



SESEC V Translation

Review of Standardization Work in 2023

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Seconded European Standardization Expert in China
(SESEC)

Introduction

On 29 January 2024, China's State Administration for Market Regulation (SAMR) released the infographic on the Review of Standardization Work 2023. The infographic summarized the major achievements that China has made in 2023 and presented key statistics. To assist foreign stakeholders, SESEC translated the infographic as follows.

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Review of Standardization Work in 2023

The year of 2023 is the first year to fully implement the spirit of the 20th National Congress of the Communist Party of China. It is the year for economic recovery and development after three years of COVID-19 prevention and control. It is also a critical year for the in-depth implementation of the **National Standardization Development Outline**. The national standardization work resolutely follow the spirit of the President Xi Jinping's important expositions and important instructions, fully implements the decisions and arrangements of the Party Central Committee and the State Council, and promotes the implementation of the outline. The work of national standardization implements the decisions and arrangements of the Party Central Committee and the State Council and delivers fruitful results.

I. Remarkable results in deepening internalization and transformation through thematic learning

Strengthen theoretical study to improve political judgment, political understanding, and political execution

- Party members and cadres **in the standardization line of work** learned Xi Jinping's Thoughts on Socialism with Chinese Characteristics for a New Era in a comprehensive, systematic, and in-depth way.
- **The committee affair meetings of the Standardization Administration of China (SAC)** promptly followed up and studied the latest important speeches and articles of General Secretary Xi Jinping.
- **Going through all expositions** that General Secretary Xi Jinping's made on standardization works to form ideas and measures to guide practice and promote development through in-depth study and practice.

Implement "two safeguards" principle

- Implementing the instructions of General Secretary Xi Jinping's on cybersecurity, gas safety, preventing food waste, limiting excessive packaging, and rural revitalization etc., SAC has created **106** new national standard projects and issued **183** new national standards.
- **The Cyberspace Administration of China** has formulated **31** national standards for cloud computing, big data, and cybersecurity.
- **The National Government Offices Administration** takes the lead in developing national standards for anti-food waste in governmental canteens
- **The Ministry of Agriculture and Rural Affairs** takes the lead in issuing the Standardization Action Plan for Rural Revitalization
- **Guizhou province** actively carries out pilot construction on rural revitalization standardization.
- **Hainan province** builds a demonstration project called "standardization plus ecological civilization"
- **Shanxi province** held a conference on the Standardization of ecological protection and high-quality development in nine provinces (districts) along the Yellow River. Hubei and other ten provinces jointly released the Wuhan Initiative for Standardization Cooperation in Ecological Civilization in the Yangtze River Economic Belt.
- **Hebei province** takes international and other advanced foreign standards as a benchmark to build a world-class Xiong'an standard system.

Solve development problems through in-depth investigation and research

- **SAC** carried our research around multiple topics including the in-depth implementation of the **National Standardization Development Outline** (hereinafter referred to as "the Outline"), establishing standard

systems in critical areas, and internationalization of association standards. It launched standardization system planings for hydrogen energy, intelligent connected vehicles (ICV), general public services, and aging-friendly transformation etc. It has also completed the pilot project of assessment for association standard formulation.

- **The Ministry of Water Resources of China** organized survey on the projects' implementation such as the "Standardization Demonstration Zone of National Soil and Water Conservation" to summarize the effectiveness of the implementation of water and soil protection, irrigation, and drainage technical standards
- **Fujian province** investigates the excessive packaging of tea to promote green and civilized consumption.
- **Chongqing** made surveys on the standardization of governmental affairs, and establishes a project ledger for formulating standards that can help people solve more problems and improve their livelihoods.

Promote a comprehensive standardization development through overall planning and coordination of the Outline's implementation.

- **Firstly**, establish an evaluation mechanism for the implementation of the Outline.
- **Secondly**, promote an effective implementation of critical tasks in the Outline.
- **The third** is to set the action plans for the next round.

