment [2022] No. 42)

Measures should be taken to synergize the reduction of pollution and carbon emissions, such as implementing green manufacturing projects, promoting green designs, exploring the green industrial chain including product design, production process, product distribution, recycling, disposal, and utilization, and accelerating the green development of the whole process in the industrial field including emission reduction from the source, process control, end treatment, and comprehensive utilization, thus promoting industrial energy conservation and energy efficiency.

Implementation Plan for Carbon Peaking in Industry (Ministry of Industry and Information Technology [2022] No. 88)

1. Promote coordinated low-carbon demonstration of various industries. Efforts will be made to strengthen the coupling development of such industries as energy, iron and steel, petrochemical and chemical industries, building materials, non-ferrous metals, textiles, and paper;
2. Build a green and low-carbon supply chain. Support will be given to leading enterprises in the automotive, machinery, electronics, textile, communications, and other industries to play a leading role in key areas such as supply chain integration and innovative low-carbon management;
3. Carry out upgrading and transformation demonstrations in key industries. Technology demonstration projects for deep decarbonization of production processes, industrial process reengineering, electrification transformation, and carbon dioxide recovery and recycling will be carried out in such industries as iron and steel, building materials, petrochemical and chemical industries, non-ferrous metals, machinery, light industries, and textiles;
4. Boost the integrated development of next-generation information technology and manufacturing. The advantages of information technology in personalized customization, flexible production, product traceability, and other aspects will be leveraged in household appliances, textiles, food, and other industries, and product life-cycle management should be implemented;
5. In the textile industry, efforts will be focused on developing intelligent and efficient flexible preparation technology for chemical fibers, promoting low-energy printing and dyeing equipment, and applying advanced technologies such as low-temperature printing and dyeing, low-bath-ratio dyeing, and continuous dyeing of knitted fabrics;
6. Accelerate the recycling of waste textiles;
7. Efforts will be accelerated in the green and low-carbon transformation of the manufacturing industry by adopting green credit under the premise of legal compliance and risk control, and several low-carbon technological transformation projects will be supported in such industries as iron and steel, building materials, petrochemical and chemical industries, non-ferrous metals, light industries, textiles, machinery, automobiles, ships and electronics.



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