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Spotlight

An overview of Two Sessions in 2024 and representatives' insights into standards
2024年全国两会概览及两会中的“标准声音”

Special Report

Annual Report on Standardization Development of China published
《中国标准化发展年度报告（2023年）》发布

Dialogue

Dialogue on standards:

Work plan of overseas standards organizations in 2024
标准对话：国外标准化组织2024年工作规划

CSP
CHINA STANDARDIZATION PRESS

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has been implemented since August 15, 2023.

SAY NO TO OVERPACKAGING!

Designed by China Standardization Press

Communication helps us understand each other better

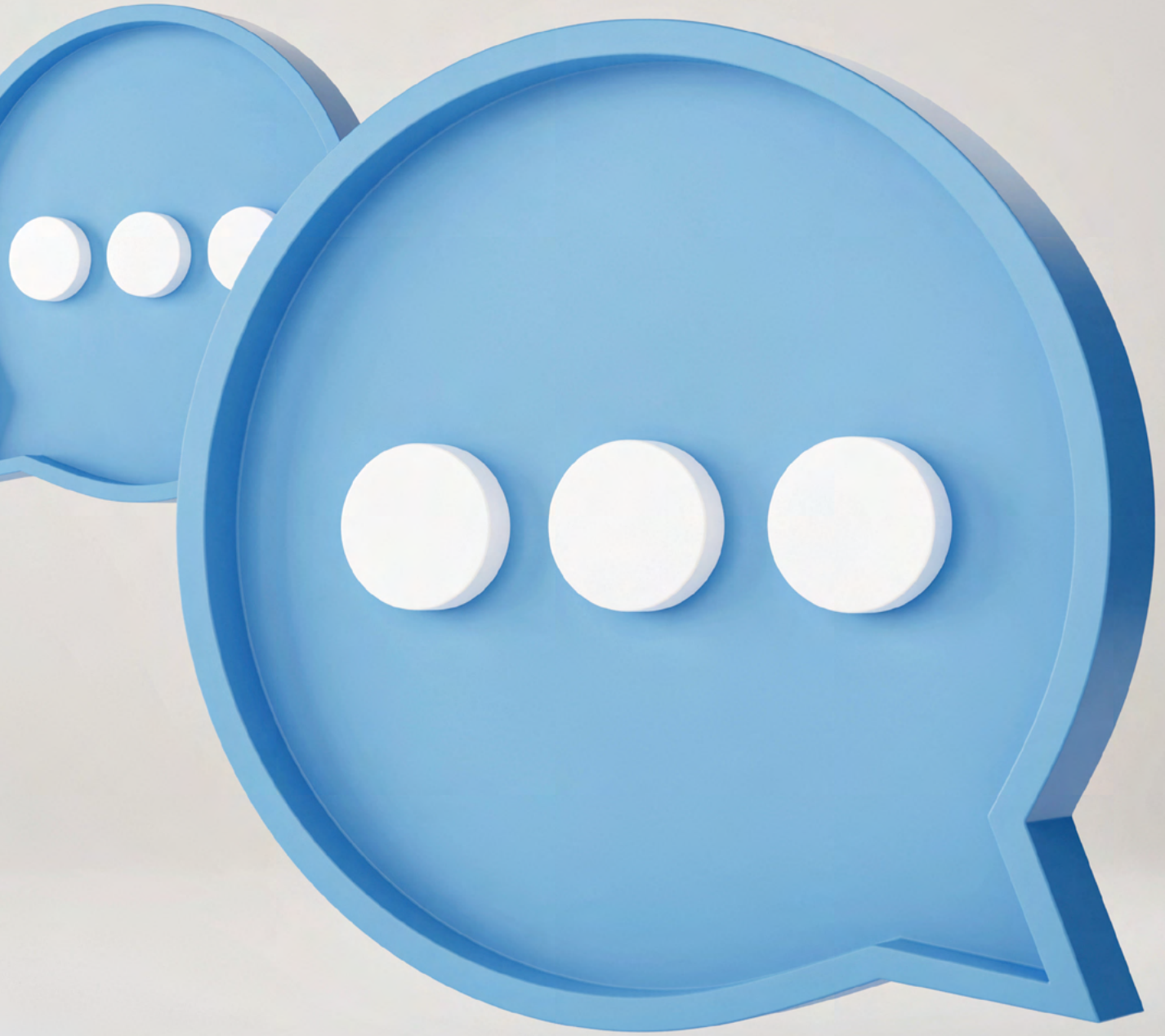
As a professional media in the standardization field, China Standardization Press (CSP) strives to serve as a bridge that connects the Chinese standardization community with foreign and international communities to enhance communication and understanding, and help find potential cooperation opportunities for mutual benefits.

To this end, CSP organized a dialogue on standards, gathering four representatives from IEEE SA, ASTM International, SESEC and ANSI. The veteran experts shared their views about the development trends in this area, introduced the work plan of their organizations in 2024 and the cooperation plan with China, and gave suggestions on China's standardization work. We believe that the communication will help us understand each other better, and build good relationships with our partners. You can find more details in the DIALOGUE column.

A big event that attracted worldwide attention was the annual Two Sessions held in March. The SPOTLIGHT column presents the overview of the meeting, including the brief information of the government work report, SAMR Minister Luo Wen's speech on strengthening the supporting and leading role of quality and standards, and the views of the representatives of the Two Sessions.

In the same month, Standardization Administration of China (SAC) published the *Annual Report on Standardization Development of China (2023)*, which gives a profile of China's standardization work last year including the analysis of key data, and how standards advance technologies and promote social and economic development. You can fine more details in the SPECIAL REPORT column.

Enjoy your reading!



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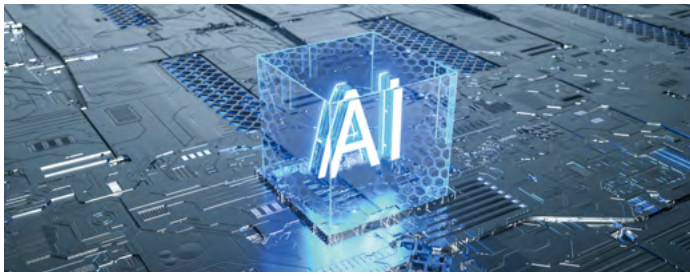


HEADLINE |

Standardizers gather at Forum on Standardization and Science and Technology Innovation Development

The Forum on Standardization and Science and Technology Innovation Development, one of the series activities of 2024 ZGC Forum, was successfully held in hybrid forms at the Zhongguancun International Innovation Center, Beijing on April 26.

With the new round of technological revolution and industrial transformation, standards have become an important element of technological competition and cooperation. The forum was addressed by Tian Shihong, Vice Minister of SAMR and Administrator of SAC, and Mu Peng, Vice Mayor of Beijing. Over 450 participants attended the forum on site, who are representatives from the local government, domestic mirror committees of international standards organizations, research institutes, industrial association, enterprises, universities, and relevant units.

Keynote speeches were given by Christoph Preusse, Chair of ISO/SMCC, Wu Hequan, former Vice President and Academician of the Chinese Academy of Engineering (CAE), James Matthews, President of IEEE Standards Association, Zhang Gang, former Counselor of the State Council, Member of the National Manufacturing Strategy Advisory Committee, and Deputy Director of the China Standardization Expert Committee, and Sergio Parolari, Vice Chair of 3GPP RAN2 and Standards Specialist at ZTE, which centered on how standards facilitate the transformation of cutting-edge technologies into industrial achievements.

A high-level dialogue discussed the role of standardization in building a win-win cooperation system for industrial and supply chains, which was moderated by Zhang Xiaogang, Chair of the Chinese Society for Metals and the former President of ISO. Insightful views were given by guests Tan Jiubin, Academician of CAE and Dean of the School of Instrumentation Science and Engineering of Harbin Institute of Technology, Alpesh Shah, Secretary General of IEEE-SA, Wang Decheng, Chair of the Board of China Academy of Machinery Science and Technology Group, Kevin Lippert, Senior Advisor International Standards with UL Standards & Engagement, and Wu Kai, Chief Scientist of CATL.

At the forum, Beijing Association for Standardization and IEEE signed the cooperation agreement to advocate participation in developing IEEE standards for electronic information, AI, health, intelligent connected vehicles and other industries. Also, the government of Haidian district in Beijing signed the framework agreement of strategic standardization cooperation with six national TCs on AI and related fields, in order to establish a standards system serving high-quality development and new quality productive forces.

Lecture on quality and standardization of private economy convened in Beijing

Themed "strengthening leading role of standards and supporting role of quality, accelerating development of new quality productive forces", the lecture on quality and standardization of private economy was held by the Standardization Working Committee of All-China Federation of Industry and Commerce on April 19 in Beijing.

The lecture aims to thoroughly implement Chinese President Xi Jinping's directions on standardization work, implement the *Outline of Boosting China's Quality Strength* and *National Standardization Development Outline* in all respects, and assist private enterprises in raising the awareness of quality and standardization, as well as realizing the quality- and efficiency-oriented development.

To accelerate the development of new quality productive forces, it is necessary to give full play to the role of private enterprises as the key subject, said An Lijia, Vice Chair of All-China Federation of Industry and Commerce. Private enterprises and chambers of commerce should grasp the opportunity of large-scale equipment renewals and trade-in of consumer goods, actively participated in the digital transformation and green low-carbon actions, and promote industrial transformation and upgrading to meet people's demands for a better life.

SAMR will work together with All-China Federation of Industry and Commerce to enhance standardization promotion and communication, optimize standard information service, support the participation of private enterprises in international standardization activities, and improve the working mechanisms of enterprise standards, said Fu Wenbiao, First-class Inspector of Standards Innovative Management Department of SAMR.

Zhang Xiaogang, Director of the Standardization Working Committee of the All-China Federation of Industry and Commerce and former ISO President, gave a keynote speech entitled "Standardization facilitates new quality productive forces to realize high-quality development".

Representatives from private enterprises and chambers of commerce such as CATL, Gree, Novel Optics, International Logistics Chamber of Shanghai Federation of Industry and Commerce, and Wuxi Sensing China IoT Chamber of Commerce, exchanged experiences at the event.

Plenary meeting of SAC/SWG 27 and Standardization Education Week held in Shenzhen

Directed by the Shenzhen Administration for Market Regulation and the government of Pingshan district, the plenary meeting of SAC/SWG 27 and Standardization Education Week was held by Shenzhen Technology University on April 22-26 in Shenzhen city, Guangdong province.

The event was held to respond to the requirement of "strengthening the construction of standardization talent teams" in the *National Standardization Development Outline*, fully implement the deployment of the *Special Action Plan for Standardization Talent Training (2023-2025)*, so as to promote the integrated education of professions and standardization, and continue to carry out the cultivation and training of standardization talents.

The Standardization Education Week included a series of activities, which was attended by Chen Gang, former Administrator of SAC and Chair of SAC/SWG 27, Zhang Xiaogang, former President of ISO, Zhang Gang, former Counselor of the State Council, and Song Mingshun, former President of China Jiliang University, all members of SAC/SWG 27, and representatives from SAMR, Shenzhen Administration for Market Regulation, technical institutions, relevant industries, and universities.

Zhang Xiaogang affirmed the efforts and achievements in standardization education at the plenary meeting of SAC/SWG 27. He suggested deepening education research and promotion, bolstering international communication and cooperation, optimizing working mechanism, increasing research on standardization in emerging fields, and reinforcing research projects and talent cultivation.

The working group signed agreements with a few pilot universities to promote the course on Standardization Basics. It will also cooperate with China Quality and Standards Publishing & Media Co., Ltd. to compile series books for standardization education courses. Other activities and training were kicked off at the event to enrich the means of standardization education.

SAC establishes a standardization research group on ESG

The secretariat of SAC issued the notification on the approval of setting up the Standardization Research Group on Environmental, Social, Governance (ESG) on April 18.

Liu Xuexin, President of the China ESG Research Institute at Capital University of Economics and Business, served as the convener, and Ding Qing from the China National Institute of Standardization served as the deputy convener. There are 17 members in SAC/RG 2, who are experts from scientific research institutions, universities, and enterprises.

SAC changes the previous work mode of "research first, standard later" by taking standards into account at the early stage. The research group is a new-type technical organization mode, enabling early layout, and carrying out overall planning from the top level.

The group is named SAC/RG 2, which focuses on the ESG field, follows the practice and activities of ESG in domestic industries to delineate standardization development paths, as well as policies, mechanisms and strategies on standardization at home and abroad. It will put efforts into developing key ESG standards, exchanging with relevant standardization technical organizations, tracking the updates of international standard organizations such as ISO, ISSB, and GRI, giving suggestions on standards proposals and international standards adoption, and developing deliverables.

Recently, international standards on ESG demonstrate an increasing trend of integration. There is an urgent need for China to initiate ESG standardization work to boost the high-quality development and green low-carbon transformation.

The China ESG Research Institute has developed T/CERDS 2-2022, *Guidance for enterprise ESG disclosure*, which is China's first association standard for ESG. The institute leads the research on ESG standards nationwide, and has established a "1+N+X" standards system, consisting of general standards, enterprise and sectoral standards for specific industries, and characteristic standards for climatic risks, biodiversity, SMEs, diversity, equality and inclusiveness.

HIGHLIGHTS |

Tian Shihong meets with the delegation of BSI

Tian Shihong, Vice Minister of State Administration for Market Regulation (SAMR) and Administrator of Standardization Administration of China (SAC), met with Scott Steedman, Director-General of Standards at BSI, the national standards body of the U.K., and his companion on April 12 in Beijing.

At the meeting, the two parties had in-depth exchanges of views on cooperation within ISO, governance of IEC, preparations for the 88th IEC General Meeting, and standardization cooperation in specific fields.

The standardization cooperation between China and the U.K. has a solid foundation, and the participation of the British Embassy in China in the meeting has fully demonstrated that the U.K. government values the standardization cooperation between the two countries, said Tian.