II. Make standardization have closer interaction and co-development with the technological innovation

Accelerate the gap-bridging of standard formulation in crucial emerging areas

- Made breakthroughs in **7** Beidou satellite navigation standards and **14** space science standards and promoted the development of **more than one hundred** standards on Beidou application.
- Started the research of **more than 200** national standards in key and emerging technology fields such as integrated circuits, clean energy, and biotechnology.
- Authorities **including the Cyberspace Administration of China (CAC), the Ministry of Industry and Information Technology (MIIT)** etc., have issued guidelines for constructing standard systems for artificial intelligence, intelligent connected vehicles, and other areas.
- **The Chinese Academy of Sciences** promotes the formulation of national and international standards for quantum computing, stem cells, nanotechnology, etc.

Technological innovation boosts the improvement of standards.

- **Consistently improve** the reward mechanism of the China Standard Innovation Contribution Award. 72 standard projects, organizations, and individuals have been awarded.
- 8 new national technical standards innovation bases **were newly approved**, including non-ferrous metals, new chemical materials, medical equipment, and civil aviation.
- The **national technical standards innovation base for intelligent manufacturing, photovoltaics, household appliances, etc.** have promoted the transformation of 1,924 advanced scientific and technological achievements into 2,245 technical standards.
- **The Ministry of Transport, the National Food and Strategic Reserves Administration, and the State Administration of Science, Technology, and Industry for National Defense** have included the significant technical standard achievements into the appraisal system.
- The **National Energy Administration** has studied and compiled the standard project list of China's advanced

pressurized water reactor nuclear power (2023 edition). It has resulted in more than 1,200 high-level technical standards based on China's independent intellectual property rights.

- **Since the implementation of the Outline**, the transition rate of standard research results from common key technologies and applied science and technology plan projects has reached 57%.

Establish a sound mechanism to transform innovative achievements

- **New national TCs has been established** for intelligent computing and brain-computer interface etc. The first standardization project research group has been founded to carry out frontier exploration of Standardization in the metaverse field.
- 38 national standard verification points was approved as the first batch, **focusing** on rare earth materials, high-tech ships, offshore engineering equipment, and core essential aviation components,
- **Jointly with the with the China National Intellectual Property Administration**, the linkage between standard formulation and patent review was formed to provide a healthy system to incubate more innovative patents.
- **Together with the Ministry of Science and Technology**, a guideline for deepening the interactive development of standardization and technological innovation was researched and drafted.
- In the national major R&D plan setting in the "14th Five-Year Plan", **the Ministry of Science and Technology** has set up key projects for the national infrastructure system, and has deployed promote the development of integral technical specifications and essential international standards.
- **National Radio and Television Administration** has established an interactive innovation system for technologies, patents, and standards of radio, television, and online audio-visual.

III. Effective improvement on the level of industrial Standardization

For agricultural standards

8 national mandatory standards and **161** national voluntary standards were issued, including **Requirements of restricting excessive package-Fresh edible agricultural products, Wheat, and Cotton—Part 1: Saw ginned upland cotton**. The Ministry of Agriculture and Rural Affairs has proposed **297** formulating and revising projects for national standards on pesticides, seeds and seedlings, breeding livestock and poultry, and soil quality etc. The National Food and Strategic Reserves Administration and the National Forestry and Grassland Administration have proposed **59** formulating and revising projects of national standards for camellia seed oil and evaluation indicators of national forest cities. Guangxi has improved its standard system for products such as snail rice noodles and sugarcane etc. Tibet, Gansu, Qinghai, Xinjiang and other regions have carried out in-depth construction of agricultural standardization demonstration zones for *Gastrodia elata*, *Ganoderma lucidum*, and Tibetan antelope.

Manufacturing standards

410 national standards have been issued in different fields such as industrial foundation, high-end equipment manufacturing, aerospace etc.², to improve the standard formulating systems more intelligent, green, and service-oriented. **28** national standards have been published for key industrial chains, such as additive manufacturing and hydrogen energy, and a bunch of other essential standards to ensure the supply demand of raw materials (such as recycled copper and aluminum etc.). **42** standards have been formulated in critical areas such as new energy storage, electric vehicle charging infrastructure, blockchain, and distributed accounting. **43** standards have been developed for new materials, such as rare earth and high-performance fibers. **241** standards for crucial consumer products have been formulated including baby products, household appliances, and cosmetics.