China and the U.K. will continue to strengthen communication within the ISO and IEC frameworks, and deepen standardization cooperation in fields including digital creative design, hydrogen energy, as well as the capture, utilization, and storage of carbon. Joint efforts will be put into the meeting of China-U.K. Standardization Cooperation Committee in 2024.

China and Sri Lanka sign a MoU on standardization

Witnessed by Chinese Premier Li Qiang and Sri Lanka Prime Minister Dinesh Gunawardena, Luo Wen, Minister of SAMR, and Anura Dissanayake, Secretary to the Prime Minster of Sri Lanka, signed a MoU on the standardization area on March 26.

According to the MoU, the two countries will strengthen the exchanges of standards information, and carry out the cooperation on improving standardization capability building.

WDTA releases two standards for LLM security

The 27th Session of United Nations Commission on Science and Technology for Development (CSTD) was held on April 15-19. The side event "Shaping the Future of AI" on April 16 was hosted by the World Digital Technology Academy (WDTA), an NGO that promotes digital technologies and global cooperation, where breakthrough results including two standards were released.

The two standards for the security of large language models (LLMs), "Generative AI Application Security Testing and Validation Standard" and "Large Language Model Security Testing Method", were the first of their kind published by WDTA, marking the new benchmark for LLM security evaluation and testing around the globe.

Multiple experts and scholars from OpenAI, Ant Group, iFLYTEK, Google, Microsoft, NVIDIA, Baidu, Tencent and other enterprises have devoted to the development of the two standards. And Ant Group has contributed to the development of the standard for LLM security testing method with leading efforts.

The testing method standard provides a comprehensive and rigorous structural scheme with high operability. It delineates the security risk classification and methods of classification, grading and testing of attacks in LLMs. Also, it puts forward the criterion distinguishing attacks of four different intensities, together with strict assessment indicators and testing procedures, to deal with the inherent complexity of LLMs and fully test their ability to defend against hostile attacks. Thus, developers and organizations can identify and remedy potential vulnerabilities, and improve the security and reliability of LLM-based AI systems.

Big tech companies should play a key role in the secure and responsible development of AI, promote best practices by their resources, expertise, and influence, and establish an ecosystem prioritizing security, privacy, and morality, said Wang Weiqiang, General Manager of Machine Intelligence Department at Ant Group.

HIGHLIGHTS |

IEC Promotion Center (Nanjing) signs an agreement with State Grid Fujian Electric Power

The IEC Promotion Center (Nanjing) signed a development cooperation agreement with State Grid Fujian Electric Power Co., Ltd. on April 23 in Nanjing city, Jiangsu province.

The signing ceremony was witnessed by Shu Yinbiao, the 36th President of IEC, Academician of Chinese Academy of Engineering, and President of Chinese Society for Electrical Engineering, Ruan Qiantu, Chair of the Board and Party Secretary of State Grid Fujian Electric Power Co., Ltd., Shan Shewu, Chair of the Board and Party Secretary of NARI Group, as well as Fan Xiangqian and Yu Qing, Director and Deputy Director of Management Committee of Nanjing Chilin Technology Innovation Park.

The two parties will cooperate in aspects of promoting international standardization of advanced technologies, prompting international layout of energy and power technologies, and building a standardization talent team, in accordance with the agreement. Further efforts will be put into carbon accounting of new-type power system, intelligent power distribution networks, offshore wind power, other emerging and future-oriented industries. Together, the two parties will strive to establish a cradle of international standards innovation, support high-tech innovation with high standards, promote high-level opening up, and lead high-quality development.

In recent years, the State Grid Fujian Electric Power Co., Ltd. focuses on building a clean energy hub in southeast China, a high-energy distribution network platform, and a smart digital ecosystem for power grid in Fujian province. By strengthening cooperation with the IEC Promotion Center, it expects to effectively enhance its ability in international standardization, and continuously empower the technological innovation and cultivation of new quality productivity.

In the process towards carbon peak and neutrality, China should attach great importance to the construction of international mutual recognition rules for carbon emissions, carbon tariffs, and carbon accounting, said Shu Yinbiao. He encouraged the both sides to make vital technological innovation in fields such as new-type power system and digital transformation of energy, speed up the construction of mutual recognition system of international standards and certification, and promote China's participation in global energy and power sector.

ISO releases a standard on braking systems of railway vehicles

ISO 24221:2024, *Railway applications—Braking system—General requirements*, the first of its kind, was recently released. With the leading efforts of National Railway Administration of China, China has made new breakthrough in railway international standardization by the development of the international standard.

ISO 24221:2024 lays out the top-level criterion of braking systems of railway vehicles, and specifies the technical requirements of braking systems including design, general safety, braking control, anti-skid protection, wheel-rail adhesion, and rescue braking. Covering high-speed trains, locomotives, passenger trains, freight trains, and urban rail transit vehicles, it is applicable to the life cycle of braking systems for rolling stock including design, manufacturing, and usage.

The standard absorbs standards of Europe, Japan and other regions, and integrates internationally accepted control technologies and Chinese braking technologies, to provide technical support for improving the braking ability of rolling stock and guaranteeing the safety of transit, which fills the gap in the top-level system in this field.

Hosted by China with the involvement of many experts from locomotive research institutions and relevant companies, the development of ISO 24221:2024 gathered 53 experts from 12 countries, including Germany, France, the U.S., the U.K., Japan, and South Korea.

With the support of National Railway Administration and railway-related institutions, China has become one of the most active countries in ISO/TC 269, *Railway applications*, the sole ISO committee for rail transit. China has participated in the development of 35 current standards within ISO/TC 269, and contributed to 6 of them with leading efforts. The National Railway Administration will continue to take part in international standards development and revision of ISO, to share China's achievements and experiences in railway development.

Dialogue on standards

Work plan of overseas standards organizations in 2024

标准对话：国外标准化组织2024年工作规划

To bolster mutual understanding, better understand major tasks of overseas standards organizations and facilitate in-depth cooperation in standardization field, China Standardization Press organized a high-end dialogue on standards in March. Presided over by Ms. Yu Xinli, President of China Association for Standardization, Dr. Yuan Yu, Ms. Hu Yanan, Dr. Betty Xu and Mr. Xu Fang, as representatives of IEEE SA, ASTM International, SESEC and ANSI respectively, were invited to brief on the current development trend of standardization, the work plan and priorities of each organization in 2024, and their suggestions for China's standardization work.

Ms. Yu Xinli

President of China Association for Standardization

The CPC Central Committee and the State Council released the *National Standardization Development Outline* in October 2021, mapping out goals and the blueprint of China's standardization development in the next 15 years.

According to the Outline, there are four quantitative indicators to be fulfilled by 2025: the rate of standards research achievements obtained from generic key technologies and applied scientific and technological plans will be raised to over 50%; the average period of standards development will be reduced to no more than 18 months; the rate of adopting international standards will surpass 85%; over 50 national technical standards innovation bases will be established.

Therefore, the year of 2024 is crucial for implementing the Outline, and realizing the development goals by 2025. China is steadily promoting the standardization work in accordance with the Outline.

In a turbulent world, China always unswervingly upholds "promoting high-level opening up" as an important part of "speeding up fostering a new development pattern, and pursuing the high-quality development". Therefore, a dialogue on standards is organized by China Standardization Press to build a platform for international communication.

The topics of the event are as follows:

- Work plan and key tasks of the organization in 2024;
- Cooperation and communication plan with China;
- Suggestions on China's standardization work, especially association standards;
- Thoughts on trends of standardization development.

Dr. Yuan Yu
The first Chinese president in the history of the IEEE Standards Association

Around the globe, standardization trends share common themes. During the 23rd meeting of the Global Standards Collaboration (GSC) on April 26-27, 2023, attended by leaders from ISO, IEC, ITU, IEEE, ETSI, and many other SDOs, I observed that various SDOs share similar concerns. Drawing from my experiences at IEEE and MSF (Metaverse Standards Forum), where I serve as a board member and treasurer, I have identified the following trends:

Firstly, there is a shift from "market-driven standards" to "market-driving standards." In mature technical fields, integration to avoid redundancy is natural, giving rise to bottom-up standards that are market-driven. However, with emerging technologies such as autonomous driving, artificial intelligence, and metaverse, standards are found to be not just driven by the market but are actively driving it. To foster these fields and mitigate development challenges, standards should lead the way, particularly in areas like fundamental terms, definitions, grading, classification, ethics, and interoperability. A prime example is SAE J3016, which defines six levels of driving automation (from Level 0—no driving automation to Level 5—full driving automation) and is widely accepted across the autonomous driving industry. It serves as a benchmark, illustrating how standards can drive the market.

Secondly, the focus is shifting from standards to standard-related work, especially open source. The open sourcing of hardware, software, and data underpins key technological advancements in recent years. The ISO/IEC MPEG standards demonstrate a successful integration of standards and open source. SDOs are increasingly putting effort into standard-related work, including open-source code, datasets, prototypes, and pilots, which expands the scope of standards activities, facilitates the wide adoption of standards, and unleashes greater value of standards.

Thirdly, more attention is being paid to the pre- and post-activities of standards development. This includes study groups for standards proposals, workshops on standardization needs prior to standards development, and activities such as promotion, testing, and certification following standards development. For example, the MSF leads coordinated discussions on sectors that may have standardization needs in the form of an industrial alliance.

Fourthly, there is an expansion from technical to non-technical standards. Traditionally, standards have been technically oriented and developed by technical committees. However, recent demands have necessitated the development of non-technical standards in fields such as the ethics of artificial intelligence and children's rights protection in the digital era. These non-technical standards focus on the social impacts of technology and ethical guidelines for the scientific and technological industry.

Fifthly, there is vigorous participation in addressing major issues. Beyond bottom-up demands, significant social, environmental, and global challenges are increasingly becoming spontaneous concerns for SDOs, which seek to provide solutions through standardization. The most pertinent trends are "go digital" and "go green". The core driving forces at the frontier of digitalization are artificial intelligence, metaverse, and decentralization (Web3), which have drawn the attention of SDOs. SDOs are also keen on making positive strides in sustainable development and climate change through standardization.

Lastly, the digitalization of standards into machine-readable formats is pivotal. As AI applications like ChatGPT become capable of interacting in natural language, the notion that traditional standards should be machine-readable without extra effort has gained traction. However, I believe that considering machine readability during standards development is crucial for ensuring the reliability of tests, certifications, and verifications of standards.

Yu Xinli's comments:

Dr. Yuan Yu shares his incisive opinions about the six development trends of standardization work. In the past, standards were developed only when there were demands from bottom to top. Now preparations are made in advance by holding workshops, and promotion and other work are carried out after the publication of standards. The working scope of standards development organizations is expanding, with consideration of social factors such as ethics and morality during the standards development process. Standards organizations, especially ISO, take the lead in supporting the SDGs through standards, each goal of which is supported by corresponding standards. Furthermore, standards need to advance with the new realities of digital transformation.

Ms. Hu Yanan

Operation Manager of ASTM International's China Office

ASTM International is a globally recognized leader in the development and delivery of voluntary consensus standards. Today, over 12,500 ASTM standards are used around the world to improve product quality, enhance public health and safety, strengthen market access and trade, and build consumer confidence.

ASTM's members are over 30,000 top technical experts and business professionals from 140 countries. Working in an open and transparent process and using ASTM's advanced IT tools, the members create the test methods, specifications, classifications, guides and practices that support industries and governments worldwide.

The *National Standardization Development Outline* requires that the rate of adopting international standards should surpass 85%. Back in 2004, ASTM signed a MoU with SAC, which indicated that China can adopt ASTM standards without causing copyright issues.

Work plan and key tasks of ASTM International in 2024

The core business of ASTM is standards development and revision without any funding. The operation of ASTM is supported by the income from standards sales, which nurtures the whole process of standards development.

ASTM consists of over 100 technical committees and more than 2,000 subcommittees, respectively holding free-of-charge on-site meetings twice a year. Also, the standards development and revision process is conducted through the official website of ASTM, where members can vote and view the reports on results generated. Therefore, ASTM connects global members by a powerful network, which is one of the reasons why ASTM standards can upgrade or respond to demands quickly.

ASTM standards cover over 100 industries, which are all our focuses. **Extra efforts will be made to additive manufacturing (AM).** An office was established in Singapore in 2023, supporting the strategic research and development of AM. The office has cooperated with Shanghai Additive Manufacturing Association, and held training in AM standards with universities such as the Shanghai Jiao Tong University, to help enterprises and industries better grasp the application of standards, make products in line with international standards, and promote their products to enter overseas markets. There may be more training activities in the AM field in May.

The second focus is promoting the application of copyrighted ASTM standards. Our standards database can authorize the accessibility of all personnel in enterprises, universities and research institutions based on their IP addresses, which cuts down costs and facilitates better utilization of ASTM standards.

ASTM has digitalized approximately 12,000 current standards and 70,000 previous versions of standards, evolving from paper copies and PDF files to the online form. The standards database enables the automatic comparison of any two versions of a given standard, serving as a great timesaver for laboratory staff and R&D teams. With the gradual increase of awareness of standards copyright, Chinese enterprises are attaching growing attention to using copyrighted standards and have consulted us about their purchase.

Cooperation and communication plan with China

We hope that Chinese experts can participate in the standardization activities of ASTM. Anyone interested can become a member of ASTM, without any requirement or qualification restriction. Once you become a member, you can learn about the standards development and revision in ASTM, and vote on the technical contents of standards. Except from advancing utilization of copyrighted standards, Chinese experts are encouraged to express their opinions, which will be introduced into technical contents of standards to drive products and technologies to go global.

ASTM has always been open for cooperation and communication. We welcome Chinese experts from all walks of life to share their thoughts through participation in workshops or forums, and we will bring their feedback to the headquarter.

Suggestions on China's standardization work

Participation in standards development and revision should be a prior task. By engaging in standardization development and revision on the platform of ASTM, you can meet potential clients, promote products, or sell products in this process.

In addition, ASTM holds training projects, capacity verification projects and seminars. ASTM also has five journals covering intelligent manufacturing, materials and characterization, detection methods, and other hot topics. Our journals publish papers for free, and it is favourable for Chinese experts to submit papers. We hope to help Chinese enterprises acquire actual benefits and facilitate their products and technologies to go global.

As for association standards, here are my thoughts. Prominent achievements have been made since China implemented the standardization reform. However, challenges still exist, especially in the field of association standards. In the U.S., voluntary standards developed by ASTM, IEEE and other organizations only become mandatory when they are adopted by laws and regulations. Whereas in China, national standards are similar to legislation, and association standards are voluntary. Given differences in history and background of standardization, China should utilize multiple methods to explore the appropriate path based on the national conditions. Also, international standards are the lowest thresholds. Association standards can fully exert their value to serve enterprises and industries through ISO, ASTM and other platforms.

Yu Xinli's comments:

The most impressive part of Ms. Hu's introduction is that ASTM nurtures standards development by standards sales, which is worth learning and thinking about. The principles to justify a good standard are good text, good application, and good implementation effect. ASTM's standards digitalization efforts have covered all its standards. I hope that more Chinese experts will participate in ASTM's standardization activities, and more Chinese enterprises will purchase and use digital resources of ASTM standards.

Dr. Betty Xu

Director of the Seconded European Standardization Expert in China

The Seconded European Standardization Expert in China (SESEC) project is a visibility project cofinanced by the European Commission (EC), the European Free Trade Association (EFTA), the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC), and the European Telecommunications Standards Institute (ETSI).

Commencing its operations in 2006, the SESEC project undergoes periodic reviews approximately every three years, delineating distinct phases. The project is presently situated within its fifth phase.

The overarching goal of the SESEC project is to enhance the visibility of European standardization endeavors, foster communication and collaboration between Chinese and European standardization bodies and facilitate mutual comprehension of regulatory frameworks and standards between Chinese and European enterprises. By doing so, the project endeavors to facilitate market access for European stakeholders. Concurrently, SESEC is dedicated to advancing the implementation of international standards in China, thus promoting global standard harmonization. Its ultimate goal is to diminish technical trade barriers between the EU/EFTA and China, thereby bolstering international trade and catalyzing industrial development in China and the EU.

Specific objectives of the SESEC project encompass:

• Fostering understanding and mutual trust among standards development bodies and pertinent organizations in both China and Europe;

• Promoting the visibility and impact of European and international standards within China;

• Strengthening dialogue and cooperation on standards between China and Europe, with particular emphasis on the framework agreement between the three European Standardization Organizations and the Standardization Administration of China (SAC).

Work plan and key tasks in 2024

The European Commission

In February 2024, the European Commission published the *2024 Annual Union Work Programme for European Standardisation*, which identifies the strategic policy priorities for European standardisation including 72 actions. It aims to support EU policies and legislation with the objective of contributing to a green, digital and resilient single market as well as the EU's international objectives.

In 2019, the EU formulated the policies of green transition and digital transition. Centered on these policies, the European Commission identified 8 priorities amongst the 72 actions in the standardization area, namely the high performance computing and European quantum communication infrastructure, critical raw materials, trusted Data, digital identity, air-to-air conditioning and heat pumps, cybersecurity, hydrogen technologies and components, and electrical vehicles charging infrastructure. The 2024 annual Union work programme emphasizes the implementation of the European Standardization Strategy, and standards development in strategic areas such as critical raw materials, quantum technology and artificial intelligence. These standards will play a key role in improving European industrial competitiveness, fostering economy and ensuring security.

CEN and CENELEC

Based on the European policies and laws, the goals of green and digital transitions, and the 2024 annual Union work programme, CEN and CENELEC also formulated their 2024 work programme.

CEN and CENELEC's work priorities include hydrogen, artificial intelligence, critical raw materials, data interoperability, and education on standardization.

CEN and CENELEC will also continue to implement the CEN and CENELEC Strategy 2030, whose priorities focus on digital transformation, business model innovation and improving the application rate and visibility of European standards. On March 5, 2024, the European Court of Justice delivered its judgment in Case C-588/21 P concerning public access to Harmonized Standards under Regulation 1049/2001. This will have a huge impact on European standardization organizations and on the business models of standardization bodies in the Member States.

For 2024 specifically, the following three Strategic Projects have been approved for implementation: 1. Timely Citation of Harmonized Standards; 2. Enabling Digital Transformation Strategy; 3. High-Level Forum (HLF) Rapid Response Mechanism. At the same time, they take European wind energy, hydrogen energy, raw materials strategy and legislative proposals as key areas of participation in the formulation of EU policies and regulations. In terms of international cooperation, CEN and CENELEC make it clear that they will continue to cooperate with ISO, IEC and other regions and countries such as Japan, China, the Gulf states, Africa and India. CEN and CENELEC will host a number of events in 2024, such as an alternative fuel infrastructure workshop, harmonized standards training, a cybersecurity standardization conference and the sixth Standards + Innovation Awards. CEN and CENELEC are well aligned with the standardization objectives of

the European Commission as most of the eight priorities for standardization set by the European Commission are reflected in the work of CEN and CENELEC.

ETSI

ETSI used to focus on GSM standardization. However, with the ongoing digital transition, and the evolution of communication standards and digital technologies, ETSI is increasingly involved in the development of information technology standards. In 2023, ETSI published the Work Programme 2023-2024, which covers the work plan of more than 100 technical bodies. The focus is placed on the areas such as emergency communications, driverless cars, smart building, and cybersecurity of connected devices. Now digital connectivity is everywhere and digital transition is the top priority of the standardization.

New technologies such as AI, automated driving and metaverse are closely related to and rely on the communications standardization work. In this respect, enabling groups in ETSI to develop software in support of standardization—including open-source software development—is a big step forward to enhance the quality and timeliness of the deliverables.

The work programmes of the EC, CEN, CENELEC and ETSI are complete, all of which mentioned the cooperation with China. SESEC also made our own work plan for this year. The priorities include: 1. help to build the long-term, stable trust and cooperation relationship between the European and Chinese standardization communities; 2. under the framework of the cooperation agreement between SAC and CEN/CENELEC, facilitate the establishment of cooperation in areas of mutual interest; 3. enhance the governmental communications and dialogue based on the regulatory dialogue and standardization working group between the SAC and the European Commission.

Cooperation and communication plan with China

Last year, bilateral talks between SAC and the EC were held in Brussels, Belgium. This year's bilateral talks will be convened in Beijing, China. We will build on this platform to establish a bridge for good cooperation between China and Europe, promoting high-level visits between the two sides. Additionally, certain meetings may be held offline, as part of the specific work in high-level forums.

We also plan to hold an EU-China digital standardization forum to expand mutual understanding and communication between the two sides. Discussions are underway between the SESEC project, the European Chamber of Commerce, and the China Academy of Information and Communications Technology (CAICT) to hold 5-6 EU-China digital standardization forums this year, covering topics such as artificial intelligence, cybersecurity, and future networks. We have made relatively good plans for this.

Furthermore, based on the cooperation agreement renewed in 2021, ETSI and China Communications Standards Association (CCSA) will conduct standardization exchanges from time to time. Both ETSI and CCSA are formal members of 3GPP, and the 3GPP annual meeting will be held in June in Shanghai, China, serving as an important platform for EU-China standardization

cooperation.

Under the cooperation framework between CEN/CENELEC and SAC, good cooperation has been achieved in working groups such as the EU-China elevator standardization group. Whereas, European standardization organizations all suggest that the best platform for Sino-European standardization cooperation is within ISO and IEC, as standards developed by ISO and IEC have global applicability.

Suggestions on China's standardization work

Firstly, the *National Standardization Development Outline* sets a goal that the adoption rate of international standards should exceed 85%. European standardization bodies and the business community welcome this measure, as it will greatly promote standardization work. At the same time, we hope that the Chinese industry can apply more international standards. Most European companies have fully applied ISO and IEC standards and hope to enter the Chinese market by using international standards, which is a very urgent and practical desire for European companies.

Secondly, European companies are allowed to participate in the national standards development, but we have noticed that the work procedures of some technical committees need to be improved. Take the voting process for example. In some technical committees, the voting may not be fully conducted, or the opinions of some companies may not be received in a timely manner or not be fully discussed. We hope that SAC can provide more guidance and assistance to technical committees in the standards development process to help them improve voting procedures or achieve the consensus-building processes. Some foreign companies were not invited to participate in meetings held by standards development groups, which is also an issue.

Thirdly, regarding the foreign language versions of national standards. Many foreign companies have to repeatedly translate Chinese national standards, which is a waste of social resources. If SAC could organize more translations and publish the English versions of more standards, it would be greatly appreciated.

Yu Xinli's comments:

Through Dr. Betty Xu's introduction, we have gained insights into the focus of standardization work of various European organizations this year, as well as their cooperation plans with China. I hope that the communication between Sino-European standardization institutions can be strengthened to carry out more practical cooperation. I also hope that the SESEC project can continue to serve as a bridge, helping both China and Europe to better understand each other's standardization dynamics.

Mr. Xu Fang

Chief Representative of ANSI in China

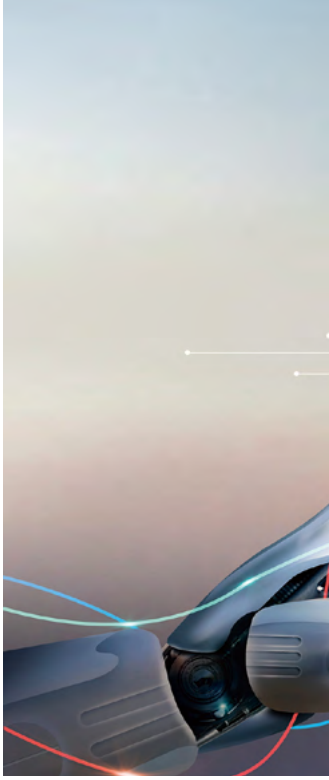
Work plan and key tasks of ANSI in 2024

Bringing diverse stakeholders together is at the heart of everything ANSI does, and it's fundamental to a flexible, open, and effective standardization system—particularly in such complicated, transformative times. In 2024 ANSI will continue to place a high priority on this, and through interactive discussions, participants from diverse sectors and forums can explore how the standards community can best navigate a changing landscape, and what can be done collaboratively to assure the global standards infrastructure is protected.

In 2022 the ANSI Board of Directors launched an effort to identify opportunities and challenges presented by the evolving standards landscape. Following a year of extensive work by Board Focus Groups to assess needs and propose actions, in 2023 the Focus Group leads aligned on an overarching, comprehensive recommendation: ANSI should launch an institute-wide campaign to educate and raise awareness about the urgent challenges to the standardization system due to the increasing politicization of standards and inform stakeholders about how to partner with ANSI and the standards community to address concerns.

A set of recommended actions were identified that are intended to:

- Educate and raise awareness on how to effectively leverage standards;
- Work collaboratively with policy makers to assure that their solutions to address shortcomings are directed to specific organizations where there are genuine issues that have not been or cannot be resolved;
- Assure that standards organizations' safeguards (i.e., procedures, policies, controls) are continually reviewed and pressure-tested so they remain fit for purpose.



ANSI has initiated these efforts, and will continue this year, working with our members and partners to assure the integrity and efficacy of our system and drive the collaboration and resilience needed to thrive in a changing standards landscape. Stay tuned to ANSI news for updates on progress.

Cooperation and communication plan with China

Robust and effective U.S. leadership and engagement in international standards activities is, as always, a priority for ANSI. In addition to active representation on behalf of U.S. experts in ISO and IEC, ANSI has built long-standing relationships with standards bodies and governmental entities around the globe and continually works to strengthen those connections, engage with new trading partners, and increase opportunities for U.S. industry and government. We are proud that one of our longest standing cooperative programs is with China.

ANSI continues to engage with Chinese government and other stakeholders. We currently hold MOU agreements with key agencies such as SAC, CNCA, CNIS and CATARC, and plan to continue meeting and collaborating with each of these organizations. In addition, we have resumed our annual ANSI's appreciation dinner and delegation/meetings with our Chinese government counterparts. Furthermore, we continue to promote cooperation via our ANSI in China Newsletter quarterly release in both English and Chinese.

Expectations for standardization cooperation with China

Active participation in international standards-setting helps inform a country's ability to adopt and reference international standards, and is therefore encouraged as best practice to support the needs of the global market. ANSI has strongly supported this message with all of its counterpart organizations around the world, including with China, and we support cooperative activities in international standards setting, as a path to avoid unique national standards. In addition, leveraging ANSI's MoU relationships with Chinese organizations, ANSI provides access to a platform for the public and private sector stakeholders from the U.S. and China to improve understanding, effectively communicate, and obtain valuable information on critical issues.

Suggestions on China's standardization work

ANSI and its members have been closely monitoring the recent developments in China, such as the publication of the *National Standardization Development Outline* in 2021, its *Action Plan*, and the subsequent updates to key underpinning policies and regulations. We have submitted official comments to many of the guidance documents as they have been released, particularly those concerning national standards, industry standards, association standards, and enterprise standards.

We take note of the most recent developments in association standards, including in particular the 2023 Provisional Regulation on the Adoption of Association Standards for Recommended National Standards. This process has been of high interest to ANSI members and stakeholders, and ANSI looks forward to engaging with the relevant Chinese organizations to hear their opinions on the progress of the implementation, and any feedback from users of the standards. In general, in the development of guidance for association standards, ANSI has encouraged China to look to existing examples such as the ANSI Essential Requirements for accreditation, for information on how to ensure that the processes and procedures used by standard developing organizations meet the WTO principles and other best practices.