For standards of the service sector

National standards for home care services, cognitive accessibility, and basic pension insurance for urban and rural residents were released, and **39** specialized plans for national standards in terms of aging-friendly transformation were approved. **21** national standards are issued which are related to port logistics, multimodal transport, and instant distribution. 6 e-commerce-related standards, such as e-commerce live sales, and 35 data security-related standards, were published. **12** national ice and snow sports standards were issued. The People's Bank of China, the National Financial Regulatory Administration, and the China Securities Regulatory Commission have formulated **18** national standards in the financial field in the topic of information disclosure and consumer complaints. The Ministry of Commerce completed the construction of 86 special standardization pilot projects for commercial circulation in cities and enterprises.

IV. Gradual systematization of green development standardization

Accelerate the establishment of a carbon peak and carbon-neutral standard system.

The guidelines for standard construction have been issued jointly with 10 other ministries. More than **120** national standards have been issued on water conservation, ecological restoration, forestry carbon sequestration, and carbon capture, utilization, and storage (CCUS), and **114** specialized plans were issued. The National Development and Reform Commission (NDRC) promotes, upgrades, and applies energy-saving standards. Shandong, Guangdong, and Hunan provinces have successively established work plans for the construction of carbon peak and carbon neutral standard systems. Tianjin has formulated an indicator system on the zero-carbon demonstration unit and smart city construction. Inner Mongolia has issued regional standards for the construction of zero-carbon industrial parks.

Continuously improve standards for ecological environment protection, conservation, and intensive utilization of natural resources.

The Ministry of Ecology and Environment (MEE) has formulated **over 100** standards for solid waste storage sites. The Ministry of Natural Resources prepares **131** standards for surface carbon verification and other standards. The National Forestry and Grassland Administration comprehensively promotes assessment, review and the implementation of forestry and grassland standards. The Ministry of Water Resources issues **15** standards, including "three lines of defense" for rainwater monitoring and forecasting, and termite control. The China Meteorological Administration issued the meteorological observation standard system (2023 version). Yunnan province has formulated core standards for the protection of several representative species of its biodiversity.

Strengthening the guidance function of standards for green production and consumption

5 national standards have been published for green catering. National standards has been formulated for restrict excessive packaging of food, cosmetics, and edible agricultural products. The standard system of the resource utilization of livestock and poultry manure was jointly promoted by the Ministry of Agriculture and Rural Affairs and the Ministry of Ecology and Environment. **23** national standards has been issued un the topics of wetland protection, livestock and poultry breeding wastewater testing, and soil management. The People's Bank of China formulates standards for carbon finance, green finance, and green bonds. Eight departments, including the National Development and Reform Commission, have carried out in-depth actions to promote the green transition of courier packaging, and the State Post Bureau has organized the formulation of **6** national standards, including limits on harmful substances in express packaging and recycling packaging boxes.

V. Continuous acceleration of the standardization process of urban, rural, and social construction

Implement actions on rural revitalization and urban standardization.

Action plans has been set up jointly with the Ministry of Agriculture and Rural Affairs, and formulate/revise **169** national standards for rural sectors, rural facilities and environment, public services, and rural governance. An urban standardization action plan has been drafted jointly with five departments, including the Ministry of Housing and Urban-Rural Development and Ministry of Emergency Management of China. Qingdao, Hangzhou, and Guangzhou have started the construction of innovative cities of standard internationalization. Xianning of

Hubei province and other places have implemented pilot projects for comprehensive urban standardization.

Improve social governance and public safety standards.

24 national standards have been issued for basic level government affair disclosure, agency affair management, forensic science, and social credit. Jointly promoted the construction of **157** comprehensive standardization pilot projects for social management and public services in judicial administration, health, medical security, and other fields with the Ministry of Justice, National Health Commission, National Healthcare Security Administration and other ministries. Quickly formulated and released mandatory national standards for gas safety of liquefied petroleum gas cylinders and cylinder valves. **21** national voluntary standards on safety product supervision have been converted into mandatory such as steel bars and lithium-ion batteries. **129** standards were formulated and released in safety production fields, such as hazardous chemical substances and electrochemical energy storage power stations. Ningxia province has created a "12333" standardized innovative service model for managing agency affairs.

Implement the construction project of essential public service standard system

Together with 18 departments, including the Ministry of Education, the Ministry of Civil Affairs, the Ministry of Human Resources and Social Security, the Ministry of Culture and Tourism, and the General Administration of Sports, construction plan of general public service standard system has been published. **29** national standards have been issued for social insurance, rehabilitation of disabled people. The research and formulation of **51** specialized standards for public education, public culture, and sports have been promoted. 21 provinces, autonomous regions, and municipalities directly under the Central Government have been organized to construct the first batch of national basic public service standardization pilot. The National Health Commission, the National Administration of Traditional Chinese Medicine, and the National Medical Products Administration have formulated **52** health-related standards, such as drinking water testing methods, clinical traditional Chinese medicine, and medical devices.

VI. Continuous improvement on the capability level of standard internationalization

In depth participation in the governance of international standard organizations.

- **Lead** the formulation of strategic whitepapers on key emerging technologies such as climate change, zero-carbon power systems, and standard digital transformation.

Actively promote the construction of international standards systems

- Six international standardization technical institutions have been proposed and established, including mechanical energy storage, innovative logistics, and medical cryogenic storage equipment.

Consolidate and strengthen mutually beneficial and win-win partnerships

- General Secretary Xi Jinping witnessed the **signing** of the cooperation agreement between SAC and the Kazakhstan Standards Agency.
- SAC signed **five** cooperation agreements with the national/regional national SDOs such as African Electrotechnical Standardization Committee and Uzbekistan.
- With the support of the Ministry of Foreign Affairs, the practical cooperation with regional SDOs in Africa, Europe, America, and the Gulf Arab countries has been deepened. The BRICS Ministerial Conference on Standardization Cooperation was convened. Bilateral and multilateral mechanisms such as China-Europe, Northeast Asia, and China-Germany has been improved. All serve for promoting **the broad consensus** in areas such as carbon peak, carbon neutrality, and standard digitization.
- More than **50** bilateral talks with heads of SDOs in Mongolia, Russia, Vietnam, and other countries to promote substantial progress in the Standardization of education and mutual recognition of Chinese and foreign standards.

VII. Steady expand opening up of standardization to the outside world

Steadily improve the standard opening level to the world

- The TC members were openly solicited **from the public**, and **736** new members from foreign-invested enterprises has joined last year.
- **Deepen** practical cooperation with European standard organizations.
- Shenzhen city promotes the construction of international industrial and standard associations such as ultra-high-definition video, wireless LAN applications and SparkLink Alliance.

Pragmatically promote connectivity of standards and jointly build the "Belt and Road Initiative."

- Co-organize the Qingdao Forum on International Standardization and the China-ASEAN Standardization Cooperation Forum **with Shandong province and Guangxi province**. Holding international standardization activities such as the Hongqiao International Economic Forum Standards Sub-forum with the Ministry of Commerce;
- Signed a cooperation agreement **with ISO** for training activities at the International Standardization Training Base (Qingdao).
- **4** standardization cooperations, including the cooperation agreement between the Ministry of Water Resources, SAC, and the United Nations Industrial Development Organization, were included in the achievements of the Third International Cooperation Summit Forum of **the Belt and Road Initiative**.

Strengthen support for trade facilitation standards.

- **632** advanced and applicable international standards were adopted, with an overall conversion rate of over **80%**.
- An extensive campaign was carried out to improve benchmarking and compliance, with more than **50,000** companies from **30** provinces and cities participating and 110,000 benchmarking results were announced.
- Published foreign language versions of **398** national standards;
- The **China-ASEAN** Automobile Standards Dialogue is incorporated into the cooperation mechanism of the China-ASEAN Free Trade Agreement.