Yu Xinli's comments:

Mr. Xu gives a comprehensive introduction to the work plan and key tasks of ANSI in 2024, and its cooperation plan with China. It will help Chinese standardizers and stakeholders to have a better understanding of the U.S. standards system and ANSI, and probably will help find new cooperation opportunities. Thanks a lot for the suggestions about the development of association standards as well.

An overview of the Two Sessions 2024

2024年全国两会概览

By Jin Jili
文/靳吉丽

The annual Two Sessions, which refer to the meetings of the National People's Congress (NPC), the national legislature, and the Chinese People's Political Consultative Conference (CPPCC), the top political advisory body, were convened in Beijing from March 4 to 11, 2024. They are of great significance in the country's political agenda.

The government work report, delivered by Chinese Premier Li Qiang, was adopted on March 11 at the second session of the 14th NPC. The report gives a review of the work in 2023, makes overall requirements and policy orientation for economic and social development in 2024, and particularly sets the major tasks for 2024.

The report proposes the main projected targets for development in 2024 as follows: GDP growth of around 5 percent; over 12 million new urban jobs; surveyed urban unemployment rate of around 5.5 percent; CPI increase of around 3 percent; growth in personal income in step with economic growth; a basic equilibrium in the balance of payments; grain output of over 650 million metric tons; a drop of around 2.5 percent in energy consumption per unit of GDP; continued improvements in the environment.

In the report, there are 8 points directly related to standardization work in industrial and supply chains, high-quality development, united national market, foreign-funded enterprises and other fields. For instance, "stronger guidance and support on quality and standards to create more Chinese brands with global reach" highlights the importance of quality and standards in the development of various industries including manufacturing.

"An initiative to upgrade standards and speed up the establishment of a system of standards to facilitate high-quality development" and "guidance on standards for the development of a unified national market" emphasize the vital role of standards in ensuring the steady improvement of product and service quality and meeting the people's needs for a better life.

When it comes to foreign-funded enterprises, a better standardization landscape with extensive participation is expected to take shape as China will "ensure national treatment for foreign-funded enterprises and see that they can participate in government procurement, bidding, and standard-setting processes in accordance with the law and on an equal footing".

Strengthening the supporting and leading role of quality and standards

加强质量支撑和标准引领

Luo Wen, Minister of State Administration for Market Regulation (SAMR), explained the plans to strengthen the supporting and leading role of quality and standards and bolster the resilience and competitiveness of industrial and supply chains at the Ministers' Corridor after the second plenary meeting of the second session of the 14th NPC held on March 8, 2024.

Luo Wen
Minister of SAMR

Attaching great importance to quality and standards, the CPC Central Committee and the State Council have released the *Outline of Boosting China's Quality Strength and the National Standardization Development Outline*, which are programmatic documents for quality and standardization work in China.

With concerted efforts in 2023, the national manufacturing quality competitiveness index reached 85.21, 2,902 national standards were published, and the consistency degree of major consumer goods with international standards achieved 96%. This indicates that the national quality and standardization work have been brought to a new level. In 2024, we will earnestly implement the guiding principles of the Central Economic Work Conference and continue to put in place the two outlines.

There are three priorities in exerting the supporting role of quality.

First, selecting a batch of leading enterprises for boosting China's quality strength, and fully exerting the role of quality in facilitating enterprises to become bigger and stronger. We will select a batch of leading enterprises for quality development in information communication, new energy vehicles and other areas, organize on-site experience exchange activities to help more enterprises to learn, enhance overall quality management, and make technological breakthroughs, unswervingly following the development path of superior quality.

Second, launching a number of landmark projects on strengthening industrial and supply chains through quality, and fully exerting the role of quality in supporting the establishment of industrial circles and strong industrial chains. We will launch a number of landmark projects to reinforce industrial and supply chains through quality in key industries such as integrated circuits and quantum information, comprehensively apply quality tools including metrology, standards, inspection and testing, certification and accreditation, and put effort into the interactive quality improvement of industrial and supply chains.

Third, cultivating a series of counties, districts and towns with strength in quality, and fully exerting the role of quality in promoting the sustainable development of cities. We will explore and establish the comprehensive evaluation indicator system for the quality development level in counties, strongly support the policies and measures on quality improvement by leveraging local strengths, and cultivate a series of counties, districts and towns with strength in quality, vigorously creating new advantages of regional quality development.

There are also three priorities in exerting the leading role of standards.

First, exerting the leading role of standards in advancing the large-scale equipment renewal and trade-in of consumer goods. We will improve the standards on technologies, energy consumption and emission combined with the practice, strengthen the standards development in key and emerging technologies, and shut down outdated production facilities. Meanwhile, we will further improve the standards for commodities such as automobiles and household appliances to better meet the needs of people for a better life.

Second, exerting the securing role of standards in further opening up at a high level. It is widely known that standards are the foundation of global trade and industrial cooperation. According to statistics, more than 80% of international trade is relevant to standards. Therefore, we will steadily expand the institutional opening up of standards, and support foreign-funded enterprises' participation in standards development in accordance with the law and on an equal footing. We will also actively participate in international standardization activities, contributing more Chinese proposals and wisdom.

Third, exerting the fundamental role of standards in supporting stable industrial chains. We will focus on key industrial chains in industrial robots, large-scale application of BeiDou Navigation Satellite System, and other areas, implement a batch of landmark projects on stabilizing industrial chains through standards, expedite the development of technical standards in key links, further promote the transformation of independent R&D and technologies towards independent standards, and constantly improve the standards systems in China, so as to practically raise the resilience and competitiveness of industrial and supply chains in China.

Insights into standards in the Two Sessions

两会“标准声音”

During this year's Two Sessions, representatives and deputies discussed the issues of common concerns including carbon peak and neutrality, infrastructure, intelligent manufacturing, artificial intelligence (AI) technologies, agriculture, and people's well-being. Standards play an increasingly prominent role in the country's high-quality economic and social development. Let's find out their insights into standards.

On carbon peak and neutrality

Improving the standards system for carbon emission

Wen Shugang
Member of the CPPCC National Committee

Accurate measurement, sound standards and reliable certification are the foundation for achieving the goals of carbon peak and neutrality and the control of total carbon emissions and intensity, according to Wen Shugang, Member of the CPPCC National Committee and Chair of the Board of China Huaneng Group.

Wen advised to accelerate building the continuous monitoring system of carbon emission by making technological breakthroughs via industry-university-research cooperation, establishing the national platform for online monitoring and management of carbon emission, and gradually incorporating such monitoring in the national system for carbon emission statistics and accounting in carbon market.

He indicated that we should improve the standards system for carbon emission by focusing on standards development for carbon monitoring of coal-fired power and product carbon footprint accounting, establishing the center of carbon footprint data, and stepping up the development of relevant international standards.

He also advised to expedite the certification system building of product carbon footprint accounting by forming a dynamically updating mechanism of carbon emission at all levels, regulating the market access management of certification bodies, and establishing the mutual recognition mechanism of certification body qualifications with major trade partners.

Feng Xingya
Deputy to the NPC

Unified standards for high-power charging and battery swapping

Nowadays, electrification is an important path to carbon peak and neutrality in the automobile industry. However, the problems such as conflicting standards and low standardization level of batteries lead to higher R&D costs, difficulties in industrial chain coordination, waste of resources, and declining market competitiveness.

In this context, Feng Xingya, Deputy to the NPC and General Manager of GAC Group, proposed developing unified standards for high-power charging and battery swapping and exploring the establishment of a standards system on all-solid-state batteries.

Feng believed that electric vehicles, as mobile energy storage units, can realize distributed energy storage with large scale, low costs and rapid response, and provide effective solutions to the supply and demand balance of power system through the integration and interaction with the power grid. To accelerate that, he suggested improving technologies and standards system, establishing complete pricing and power trading mechanisms, and enhancing demonstration and application.

Li Donglin
Deputy to the NPC

Standards system for new energy storage in need of improvement

Over the past years, energy storage has played a crucial role in the booming development of renewable energy. Li Donglin, Deputy to the NPC and Chair of the Board of CRRC Zhuzhou Institute, found that the current standards system for new energy storage needs further improvement due to its weak harmonization and coordination, and lack of overall planning and requirements at the national level.

Therefore, he advised to rapidly improve the standards system, and facilitate the coordinated development of national, sectoral and local standards; establish the communication and coordination mechanism, and promote the standardization in the areas such as capacity construction of energy storage power stations, equipment spot check and certification requirements, grid interconnection and grid-related test and acceptance in different areas.

He indicated that we should accelerate the key standards development and revision, and improve the safety management system of energy storage on the user side, satisfying the application and development needs of new energy storage in new circumstances.

Improving national standards on solid-state batteries for energy storage

Zhu Jian
Deputy to the NPC

The technology of solid-state lead batteries for energy storage in China has been applied in overseas markets. Such batteries can be fully recycled and reused, which have promising industrial development prospects, according to Zhu Jian, Deputy to the NPC and Mayor of Hengyang in Hunan province.

Through investigation, Zhu found that there are incomplete standards in the solid-state battery industry, especially those for general technology, planning and design. Thus, promoting the development of national technical standards has become a common voice of industrial insiders.

He suggested that SAMR should guide leading enterprises to improve enterprise standards, and help enterprises expand both domestic and international markets; guide provinces such as Hunan to publish local standards as soon as possible, and push forward the large-scale application of solid-state lead batteries; work with the Ministry of Industry and Information Technology to publish related national standards soon.

Further improving standards system for green and low-carbon buildings

Liang Wei
Deputy to the NPC

Green and low-carbon transformation is a vital component of sustainable development. With a focus on green and low-carbon buildings, Liang Wei, Deputy to the NPC, offered a proposal on further improving its standards system.

Liang advised to improve the top-level design of green and low-carbon buildings by revising the *Construction Law of China*, highlighting the green and low-carbon concepts, and specifying the legislation on greenness. Besides, he pointed out to strengthen the development and application of technologies and standards for green and low-carbon buildings by revising the current construction design standards, and integrating the basic requirements into the standards system and regulations.

Regulation models and measures need innovation as well. He suggested establishing the green review mechanisms at all stages, and the coherent and closed-loop management mechanism with the existing project quality supervision system as the basis, so as to ensure buildings consistent with green standards in actual operation.

Li Shufu
Member of the CPPCC National Committee

Facilitating standards and demonstration projects on wheelchair accessible vehicles

As a member of the CPPCC National Committee and Chair of the Board of Geely Holding Group, Li Shufu suggested establishing and promoting the plan of standards on wheelchair accessible vehicles across the country.

To be specific, competent departments should enhance policy guidance, develop threshold standards, mobilize all walks of life to participate actively, and encourage the integration of business forms, business model innovation and service quality improvement. This will facilitate the openness and coordination of interfaces and user resources, promote the social and economic benefits generated by the projects on wheelchair accessible vehicles, and drive the sustained and sound development of the industry of wheelchair accessible vehicles.

Li advised to take the plan as reference to develop featured models based on wheelchair accessible vehicle projects, set up the green channel for wheelchair accessible vehicles in public places including airports and hospitals, and establish loving care projects for accessibility services. In addition, he also suggested facilitating the demonstration projects on wheelchair accessible vehicles across the nation.

Wang Baisen
Member of the CPPCC National Committee

Upgrading technical standards in pipeline projects

As pipeline construction standards are out of step with the development of materials, the projects using high-end materials still have to use the pipeline construction standards applicable to medium and low-end materials, according to Wang Baisen, Member of the CPPCC National Committee and Party Secretary of SINOPEC Tianjin Company.

Wang advised to upgrade the standards on pipeline project construction in chemical industry, and supporting standards for the inspection and testing of pipelines and component products.

He suggested improving the standards system for engineering technology, strengthening the adoption of advanced and applicable international standards, and upgrading related technologies and standards. He also indicated that upgrading the technical sectoral standards with excellent effect to national standards will strengthen the credibility and influence of standards.

On intelligent manufacturing

Expediting standards development for intelligent manufacturing

Zhong Zheng
Deputy to the NPC

Targeting at the challenges of intelligent manufacturing in China, Zhong Zheng, Deputy to the NPC and Vice President and CEO of Midea Group, suggested expediting the approval and implementation of intelligent manufacturing special projects, innovation and integration of key technologies, R&D and industrialization of major products, and common solutions to intelligent manufacturing system.

Apart from accelerating the popularity of intelligent manufacturing applications, Zhong also suggested speeding up the standards development and evaluation system for intelligent manufacturing through encouraging leading enterprises to build standards clusters, and driving the coordinated transformation of upstream and downstream enterprises in the industrial chain.

In terms of the development of household appliance industry, she recommended prioritizing the development of a unified standards system for carbon footprint accounting of household appliance products, which will provide scientific support for international mutual recognition in the next step.

Exploring Chinese paradigm of intelligent manufacturing by standards system

Lei Jun
Deputy to the NPC

Intelligent manufacturing has stepped into a new stage. While continuing to strengthen the infrastructure such as 5G and data centers, Lei Jun, Deputy to the NPC and founder and CEO of Xiaomi Group, recommended supporting the creation of application scenarios integrating artificial intelligence and manufacturing represented by large AI models, and finding the solutions to intelligent manufacturing system that is independent, controllable, advanced and applicable.

Lei suggested improving the standards system to explore the Chinese paradigm of intelligent manufacturing. The innovation of intelligent manufacturing in China requires the systematic technologies and standardization advantages of the industry.

He also suggested encouraging leading enterprises to set demonstration examples for intelligent manufacturing, and exploring future manufacturing modes and business forms; encouraging the deep industry-university-research integration; and supporting enterprises and experts to actively participate in international standardization activities.

Jin Shi
Member of the CPPCC National Committee

Standards for AI-driven mobile phone ecosystem urgently needed

With the "1+N" intelligent ecosystem of AI-driven mobile phones, relevant enterprises, departments and organizations start to work together to promote the development of sectoral standards on AI-driven mobile phones. Due to high costs and technical thresholds, uneven technical development and other reasons, the mobile phone communication industry in China has not gained overall competitiveness and new quality productive forces in the field of large AI models.

Considering how to make the top-level design of standards, Jin Shi, Member of the CPPCC National Committee and Vice President of Southeast University, advised to encourage enterprises to put long-term investment in key technologies by various means, establish a big model innovation alliance of the communication industry involved by industry associations, leading enterprises, universities and research institutes, release the standards for AI-driven mobile phone ecosystem, and develop unified sectoral standards.

He suggested accelerating talent cultivation via industry-university-research cooperation.

Feng Dan
Deputy to the NPC

Developing standards on AI data storage capacity for industrial development

The insufficient consideration of AI data storage capacity will lead to heterogeneous system architecture, complex management, and difficulty in rapid application. A lack of sectoral standards will result in inadequate regulation and guidance of storage capacity building. Therefore, Feng Dan, Deputy to the NPC and President of School of Computer Science & Technology, Huazhong University of Science and Technology, put forward suggestions on taking advantage of storage and computing capacity coordination.

Feng indicated that developing and improving sectoral standards for AI data storage capacity is expected to regulate and lead the sound industrial development of AI.

She suggested that standardization working groups should be set up to include such standards in the national comprehensive standardization system of the AI industry. Meanwhile, focusing on the demands of functional performance, industrial application, energy conservation and environmental protection of AI data storage technologies and products, standards development should be carried out to constantly improve the standards system building.

On agriculture

Promoting standardization of agricultural product packaging

Yu Ruifen
Member of the CPPCC National Committee

Yu Ruifen, Member of the CPPCC National Committee and President of Shanghai Laiyifen Co., Ltd., submitted the proposal of improving the standards system for full industrial chain of agriculture, and facilitating the high-quality development of advanced characteristic industries.

Yu advised to continuously increase the research and input of seed breeding, drive the in-depth industry-university-research integration, and improve the integrated commercialized seed breeding system. With rational layout and increasing planting areas, agricultural enterprises will enhance yield per unit area of land, product quality, and level of production and processing, and promote smart agriculture by unified standards on agricultural supplies and production operation.

She also advised to establish normative and systematic logistics network, and drive the standardization of agricultural product packaging. Through the standardization of sorting, processing, packaging and other links, losses will be reduced and benefits will be increased in the circulation of agricultural products. The supply chain of agricultural products will be smoothed by digital means to ensure their quality and safety.

Establishing quality inspection & testing system of high-standard farmland projects

Li Yehong
Deputy to the NPC

Through lots of investigation and research, Li Yehong, Deputy to the NPC and President of a fruit professional cooperative in Xuyi county of Jiangsu province, found the problems of farmlands such as incomplete protection system of local seed industry and difficulty in post-management and maintenance of high-standard farmlands.

Based on her actual work, Li put forward the suggestions including establishing a quality inspection and testing system of the high-standard farmland project, improving the system from the perspective of top-level design, setting up stations for construction quality testing, guiding local areas to enhance the quality inspection and testing of high-standard farmlands and strengthen the responsibilities of quality supervision, and increasing the financial support for quality testing and other work.

Responding to the agricultural development status at the grassroots level, she has strived to promote ecological agricultural development and rural revitalization.

On people's welfare

Gao Zicheng
Deputy to the NPC

Releasing unified national standards on pre-made dishes

In recent years, pre-made dishes are popular for their convenience, low costs and other advantages. However, they also bring problems of food safety. Gao Zicheng, Deputy to the NPC and President of All China Lawyers Association, believed that a lack of national standards causes the public controversy and industrial chaos at present.

Gao said that there are more than 190 valid standards on pre-made dishes at the level of association, local government, and enterprise. The differences in raw materials and production modes will result in hidden risks of food safety. To address the problem, useful exploration has been made in various cities, which can help promote the industrial development.

To achieve the high-quality industrial development, he suggested releasing unified national standards to specify the quality requirements and specifications of production and storage procedures, establishing the effective safety regulation systems for food certification, tracking and others, and improving the industrial regulation mechanism.

On export

Yin Tongyue
Deputy to the NPC

Helping Chinese automobiles go global with standardization

Yin Tongyue, Deputy to the NPC and Chair of the Board of Chery Holding Group, called for standards and certification mechanism on exported product quality and all-round examination of export enterprises.

Yin suggested establishing the standards system for automobile data information security with proper increase of data security standards, taking the lead in promoting mutual recognition of data standards in the BRICS and Belt and Road countries, and exploring the mechanism of data standards mutual recognition in countries and territories such as EU and the U.S.

Furthermore, he suggested improving the definitions and detailed standards of second-hand automobiles, and prohibiting the export of Chinese automobiles without overseas qualification certification, so as to avoid problems in product quality and after-sales services.

编译/靳吉丽
(Edited and translated by Jin Jili based on the news in Chinese)

Annual Report on Standardization Development of China published

《中国标准化发展年度报告（2023年）》发布

In March, Standardization Administration of China (SAC) published the ***Annual Report on Standardization Development of China (2023)***, which gives an overview of China's standardization work last year including the analysis of key data and how standards advance technologies and promote social and economic development. It also clarifies the role of standards in promoting equipment renewal, expanding high-level opening up, and stabilizing the industrial chain in the near future.

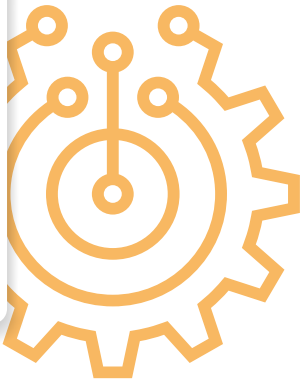
Standards are a key part of the internationally recognized National Quality Infrastructure (NQI) and the world's common language, which are also important innovative resources. In 2023, all regions and government departments have earnestly implemented the revised *Standardization Law of China* and the *National Standardization Development Outline*, and actively used high standards as a tool to boost high-tech innovation, promote high-quality industrial development and high-level opening up, realize high-efficient governance and shape a high-quality life for the people, making remarkable achievements.

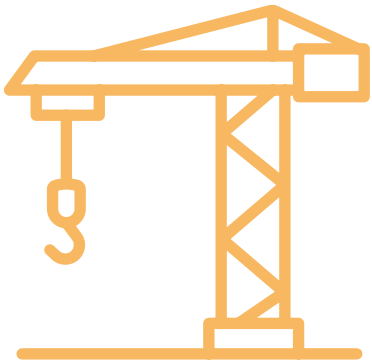
The report is composed of three parts. Part one is the overview of data, covering the aspects such as the five types of standards (national, sectoral, local, association and enterprise standards), standardization technical bodies, pilot and demonstration projects, the special project on standards comparison and compliance, the statistical survey on standards implementation, and international standardization. Part two focuses on the six standardization priorities, and summarizes the roles of standards in advancing high-tech innovation, promoting industrial development, shaping a high-quality life, driving high-level opening up, facilitating the governance of local areas, and consolidating the foundation of development. Part three is the outlook of standardization development, which clarifies that standards will play a big role in unleashing the production capacity, expanding opening up, and stabilizing the industrial chain, to write a new chapter for standardization development, and contribute to economic upturn and social prosperity.

OVERVIEW OF STANDARDIZATION DATA

01 National standards

In 2023, SAC approved and released **2,902** national standards. According to the nature of the standards, there were **75** mandatory standards, **2,756** voluntary standards, and **71** guiding technical documents. In terms of standards development and revision, **1,708** were newly developed national standards and **1,194** were revised ones. A total of **225** national standard reference materials were approved and released. By the end of 2023, there were altogether **44,499** national standards, including **2,064** mandatory standards, **41,844** voluntary standards, and **591** guiding technical documents; there were **4,164** national standard reference materials.





02 Sectoral standards

In 2023, **4,141** sectoral standards were filed. By the end of 2023, **75** categories of sectoral standards were approved, with **80,828** sectoral standards filed.

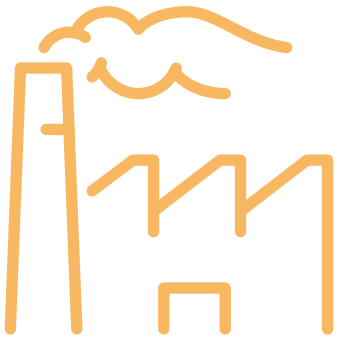
03 Local standards

In 2023, **10,751** local standards were filed. By the end of 2023, **69,709** local standards were filed.

04 Association standards

In 2023, social organizations published 23,162 association standards on the national platform for association standards information. By the end of 2023, social organizations had cumulatively published 74,240 association standards on the platform.

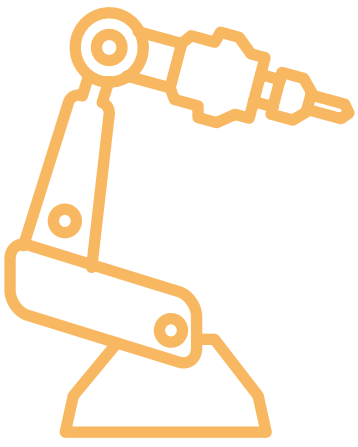
05 Enterprise standards



In 2023, enterprises declared 546,160 standards through the public service platform for enterprise standards information, covering 932,124 products. By the end of 2023, 472,459 enterprises had declared 3,165,625 standards through the platform, covering 5,271,353 products.

06 Standardization technical bodies

In 2023, 23 national standardization technical bodies were established, including 5 technical committees (TCs), 12 technical subcommittees (SCs), and 6 standardization working groups (SWGs). By the end of 2023, there were a total of 1,338 national standardization technical bodies, including 550 TCs, 766 SCs, and 22 SWGs.



07 Standardization pilot and demonstration projects

In 2023, various regions carried out 310 national standardization pilot and demonstration projects. By the end of 2023, various regions had cumulatively carried out 8,038 national standardization pilot and demonstration projects, including 96 national standardization pilot and demonstration projects on circular economy, 4,833 projects on agriculture, 53 on high-tech, and 60 on service industry.

08 The special project on standards comparison and compliance

In 2023, 7,055 enterprises were newly involved in the special project on standards comparison and compliance, with 169 new standards comparison schemes published and 12,844 new standards comparison results published. By the end of 2023, 58,559 enterprises from 238 cities of 30 provinces (autonomous regions, municipalities) had participated in the special project, publishing 4,120 standards comparison schemes, and 126,593 standards comparison results.

09 The statistical survey on standards implementation

The first statistical survey on national standards implementation data was conducted. Through the comprehensive analysis of six indicators including consultation volume, download volume, sales volume, citation volume, enterprise implementation volume, and detected application volume of standards, it was concluded that **5,784** national standards were "strongly" implemented in China, accounting for **13.1%** of the total; **35,583** national standards were "moderately" implemented, accounting for **80.6%** of the total; **2,772** ones were "weakly" implemented, accounting for **6.3%**. The "strongly" and "moderately" implemented standards were effective implemented standards, making the effective implementation rate of national standards reach **93.7%**.

10 International standardization

In 2023, **9** Chinese experts newly served as the chair or vice chair of ISO and IEC technical bodies, and another **7** secretariats were held by China. A total of **1,311** experts became new ISO or IEC registered experts, and China submitted **244** international standard proposals to ISO and IEC. A total of **398** foreign language versions of national standards were approved and released. **Eighty-four** mandatory national standards were notified to the WTO, and **8** new domestic technical counterparts to international standardization organizations (ISO and IEC) were established.

STANDARDIZATION PRIORITIES

Standards promoted high-tech innovation more vigorously.

Firstly, the interaction between standards and technologies continued to strengthen. In the NQI major project in the 14th Five-Year Plan period (2021-2025), the "internationalization of standards" project was established to support the standards development in fields such as new power systems, smart robots, nanomaterials, Internet of Things (IoT), and new infrastructure with technological innovation. Centered on the areas such as rare earth materials, high-tech ships and marine equipment, and core aerospace components, the first batch of 38 national standards verification sites were approved, and a senior expert pool of nearly 500 experts was established, which covered the areas such as macro strategies, standardization, measurement testing, inspection, scientific research, and industrial applications. Thirty-four national technical standards innovation bases were established, among which those on intelligent manufacturing, photovoltaics, and household appliances contributed to the conversion of 1,924 advanced technological achievements with application potential into 2,245 technical standards.

Secondly, the supply of standards in key technology areas continued to increase, with the proportion of standards for strategic emerging industries reaching about 40%. Breakthroughs were made in the development of 7 BeiDou satellite navigation standards and 14 space science standards in key areas such as BeiDou navigation and manned spaceflight, promoting the development of more than 100 BeiDou application standards. Over 200 national standards were developed in key and emerging technology fields such as integrated circuits, clean energy, and biotechnology. A total of 4,141 sectoral standards were filed, of which 1,902 were related to the strategic emerging industry, accounting for 45.9%. And 23,162 association standards were published, of which 11,644 were related to the strategic emerging industry, accounting for 50.3%. And 546,160 enterprise standards were declared, of which 210,508 were related to the strategic emerging industry, accounting for 38.5%.

Thirdly, the leading role of advanced standards continued to strengthen, with nearly 1,400 standards recognized as forerunner standards. In 2023, 1,399 standards of 947 companies became forerunner standards. Among the 640 standards in the product field, standards in the electrical machinery and equipment manufacturing industry accounted for nearly 20%, and standards in general equipment manufacturing and professional equipment manufacturing accounted for 12% and 10% respectively. There were 53 forerunner standards in the service industry, with logistics services standards accounting for 14% and solid waste management services standards accounting for 8%. As of the end of 2023, 3,631 standards of 2,003 companies had become forerunner standards, covering 893 types of products and services.

Standards facilitated high-quality industrial development more effectively.