VIII. The continuous deepening reform and innovation of standardization

The governance level of standard publication and management has been effectively improved

Explore innovations in the national standards management system and mechanism, improve the system for association standards to be adopted into national voluntary standard. Revise and issue administrative measures for sector standards to support the unified integration of **six** industry standards (including aerospace, aviation, shipbuilding, electronics, weapons, and nuclear) into national defense sector standards. Further clarify the scope of sector standards of emergency, mining, and coal. The Equipment Development Department of the Military Commission of the Central Committee of the CPC has promoted the construction of relevant laws and regulations, to improve general military and civilian standardization to the next level. **More than 600** supervision and random inspection for sector standards and regional standards.

The vitality of the market in formulating independent standards is further released.

Promoting measures for enterprise standardization have been published. Management measures for cultivating standard innovative enterprises has been issued and printed. Vigorously implemented the "front-runner" system for enterprise standards, and **1,399** enterprise standards from **947** companies in critical areas such as strategic pro-development industries and consumer goods have become "front-runners." Continue to

promote benchmarking actions. About **7300** companies have released **13,000** benchmarking standards, covering **1,700** product and service categories such as semiconductor wafers, motors, and auto parts. Cooperate with the All-China Federation of Industry and Commerce to launch activities like Private Economic Standards Innovation Week. Regions like Beijing, Shanghai, Jiangsu province and other places have launched pilot projects to evaluate the development capabilities of association standard organizations.

The coordinated development of regional standardization has achieved outstanding results.

Organize and release **36** coordinated regional standards for three provinces and one city in the Yangtze River Delta. Guangdong province, Hong Kong, and Macao jointly released **161** "the Greater Bay Area standards" for different sectors such as food, traditional Chinese medicine, transportation, and elderly care etc. Fujian province has established **38** standardization pilot projects for shared cross-strait standards. Beijing, Tianjin, Hebei province, Shanxi province, and Inner Mongolia have founded a "3+2" North China regional strategic cooperation mechanism. The national standardization innovation and development pilot projects in **6** provinces and cities are accelerating including Shanghai, Zhejiang province and Anhui province.

Effective implementation of standards continues to increase.

Guidelines for statistical analysis of the implementation of national mandatory standards have been released. An information platform for statistical analysis of implementation has been established. **13** relevant departments of the State Council carry out statistical analysis of the implementation of critical national mandatory standards. The pageview of the National Platform of Full Standard Text reached more than **30 million times** and download reached more than **1.3 million times** yearly. An in-depth survey of national standard implementation data was carried out for the first time, and feedback statistics show that the effective implementation rate of national standards reached **93.7%**, and the overall implementation was exemplary.

IX. A more solid foundation for standardized development

The building of standardization support capacity continues to strengthen.

Guidelines on strengthening the TC work has been issued. Cooperate with Guangxi to build the ASEAN National Standardization Exchange and Cooperation Center. Accelerate the construction of pilot demonstration projects in the circular economy, agriculture, new technologies, service industries, and social management, and **310** have been established. Focusing on essential pillar industries and new technology fields such as green ecological food, new materials, and energy etc. **225** national standard samples have been researched and duplicated. Initiate mechanism research and system construction for digital standards while researching and developing **6** digitalized general national standards. The Chinese Academy of Engineering has conducted theoretical and practical research on standardization, focusing on multiple topics including strengthening association standards, energy security, environmental and social governance (ESG), and standards-based institutional opening.

Talent training of standardization is vigorously promoted.

A specialized action plan for standardized talent training was issued and printed to fully deploy the target of talent cultivating. An implementation plan to support the training of international standardization talents has been published, and books on the theoretical basis and practical operation of standardization have been edited and published. **37** training sessions have been conducted for international standardization talents, with **4,398** people trained. Top universities like Tsinghua University and Zhejiang University have strengthened the training of high-end professional talents in Standardization, and **13** ordinary colleges and universities and higher vocational colleges have promoted the establishment of standardization engineering and standardization technology majors. Shenzhen builds the first national professional standardization technical committee training base to explore a new "**scenario-based, case-based, and experiential**" standardization talent training model. Shanghai and Zhejiang province actively inenterprise standardization positions into talent policies and provide funding and rewards, setting an example for other regions to strengthen the construction of talent teams of standardization.