Firstly, the standards system of the agricultural and rural areas became more robust, with the total number of national standards exceeding 4,000. The *Guidelines for Advancing the Construction of the Standards System for the Utilization of Livestock and Poultry Manure Resources* and the *Action Plan for Rural Revitalization Standardization* were issued, fully leveraging standardization to support rural revitalization. A total of 169 national standards were released, including 165 ones related to the quality and safety of agricultural products and agricultural inputs, agricultural infrastructure construction, agricultural product quality grading, prevention and control of animal and plant diseases, utilization of agricultural waste, improvement and utilization of saline-alkali land, agricultural social services, and wetland protection, and 4 national standards were issued in rural areas. Three national agricultural standardization demonstration zones were established. By the end of 2023, in the agricultural and rural areas, the total number of national standards exceeded 4,000, the total number of filed sectoral standards reached 4,721, and the total number of published association standards reached 12,293.

Secondly, standards in the industrial sector more focused on key technologies and emerging fields, with the total number of national standards reaching over 35,000. In the area of modern industrial system building, 126 industrial foundation standards, 41 high-end equipment manufacturing standards, and 50 aerospace standards were released. A total of 38 standards were issued in industries such as additive manufacturing and hydrogen energy, and key standards were issued to address the demands of national copper and aluminium supply chains such as reclaimed cooper materials, helping improve the resilience and safety of industrial chains. By the end of 2023, in the industrial sector, the total number of national standards reached 35,851, the total number of filed sectoral standards was 25,871, the total number of published association standards reached 36,434, and the total number of self-declared and implemented enterprise standards on the public service platform for enterprise standards information reached 1,692,235.

Thirdly, standards coverage in the service industry was more comprehensive, with the total number of national standards reaching over 3,800. Twenty-one national standards were released in the field of logistics, such as international road freight hubs, port logistics, multimodal transport, agricultural production area cold chain logistics, immediate delivery, and reverse logistics, to promote safe, green, and efficient logistics transportation. Six e-commerce-related standards and 35 data security-related standards were released to support the healthy development of the platform economy. Eighteen national standards in the financial field, such as information disclosure and consumer complaints, were issued to help the financial industry strengthen comprehensive regulation and prevent and resolve financial risks. In the service industry, 308 new national

standards were released in the service industry, accounting for 10.6% of the total; 5,334 new association standards were released, accounting for 23% of the total; and 140 new national service standardization pilot projects were established, along with 10 new national service standardization demonstration projects. By the end of 2023, in the service industry, the total number of national standards reached 3,821, the total number of filed sectoral standards was 10,803, the total number of association standards reached 16,466, and the total number of self-declared and implemented enterprise standards on the public service platform for enterprise standards information reached 50,215.

Standards shaped a higher-quality life with more tangible effects.

Firstly, public service standardization became more grounded, enhancing the people's sense of gain, happiness, and security. Eighteen national departments jointly issued the *Work Plan for the Construction of the Basic Public Service Standards System*. Twelve ice and snow sports standards, such as GB/T 42378-2023, *Basic vocabulary of for popular snow sports*, and GB/T 42369-2023, *Specifications for grading and evaluation of popular racing skating sport level*, supported the vigorous development of mass sports activities. The standardization action of elderly care and housekeeping services was implemented, with 39 special plans for elderly-oriented renovation standards issued and 7 standards related to elderly care services developed to safeguard the interests of special groups. Fifty standards related to health and hygiene, such as testing methods for drinking water, clinical Chinese medicine and medical devices, were developed to safeguard public health.

Secondly, social governance standardization became more precise, improving the urban and rural governance and public safety levels. Twenty-four national standards were released for grassroots government transparency, office affairs management, court science, and social credit. A total of 157 social management and public service comprehensive standardization pilot projects were promoted in areas such as judicial administration, health care, and medical insurance. One hundred and twenty-nine safety production standards were developed, including GB/T 42312-2023, *Guide for production safety emergency response plan of electrochemical energy storage station*. Eight standards in transportation safety were released, covering ship life-saving equipment and civilian unmanned aerial vehicles, and seven mandatory national standard projects were approved, including the ones about gas appliance for commercial use, and rubber composite hose for connecting gas appliances, effectively supporting the prevention and resolution of major safety risks.

Thirdly, the standardization of green development became more efficient, strongly supporting hot issues such as combating food waste and restricting excessive packaging. Eleven national departments jointly issued the *Guidelines for the Construction of the Carbon Peak and Carbon Neutrality Standards System*, establishing a blueprint of dual-carbon standards system building to serve the

national dual-carbon strategy. Eleven relevant national standards were issued, including standards for carbon capture, energy consumption quotas, water intake quotas, marine ecological restoration, and small and micro wetland protection, and the development of carbon emission accounting and reporting standards for key industries such as steel, building materials and constructing were promoted to boost green development via standardization. Five national standards, including GB/T 42966-2023, *General rules for management of anti-food waste in catering*, were released, and three national standard projects for tourism buffets and exhibitions were approved. A mandatory national standard for limiting excessive packaging of fresh edible agricultural products was issued, a plan for mandatory national standards for limiting excessive packaging of express delivery was initiated, and the modification of standards for limiting excessive packaging of tea was accelerated. More than 40 social organizations in food and catering sectors published more than 60 associations standards for saving food and cutting loss, and preventing waste in catering, such as *Assessment requirements for forerunner standard—Kitchen waste treating and utilizing equipment in catering services* and *Technical specification for rice moderate processing*.

Fourthly, the implementation of standards in the consumer goods sector was steadily improved, effectively promoting consumption growth. Two hundred and forty-one standards were developed in key consumer goods sectors such as infant and child products, household appliances, and cosmetics to strengthen the quality and safety of consumer goods. The number of products using globally uniform identification standards increased by 19.2% to 19.64 million types, covering over 190 million consumer goods. Among them, products related to motor vehicles, household or office furniture and furnishings, and personal accessories increased by 120.0%, 66.8%, and 51.1% respectively. Electrical appliances, kitchenware, and tableware increased by 47.5% and 47.1% respectively, and food/beverages and tobacco, beauty/personal care, and hygiene products increased by 36.1% and 33.7% respectively, effectively promoting the smooth flow of consumer goods in China.

Standards drove high-level opening up more orderly.

Firstly, the consistency of Chinese standards and foreign standards continued to increase, with the overall conversion rate of international standards reaching 82%. In 2023, 999 international standards were converted into national standards, the consistency degree of major consumer goods with international standards was 96%, and the conversion rate of international standards in areas such as key equipment manufacturing and new-generation information technology surpassed 90%. The data comparison between national standardization technical committees and domestic counterparts of international standards organizations was conducted to ensure the correspondence between the 380 technical bodies of international standards organizations and national technical committees, with the corresponding degree exceeding 90%.

Secondly, the capability of participating in international standardization activities continued to improve, with the submission of 244 proposals of international standards. In 2023, in international standards organizations, another 7 secretariats in mechanical energy storage, innovative logistics and other areas were held by China, 9 Chinese experts newly assumed the chair or vice chair, and 1,311 Chinese experts became new registered experts. China's participation degree in international standards development reached 82.2%. The plans for publishing the foreign language versions of 480 voluntary national standards in areas including international trade, foreign contracted projects, international cooperation and exchanges on technologies, and carbon peak and neutrality were announced, and the foreign language versions of 398 national standards were published.

Thirdly, the level of international standardization cooperation continued to increase, with the signing of 5 new documents of international standardization cooperation. In 2023, SAC signed standardization cooperation agreements with national and regional standardization bodies such as Technical Regulation and Metrology Committee of the Ministry of Trade and Integration (CTRM) in Kazakhstan and the African Electrotechnical Standardization Committee (AFSEC), and signed an agreement on the mutual recognition of standards for animal and vegetable fats and oil with the Russian counterpart. By the end of 2023, China had signed 108 documents on bilateral and multilateral standardization cooperation with 65 national and regional standardization bodies and international organizations, including 57 cooperation documents with 47 countries involved in the Belt and Road Initiative. Representatives from enterprises including foreign-funded enterprises were widely accepted in the work of domestic technical committees. In 2023, 7,409 registered members were added in domestic technical committees, 400 of whom were from foreign-funded enterprises, accounting for 5.4%.

Standards facilitated the governance of local areas more effectively.

Firstly, the vitality degree of market-oriented standards in developed regions was higher, especially in Guangdong province, Zhejiang province, Shandong province, Jiangsu province, Beijing municipality and Shanghai municipality. In 2023, 1,387 social organizations were added on the national platform for association standards information, among which 205 were from Guangdong, 102 from Zhejiang, 96 from Shandong, and 73 from Jiangsu. Five regions including Guangdong, Zhejiang, Shandong, Shanghai and Beijing ranked the top 5 in the aspect of the published number of association standards, 2,485, 1,510, 1,255, 889 and 818 respectively. In the top 5 regions with a large number of enterprise that declared standards on the public service platform for enterprise standards information, there were 4 developed regions including Guangdong, Shandong, Zhejiang and Jiangsu, with 7,679, 7,174, 6,108 and 4,227 enterprises respectively declaring standards. Guangdong, Zhejiang, Shandong, Jiangsu and Beijing ranked the top 5 in terms of the number of forerunner enterprise standards, which was 1,152, 384, 380, 259 and 252 respectively.

Secondly, the standardization capability in central and western regions steadily increased, with great efforts made by Hebei province, Hubei province, Hunan province, Anhui province, Sichuan province, Inner Mongolia autonomous region and other regions. In 2023, Hebei had the largest number of enterprises (14,489) that declared standards on the public service platform for enterprise standards information. In the top 10 provinces/autonomous regions with a large number of declared enterprise standards in strategic emerging industries, half of them were from the central and western regions, including Hebei (24,163 standards), Henan (23,309 standards), Sichuan (9,242 standards), Anhui (8,051 standards) and Hubei (7,048 standards). In the top 10 provinces/autonomous regions with the most enterprises participating in the special project for standards comparison and compliance, 65.1% of the enterprises were from the central and western regions, including 1,210 enterprises from Xinjiang Uygur autonomous region, 1,171 from Hunan, 788 from Hubei, 394 from Hebei, 254 from Inner Mongolia, 158 from Anhui, and 146 from Jiangxi. In the top 10 provinces/autonomous regions with the most enterprises unveiling standards comparison results, 62.8% of the standards comparison results were from the central and western regions, including 2,447 results from Hunan, 1,638 from Xinjiang, 1,086 from Hebei, 907 from Hubei, 372 from Inner Mongolia, and 254 from Jiangxi. Xianning city of Hubei province carried out the urban standardization comprehensive pilot projects (natural ecological park), and Chengdu city of Sichuan province held the sub-forum on park city standardization, which were the highlights of standardization work.

Thirdly, the standardization regional coordination was further strengthened, with highlights in the Yangtze River Delta region, Guangdong-Hong Kong-Macao Greater Bay Area (GBA), Beijing-Tianjin-Hebei region, Yangtze River Economic Belt, and nine provinces/autonomous regions along the Yellow River. The Yangtze River Delta region, composed of Shanghai municipality and major cities in Jiangsu, Zhejiang and Anhui provinces, focused on the goals and tasks of regional integrated development plan, made concerted efforts to develop 36 harmonized local standards

of the regional including emission standard of air pollutants for pharmaceutical industry in key areas such as digital government, culture and tourism, public transport, health, agriculture and rural areas, and ecological environment. The Beijing-Tianjin-Hebei region established a "3+X" collaboration model, through which the standardization departments and industrial competent departments in the three areas developed 86 harmonized local standards of the region in multiple fields such as transport, health, ecological environment, safe production, market regulation, commerce, human resources, culture and tourism, and engineering construction. The second joint meeting on ecological civilization standardization cooperation of the Yangtze River Economic Belt was held, where the *Guidelines on Establishing Harmonized Local Standards System of the Region for the Ecological Civilization of the Yangtze River Economic Belt* and two regional shared standards for ecological protection were released. A standardization conference was held to sign the framework agreement on the strategic cooperation mechanism for the ecological protection and high-quality development of the Yellow River basin in nine provinces/autonomous regions along the Yellow River. Guangdong, Hong Kong and Macao signed a MoU on promoting the standards development in GBA, and released 161 GBA standards covering food, traditional Chinese medicine, transport and elderly care. At the event, nearly 900 enterprises in the area declared to use the GBA standards. Fujian province applied more cross-Strait common standards, and created 38 pilot projects for cross-Strait common standards.

The foundation of standardization development became more solid.

Firstly, the standardization system building was raised to a new level, with the release of the regulations for standards innovation-oriented enterprises for the first time. The *Interim Provisions for Adopting Association Standards in Voluntary National Standards*, *Administrative Measures for Laddered Cultivation of Standards Innovation-oriented Enterprises (Trial)*, and *Measures for Promoting Enterprise Standardization* were issued to push forward the development of market-oriented standards. The *Guidelines for Statistical Analysis of Mandatory National Standards Implementation* was released to constantly improve the unified and coordinated mandatory national standards system. The *Administrative Measures for Sectoral Standards* was revised to integrate the sectoral standards in areas of spaceflight, aviation, shipping, electronics, weaponry and nuclear power into national defense sectoral standards.

Secondly, new progress was made in standardization theoretical research, with standards outcomes on government services included in typical research outcomes of themed education in the General Office of the State Council in 2023. In terms of supporting the General Office of the State Council to develop a series of national standards on government services, related standards outcomes were included in the list of typical research outcomes of themed education in the General Office of the State Council in 2023, effectively improving the standardization level of administrative management and government services. Working with Chinese Academy of Engineering, SAC carried out the research on several key issues in implementing the *National Standardization Development Outline* to make in-depth discussions on the standardization path of association standards in key areas such as supporting high-quality development, and ensuring energy security standardization, standardization of environmental and social governance, and institutional opening up of standards, which provided high-level advisory opinions for implementing the Outline.

Thirdly, standardization talent education was brought to a new level, with the formulation of documents on standardization talent cultivation for the first time. SAC, together with Ministry of Education, Ministry of Science and Technology, Ministry of Human Resources and Social Security, and All-China Federation of Industry and Commerce, released and implemented the *Special Action Plan for Standardization Talent Cultivation (2023-2025)*. A total of 17 colleges, universities and vocational colleges set up majors such as standardization engineering and standardization technologies, and more than 40 colleges and universities carried out the talent training for applying standardization technologies such as article numbering and automatic identification. Over 4,600 people were awarded the occupational skill certificates for standardization editing, and textbooks such as *Standardization Fundamentals* were included in the booklist of the first batch of national planned textbooks for vocational education in the 14th Five-Year Plan period (2021-2025). In 2023, 34 Chinese experts won the ISO Excellence Award, and 21 Chinese experts received the IEC 1906 Award. The Chinese student teams won the Gold Award, Silver Award and IEC Special Award in the 18th International Standards Olympiad.

Fourthly, standardization technical support capability was further enhanced, with the approval and establishment of the first batch of national standards verification points. To meet the standardization development demands in national key strategies, projects and industries and emerging industries, 38 national standards verification points were approved and established to focus on 5 areas such as new-generation information technology, new material, high-end equipment and intelligent manufacturing, new energy resources and new-energy vehicle, and environmental protection and low carbon as well as comprehensive verification demands. Eight national technical standards innovation bases were approved and established, covering the areas such as non-ferrous metals, chemical new materials, medical devices, and civil aviation. China ASEAN Standardization Cooperation and Exchange Center was founded by SAC together with

Guangxi Zhuang autonomous region to exert the role of regional standardization research center for America, Europe, Northeast Asia and other areas, and facilitate the international cooperation and exchanges on standardization. In 2023, 16 advanced technical committees were commended, 17 unqualified technical committees were required for rectification, and 123 technical committees were assessed to strengthen the dynamic management of technical committees. In the year, 37 first-class and 44 unqualified domestic counterparts of international technical committees were given commendation and rectification instructions respectively, and the evaluation of 362 domestic counterparts were initiated to better guide international standardization work. By the end of 2023, there were 19 departments registering and managing 188 million unified social credit identifiers of corporates and other organizations, providing data query services for nearly 1.8 billion times. The article numbering application had covered 41 major categories according to Global Product Classification (GPC), with nearly 190 million pieces of commodity data.

Fifthly, standardization statistical survey stepped into a new phase, with the national statistical survey for standards implementation data carried out for the first time. The survey investigated and collected more than 830,000 pieces of national standards implementation data, covering more than 44,000 currently effective national standards that had been implemented for nearly 81.5 million times. The results indicated that the effective national standards implementation rate was 93.7%. The platform for statistical analysis information of implementation was established, and 13 related departments of the State Council carried out the statistical analysis of mandatory national standards implementation.

Sixthly, new progress was made in standardization publicity with the first China Standardization Conference held. The first China Standardization Conference was successfully held in Nanjing city of Jiangsu, which brought a new model of standardization publicity geared to international practices. During the theme activity for World Standards Day 2023 in Liuzhou city of Guangxi, departments across the country carried out publicity activities with the theme of "Standards shape good life". The list of the first batch of enterprises establishing standardization demonstration projects on high-quality agricultural development was unveiled, and the forerunners of the association standards of All-China Federation of Commerce and Industry and the first batch of private enterprise standards in 2023 were released. Activities such as the first Forum on Standardization Development of Chinese Nuclear Industry, activity focusing on "Standards benefit enterprises", the National Defense Industry Standards Innovation Competition, and the first ISO Standardization Youth Star Competition were carried out, creating a good atmosphere of valuing and using standards in the whole society. The publicity means of standards had changed from paper carrier to visualized, media-integrated and comprehensive data services, and the efforts on raising the public's awareness of standards copyright protection and network-based communication protection also increased.

OUTLOOK OF STANDARDIZATION DEVELOPMENT

In the next step, SAMR (SAC) will work with all regions and government departments, take the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era as guidelines, thoroughly implement the *National Standardization Development Outline*, fully exert the important role of standards in unleashing high-quality production capacity, expanding opening up, and supporting stable industrial chains, and strive to break new ground of standardization development, so as make contributions to the economic upturn as well as social stability and prosperity.

Firstly, exert the leading role of standards in promoting large-scale equipment renewal and consumer goods trade-in programs. Efforts will be made to improve a batch of standards on technologies, energy consumption and emission combined with the actual situation, strengthen the standards development in key and emerging technological areas to shut down outdated production facilities, and further improve the standards of consumer goods such as vehicles and household appliances, in order to better meet people's demands for a better life.

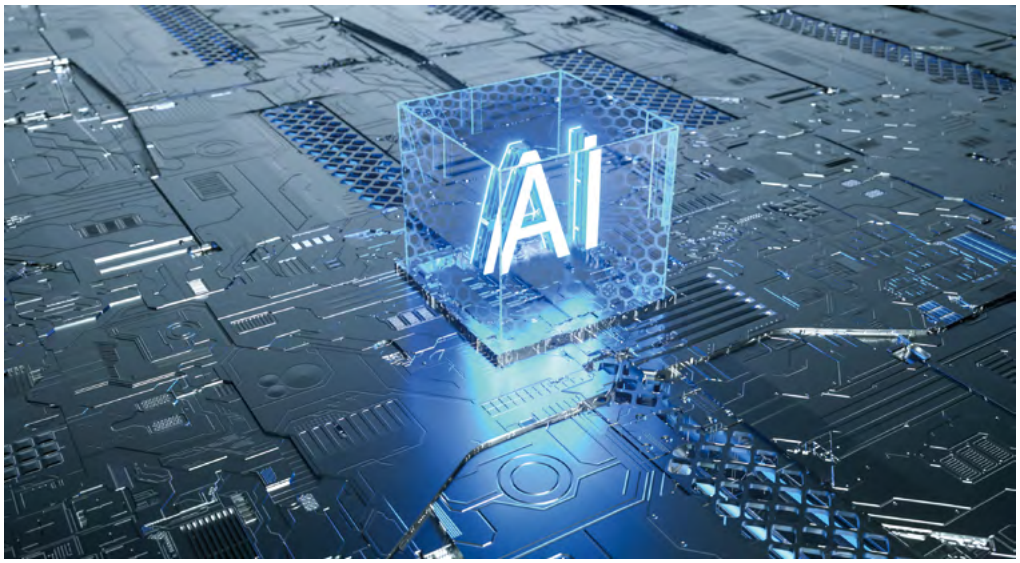
Secondly, exert the supporting role of standards in expanding high-level opening up. Efforts will be made to steadily expand the institutional opening up of standards, support foreign-funded enterprises to participate in standards development in accordance with the law on an equal footing, actively participate in international standardization activities, and continuously contribute more Chinese proposals and wisdom.

Thirdly, exert the fundamental role of standards in supporting stable industrial chains. Efforts will be made to focus on key industrial chains in areas such as industrial robots, large-scale application of BeiDou Navigation Satellite System, implement a number of landmark projects on stabilizing industrial chains through standards, accelerate technical standards development in key phases, further promote the transformation of independent R&D and independent technologies towards independent standards, and constantly improve national standards systems, so as to practically bolster the resilience and competitiveness of industrial and supply chains in China.

翻译/曹欣欣 靳吉丽

(Translated by Cao Xinxin and Jin Jili based on the report in Chinese)

Global AI experts unite to discuss challenges, trends and standardization



With the rapid evolution of artificial intelligence (AI) and the race for governments to regulate it, the need for international consensus has never been greater.

International standards can be valuable tools in the responsible deployment of AI, representing the needs and requirements of all stakeholders and providing global best practice. They can address such issues as ethics, trustworthiness and quality, allowing the benefits of AI to be truly realized. These and many other issues have been discussed at the plenary of the IEC and ISO Joint Committee for AI (ISO/IEC JTC 1/SC 42).

SC 42 Chair Wael William Diab said the plenary will enable important conversations to be had and work to be progressed to deliver globally relevant standards.

"Our committee and work programme are constantly growing and evolving to ensure we meet market and societal needs," he said.

"This includes building on our foundational standards, such as the recently published ISO/IEC 42001, as well as addressing specific concerns such as sustainability, privacy, risk management, unwanted bias and much more."

SC 42 develops international standards for AI, taking a holistic approach to consider the entire AI ecosystem. It looks at technology capability and non-technical requirements, such as business, regulatory and policy requirements, application domain needs, and ethical and societal concerns.

The committee organizes regular workshops on AI to discuss emerging trends, technology, requirements and applications as well as the role of standards. They bring together innovators at the frontier of AI development from diverse locations, sectors and backgrounds involved in research, deployment, standardization, startups, applications and oversight.

(Source: IEC)

Standards play a key role in developing an Alternative Fuel Infrastructure for Europe

Finding ways to use alternative fuels like electricity, biofuels, and hydrogen in transportation comes with its own set of hurdles. Imagine setting up charging stations for electric cars across Europe, ensuring airplanes use sustainable fuels, or making ships more environmentally friendly. Luckily, standards can help, as highlighted by the high-level workshop "Navigating the Transition: Standards Powering the Journey of Alternative Fuel Infrastructure", organized by CEN and CENELEC on April 18.

The full-day event was opened by Riccardo Lama, CENELEC President-Elect. Maja Bakran, Deputy Director-General of DG MOVE (EC), then delivered the keynote speech on "The Path to Sustainable Transport: The EU Vision of Alternative Fuels infrastructure (AFI)". Ms. Bakran explained the vision supporting the legislative work connected to the AFIR, ReFuelEU Aviation and FuelEU Maritime.

A high-level panel debate ensued, discussing the rationale behind the new AFI Regulation, the importance of integrating alternative fuels into a broader ecosystem vision, and the key challenges of the legislation.

The event then split into breakout sessions focusing on specific modes of transport. These sessions brought together industry leaders, civil society representatives, standardization experts, and policymakers to discuss various aspects of the transition to alternative fuels.

The event concluded with representatives from each session reporting on the main outcomes and takeaways. Marc-Antoine Carreira da Cruz, Project Manager Mobility at CEN and CENELEC, highlighted the crucial role of standardization in aligning with recent legislative acts and emphasized the need for an ecosystem perspective to foster cooperation between the different stakeholders.

CEN and CENELEC are strongly committed to the twin green and digital transition and the move towards climate neutrality in Europe, as outlined in their joint Strategy 2030.

(Source: CEN-CENELEC)

6G Global Summit

May 21-22, London, United Kingdom & online

The 6G Global Summit will return on May 21-22 as a hybrid event, hosted by Ofcom UK. All around the world, work on developing the 6G vision is picking up pace. We are on the brink of a new era of connectivity that promises to revolutionize industries and transform the way we live, work and communicate.

The 6G Global Summit will bring together top-level industry and policy representatives from all around the world to explore the path to 2030 and the challenges and opportunities that lie ahead.

Early visions and research on future 6G technologies and requirements will be discussed, along with the key drivers, applications and use cases that are emerging. With sustainability expected to be at the heart of 6G, there is the potential over the next few years to build an ecosystem that helps to tackle some of the world's biggest challenges. This will be the opportunity to join key global leaders at the 6G Global Summit, and be part of shaping a better future with 6G.

For more information on the event website: **https://global6gsummit.com/**

Seminars on European Harmonized Standards

May 22-23, Brussels, Belgium & online

European standards and technical specifications promote inter-operability, the safety of EU citizens and the protection of the environment, increasing consumer confidence. To contribute to improving the quality of European standards, CEN and CENELEC, with the support of the European Commission and the European Free Trade Association (EFTA), are organizing seminars dedicated to supporting standards drafters.

The seminars will focus on four sectors with the highest volume of harmonized standards, therefore the highest impact on industry and SMEs: machinery, health, low voltage, electromagnetic compatibility.

These seminars are expected to improve the understanding of those involved in the CEN and CENELEC technical work on the requirements to be fulfilled when drafting harmonized European standards, thus increasing the quality of the documents and improving the timely delivery of compliant harmonized standards.

For more information on the event website: **https://www.cencenelec.eu/news-and-events/events/2024/2024-05-22-has-training/**

UN World Summit on the Information Society (WSIS)+20 Forum High-Level Event 2024

May 27-31, Geneva, Switzerland

The UN World Summit on the Information Society (WSIS)+20 Forum High-Level Event 2024 will take place from May 27-31, 2024 in Geneva, Switzerland in parallel with the AI Global Summit, with options for remote participation.

During the open event, a series of workshops (Partner Insights), high-level policy sessions (Leaders TalkX) and special tracks will be held on various thematic areas addressing issues that are important in helping to achieve the UN Sustainable Development Goals (SDGs).

At the event, IEEE will make high-level policy statements, hold a workshop on "AI for Energy Innovation and Sustainability" and host a knowledge cafe around "Knowledge Sharing for Sustainable Development".

For more information on the event website: **https://standards.ieee.org/events/wsis/wsis-forum-2024/**

Workshop on driving inclusiveness in standardization

June 5, Brussels, Belgium & online

With the support of the Belgian FPS Economy, SBS and CEN-CENELEC are co-organizing the workshop, under the High-Level Forum on European standardization (HLF) and its workstream on inclusiveness in national standardization, to tackle issues of access and participation in standardization at the national level and discuss and promote best practices.

The event will bring together government representatives, officials from national standardization bodies and standardization practitioners from a wide range of stakeholder communities to share their insights and expertise.

The workshop will be structured around three panels, each tackling an area of interest: obstacles for stakeholders in joining and accessing the standardization system, issues concerning effective and balanced participation of all stakeholders participating in standardization, and discussion and sharing of existing best practices and possible measures and solutions.