The influence of standardization continues to expand.

The Outline implementation has been supported in Shandong province, Jiangxi province, and other regions. **10** places, including Shaanxi, Liaoning, and Henan provinces, have in-depth exchanges of experience in implementing the Outline. Close interactions between national quality infrastructure technology institutions have been organized with Sichuan enterprises and reached **68** cooperation projects. CCTV, People's Daily, and other media reported relevant news for **45** times. More than 500 essential standards were publicized and implemented throughout the year. The first China Standardization Conference was successfully held, and various local departments organized the 2023 World Standards Day activities. The standardization publicity work has achieved remarkable results.

In the past year:

➤ Great efforts have been made to promote the construction of new type of standard systems.

2,456 national standards are newly developed, 3,900 registered sector standards, **9,800** regional standards, **23,000** new association standards, and **543,000** self-declared enterprise standards.

➤ Great efforts have been made to promote the in-depth development of nationwide standardization

The standard system for the whole industrial chain of agricultural sector has been continuously improved, with **99** new national standards. More than **200** critical standards have been quickly deployed in the information technology sector. In the equipment and material sector, more than **60** standards of materials, components and parts, and process have been issued promptly, focusing on the safety and stability of the industrial chain. More than **150** national standards for consumer goods are published. The Standardization of the service sector has penetrated all aspects of production and daily life, with more than 160 new national standards. The standardization work of social undertakings has been further expanded, and more than **120** new national standards have been formulated.

➤ Great efforts have been made to promote standard upgrading.

The standards for clothing, home appliances, and furniture, knowingly as the "three traditional items in China, are updated and revised. The standard systems for new energy vehicles, batteries, and photovoltaic products, knowingly as the "three new items", continue to be improved. The standardized layout of cutting-edge fields such as quantum computing, artificial intelligence, and biotechnology is initially formed. The consistency of standards for main consumer goods with international standards reaches 96%.

➤ Great efforts have been made to promote the internationalization of standards.

274 new international standard proposals has been submitted. Lead the formulation of **214** international standards. **1,311** registered experts have been to ISO and IEC. Newly becoming **9** chairman positions and **7** secretariat positions in international standard technical agencies of an international standards organization.

➤ Great efforts have been made to lay a solid foundation for standardization development.

8 national technical standards innovation bases and **38** nationwide standard verification points were approved to be established. **310** new national standardization pilot demonstration projects have been built. Various regions have issued a total of **16** standardization regulations and management measures. **23** new national TCs have been established, and 12 TC members have been elected as new academicians of Chinese Academy of Sciences in 2023. The total number of academicians on the committee has reached 185.

Introduction of SESEC Project



The Seconded European Standardization Expert in China (SESEC) is a visibility project co-financed by the European Commission (EC), the European Free Trade Association (EFTA) secretariat and the three European Standardization Organizations (CEN, CENELEC and ETSI). Since 2006, there has been four SESEC projects in China, SESEC I (2006-2009), SESEC II (2009- 2012), SESEC III (2014-2017), SESEC IV (2018- 2022) and SESEC V (2022-2025). Dr. Betty XU is nominated as the SESEC expert and will spend the next 36 months on promoting EU-China standardization information exchange and EU-China standardization cooperation.

The SESEC project supports the strategic objectives of the European Union, EFTA and the European Standardization Organizations (ESOs). The purpose of SESEC project is to:

- **Promote European and international standards in China;**

- **Improve contacts with different levels of the Chinese administration, industry and standardization bodies;**
- **Improve the visibility and understanding of the European Standardization System (ESS) in China;**
- **Gather regulatory and standardization intelligence.**

The following areas have been identified as sectoral project priorities by the SESEC project partners: Internet of Things (IoT) & Machine-to-Machine(M2M) communication, communication networks & services, cybersecurity & digital identity, Smart Cities (including transport, power grids & metering), electrical & electronic products, general product safety, medical devices, cosmetics, energy management & environmental protection (including eco-design & labeling, as well as environmental performance of buildings).