For more information on the event website: **https://www.cencenelec.eu/news-and-events/events/2024/2024-06-05-hlf-workshop-inclusiveness/**

Analysis of Mongolia's standardization development in 2023

2023年蒙古国标准化工作进展分析

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Abstract: In 2023, the Mongolian Bureau of Standards and Metrology issued 163 new national standards, among which, 69 were developed by Mongolia itself and 94 were adopted from international and foreign standards. These new standards span crucial sectors such as environment, construction, and food, reflecting Mongolia's commitment to enhancing domestic industrial management, ensuring public health and safety, promoting economic growth, and facilitating international trade. Notably, metrology, environment, and construction were prioritized in standards development, with the biggest number of new national standards in metrology released, indicating a focused allocation of resources in this area. By adopting international standards, Mongolia has made significant progress in ensuring product and service quality, and strengthening its competitiveness in the global market.

Keywords: Mongolia, standardization, standards development, adoption and application of standards

1. Introduction

Since its implementation on December 21, 2017, the *Law on Standardization, Technical Regulations, Conformity Assessment and Accreditation of Mongolia* has become the legal cornerstone of standardization in Mongolia. The law sets out the framework and procedures for standardization, technical regulations, conformity assessment and accreditation, which aims to ensure the quality and safety of products, services and management systems while promoting domestic and international trade and protecting the rights and interests of consumers and producers.

With the development and changes in the domestic and international standardization environment, the law has been amended four times to keep its contents applicable and to ensure effective standardization in Mongolia in the context of globalization. In this process, Mongolia not only focuses on the improvement of its own legal framework, but also actively refers to international best practices. As mentioned in the LNS, BZ, NNY, et al (2021)[1], the literature mainly provides a comparative analysis and summary of the characteristics of various standardization management systems from the perspectives of standardization organizations and standards systems, aiming to clarify the current status and characteristics of the development of standardization management systems at home and abroad, as well as provide reference for the formulation of China's standardization policy.

The revision process of the law reflects Mongolia's continued emphasis on and commitment to standardization. By introducing and refining detailed provisions for technical regulations, standardization, conformity assessment and accreditation, Mongolia has taken solid steps towards establishing a more standardized and systematic legal system for standardization. The latest amendments in 2023 further strengthen the legal framework for the 2021 and 2022 standards, clarify the objectives, principles and responsibilities of standardization activities, ensure the consistency of laws with international standardization activities, and promote the international compatibility and recognition of national standards systems[2, 3].

Chapters 1 to 8 of this law cover the whole field of standardization, from general provisions to technical regulations, to implementation of standardization, conformity assessment and accreditation, and each chapter provides clear guidance and basis for standardization activities in Mongolia. Particularly in the field of conformity assessment and accreditation, the law aims to establish a system of mutual recognition in order to eliminate trade barriers, increase consumer confidence and facilitate international trade. Through these legal provisions, Mongolia has not only established a better standardization system domestically, but also demonstrated its determination to actively participate in and promote international standardization activities. This is of great significance for the sustainable development of Mongolia's economy, the improvement of international competitiveness of products and services, and the protection of consumers' rights and interests. With the continuous improvement and implementation of the law, Mongolia's role and influence in the global standardization process will be further enhanced.

2. Data and statistics

To gain an in-depth understanding of Mongolia's development in the field of standardization, a comprehensive analysis was conducted utilizing key documents and data sources, including the *Law on Standardization, Technical Regulation, Conformity Assessment, and Accreditation of Mongolia,* the *Energy Law of Mongolia,* the *Mongolia 2023 Standards List,* the *Mongolian Enterprise Standards List,* and the *Mongolian Technical Regulations List*.[4,5] EXCEL and Origin software were employed to perform detailed categorization, statistical analysis, and visual representation of Mongolia's various standards[6].

Through this analysis, bar graphs and pie charts were created to visually depict the quantity and proportion of different types of standards in Mongolia. The bar graphs clearly illustrate the distribution of various standards, and provide an intuitive representation of the proportions of different standards within the overall context, elucidating Mongolia's status in areas such as energy law, technical regulations, enterprise standards, and official national standards. These statistics and visualizations not only offer a clear perspective on the current state and trends of Mongolia's standardization efforts but also provide data support for subsequent policy-making and standardization activities. Specific details are presented in the following sections.

3. Results and analysis

As indicated in the Figure 1, the national standards development of technical committees in Mongolia in 2023 centers around areas such as energy, construction, metrology, plant-based food, healthcare and medical assistance, and conformity assessment. The diminishing size of the bars related to plant-based food, health and medical assistance, and conformity assessment suggests that although the standards development in these areas is still active, but it receives less attention compared to energy and construction. Notably, the energy area has the highest number of newly developed standards, indicating an increasing emphasis on resource allocation to national standards in this area.

Compared to Figure 1, Figure 2 illustrates the standards published by the Mongolian Bureau of Standards and Metrology (BSM). It can be seen from Figure 2, the national standards published by Mongolia in 2023 are developed by 22 technical committees for standardization in the areas of environment, health and safety, building materials, food technology, agriculture, occupational conditions and safety, and metrology. Among them, standards in the fields of environment, construction, food and agriculture are dominant. Among these areas, environmental standards focus on improving environmental protection and sustainability, and building standards are mainly aimed at improving building quality and safety. Food standards are developed to ensure food safety and enhance consumer trust. Agricultural standards are more focused on improving the quality and safety of agricultural products to meet the needs of domestic and international markets. The development and implementation of these standards are of great significance in promoting the sustainable and healthy development of Mongolia's economy and enhancing the international competitiveness of products and services.

This demonstrates Mongolia's commitment to

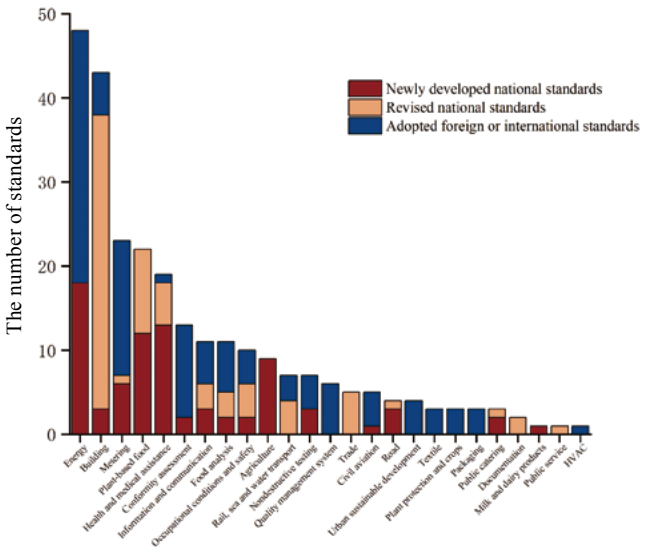

Figure 1: Focus areas of standards published by Mongolia in 2023

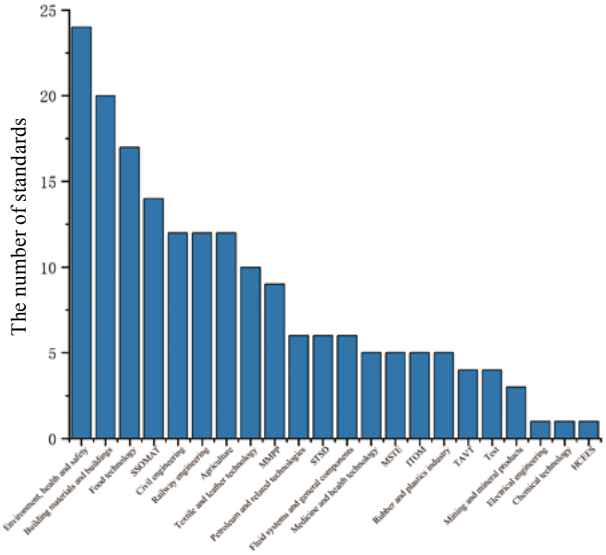

Figure 2: The number of standards developed by Mongolian Bureau of Standards and Metrology (BSM) in 2023

standardization, modernization and internationalization, as well as its proactive stance in enhancing domestic sectoral standards, fostering economic development, and engaging in international trade. By adopting international standards, Mongolia ensures that its products and services meet global quality and safety standards, thereby enhancing its competitiveness in the global market. Furthermore, the implementation of these standards aids in optimizing the domestic industrial structure, laying a solid foundation for Mongolia's economic development.

From Figure 3 we can see that, in 2023, Mongolia developed 69 national standards—MNS (Mongolian National Standard), accounting for 42.4% of the total, and adopted 94 international and foreign standards, accounting for 57.6%. Specifically, Mongolia adopted 34 standards from the International Organization for Standardization (ISO), 17 European standards (EN), 10 Russian standards (GOST), 7 standards from the Codex Alimentarius Commission (CAC), 6 standards from the American Society for Testing and Materials (ASTM), 5 standards from the American Association of State Highway and Transportation Officials (AASHTO), and 4 Chinese standards (GB). Additionally, 3 standards were adopted from ISO/IEC and ISO/TS. Other adoptions include 2 standards from the International Process Safety Management (IPSM) system, and one each from the International Organization of Legal Metrology (OIML), the International Electrotechnical Commission (IEC), and ISO/TR.

In 2023, Mongolia adopted 34 standards from ISO, which accounted for 20.8% of the total. Among these ISO international standards, the technical committee for environment contributes 7 standards, representing 20.5% of the adopted ISO international standards. It is followed by the technical committee for leather with 6 standards adopted. The technical committee for machinery industry equipment contributes 5 standards, while 3 are from the technical committee for mineral resources. The technical committees for metering, textiles, food, rail, sea and water transport, and non-destructive testing each contributes 2 standards. Additionally, the technical committees for environmental management system, occupational conditions and safety, and building each contributes one standard, see Figure4.

Furthermore, Mongolia adopted 17 European standards (EN), including 7 standards each from the technical committees for road transport and building, 2 from the technical committee for communication, and 1 from the technical committee for road.

4. Conclusions and suggestions

In 2023, Mongolia demonstrates a comprehensive approach to standards development, focusing on a wide array of sectors with a notable emphasis on metrology, construction, and energy. This diverse focus underscores Mongolia's commitment to enhancing various aspects of its national economy and infrastructure, while also addressing global trends and international standards adoption, particularly in environmental management, healthcare, and construction. The high adoption rate of international standards (57.6%) further indicates Mongolia's alignment with global best practices and its aspiration to boost international competitiveness.

What's more, Mongolia's strategic adoption of

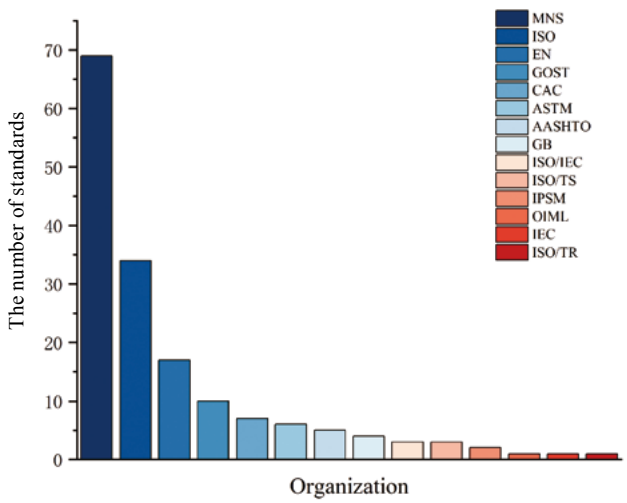

Figure 3: Source of the national standards released by Mongolia in 2023

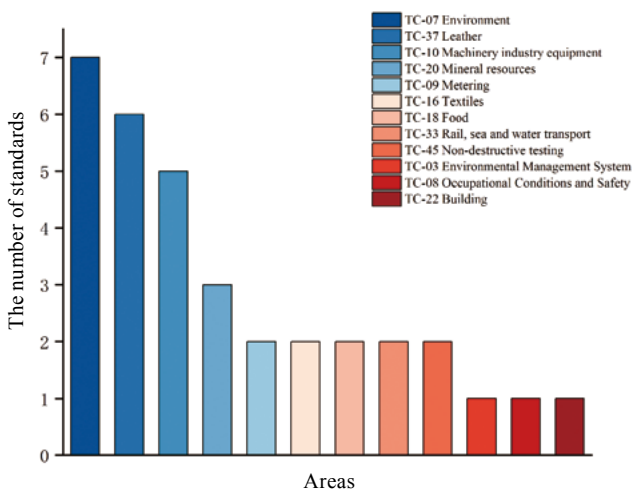

Figure 4: Major areas covered by the ISO international standards adopted by Mongolia in 2023

international and foreign standards highlights its global outlook and the priority given to sectors such as environment, safety, construction, food, and social services. This not only reflects Mongolia's endeavor to internationalize its standards regime but also its commitment to ensure that domestic products and services meet international quality and safety benchmarks.

And the targeted development and adoption of standards across critical sectors like environment, construction, food, healthcare, and agriculture play a crucial role in Mongolia's economic development and societal welfare. Standards in these sectors are instrumental in promoting sustainable development, enhancing public health and safety, and improving the quality of life for Mongolians. Furthermore, by fostering standardization in key industries, Mongolia strengthens its position in the global market and lays a solid foundation for future economic growth.

After the analysis, the following suggestions are given:

While significant efforts have been made in areas such as metrology, construction, and energy, there is a need to balance resource allocation and pay attention to other sectors like plant-based food, healthcare, and conformity assessment. It can diversify Mongolia's economic base, enhance health outcomes, and meet emerging market demands.

To further align with global standards and enhance its international standing, Mongolia should strengthen its collaboration with international standardization organizations, such as more active participation in the development of international standards, seeking technical assistance, and enhancing the capacity of national standards agency. Such efforts will not only facilitate the adoption of cutting-edge standards but also contribute to the global exchange of best practices.

Given the significant adoption of international and foreign standards, there are crucial needs to raise awareness and promote standards implementation among Mongolian industries and stakeholders. Initiatives aimed at educating businesses and the public about the benefits of standards application can facilitate compliance, foster innovation, and enhance productivity. Moreover, supporting the development of infrastructure and capabilities necessary for compliance can further ensure that the benefits of standardization are fully realized across the Mongolian economy.

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