

National Natural Science Fund Regulations Updated

Policy

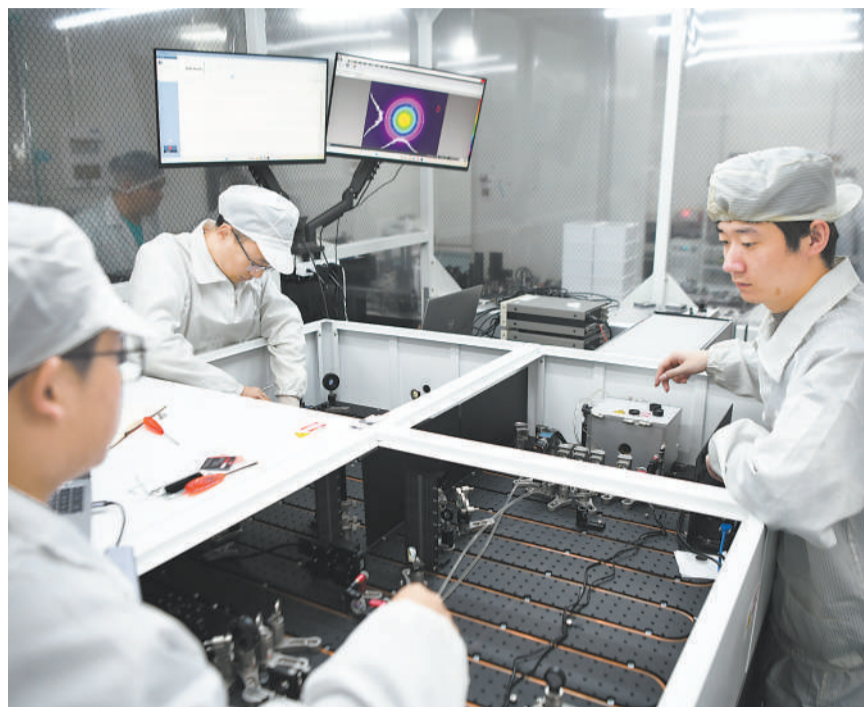
By Staff Reporters

In late October, the revised draft of the Regulations on the National Natural Science Fund was approved in the State Council executive meeting.

The original regulations were released 17 years ago. They were drawn up in accordance with the Law of the People's Republic of China on Progress of Science and Technology for the purpose of standardizing the use and management of the National Natural Science Fund, increasing the efficiency, promoting basic research, training talent in science and technology and enhancing the capability for indigenous innovation.

With the rapid development of science and technology and its impacts on a changing world, the original regulations can no longer fully meet current needs. Therefore, it is particularly important to make timely revisions.

Aimed at strengthening basic research and consolidating the foundation for scientific and technological development, the establishment of the



Scientists adjust experimental equipment at a research institute affiliated with the Chinese Academy of Sciences in Xi'an. (PHOTO: XINHUA)

new regulations will:

- Strengthen the forward-looking, strategic, and systematic development of basic research, enhance funding support for significant original and interdisciplinary innovation, and foster the development of young scientific

and technical personnel.

- Encourage greater involvement of social forces in basic research. This can be achieved by encouraging enterprises and organizations to co-invest and establish a collaborative mechanism for sci-tech innovation.

The revised draft states that the fund will increase support for cross-disciplinary integration projects in the evaluation of various proposals. It emphasizes that priority will be given to projects with clear interdisciplinary characteristics that are expected to drive future scientific and technological advancements.

The revised draft also stresses the critical role of young talent in sci-tech development and suggests attracting and nurturing them through the establishment of various programs and targeted resource allocation.

The meeting emphasized that it is important to manage the National Natural Science Fund in accordance with the law, adhering to the principles of openness, fairness, and justice, and to improve performance evaluation mechanisms and strictly punish any misconduct related to scientific integrity.

In addition, the revised draft calls for improved budget performance management and allows for performance incentives. The reform will be implemented in an ongoing step-by-step basis. The rules and regulations for performance evaluation will be formulated and improved in a scientific and standardized manner, ensuring full coverage of performance management.

Case Study

'Green Aluminum Valley' Spurs Energy Transformation

By QI Liming

China has always attached great importance to tackling climate change and promoted green energy transformation and industrial restructuring. Yunnan province in the southwest contains about 20 percent of the country's clean energy resources, with more than 140 million kilowatts of installed power. Green energy accounts for 90 percent of the installed capacity.

Among all the green energy industries, Yunnan has lots of advantages in developing a green aluminum industry. A demonstration center has been built to combine green electricity with advanced manufacturing industry, exploring the high value of green electricity.

Many Chinese aluminum enterprises have landed in the Wenshan Zhuang and Miao autonomous prefecture of Yunnan, drawn by its rich green electricity and bauxite resources. They have formed a whole industrial chain integrating bauxite, alumina, electrolytic alumi-

num, aluminum deep processing, and recycled aluminum.

Over 40 aluminum industry chain projects have been built in Wenshan and the prefecture's aluminum processing capacity is now over six million tons. In 2023, it achieved a comprehensive output value of 56.74 billion RMB of green aluminum. Nicknamed "China green aluminum valley", Wenshan has the largest green electrolytic aluminum production capacity in China.

"Every ton of aluminum produced in Wenshan reduces carbon dioxide emissions by eight tons compared to thermal power," Ma Zhongjun, governor of Wenshan prefecture, said.

In recent years, Wenshan has accelerated the construction of hydropower, wind power, photovoltaic, natural gas and other clean energy projects, and its installed green energy capacity accounts for 98 percent of its total energy. Two natural gas pipelines have been built, with an annual gas supply of 500 million cubic meters.



Wenshan, Yunnan province vigorously promotes the development of green aluminum industry. (PHOTO: XINHUA)

Urgent Shift to National Digitization, Greenification

By CHEN Chunyou

China has released a comprehensive blueprint aimed at fostering the synergistic transformation and development of digitization and greenifica-

tion across various regions and industries.

Digitized and green development has increasingly become a trend in global economic and social transformation. In recent years, many regions in China

have pioneered models that integrate digitization with greenification, forming a batch of replicable and promotable application scenarios and successful examples. Despite these advancements, some regions continue to face challenges such as unsound technical systems, inconsistent standards and norms and a low level of synergy in digitization and greenification.

The blueprint points out two major directions for the integrated development of digitization and greenification.

The first is to accelerate the green and low-carbon development of the digital industry and promote the green transformation of data centers, communication base stations, and electronic information products. The second is to leverage the innovative role of digital technology enterprises to drive green transformation in nine fields: electricity, mining, metallurgy, petrochemicals,

transportation, construction, urban development, agriculture and ecology.

For example, in the mining sector, the blueprint proposes encouraging enterprises to adopt digital technologies such as digital twins and AI to strengthen green and intelligent control during the mining process, and facilitate coordinated development between mineral resource exploitation and ecological environmental protection.

Meanwhile, in the metallurgical sector, local governments and relevant departments are expected to collaborate with industry associations to further strengthen the integrated application of digital technology in production processes, improve energy consumption monitoring levels, and enhance the level of digitization and greenification within the industrial chain, achieving full-process green transformation.



A child looks at a sand table of a green energy factory during the 8th China-South Asia Expo in Kunming city, Yunnan province, southwest China. (PHOTO: XINHUA)

China Remains Bright Spot in Global Openness

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Qu hoped the report would stimulate further dialogue and consensus-building on opening up. "We hope that the release of the World Openness Report 2024 will stimulate deeper and broader discussions on issues related to

global opening up, build more consensus on opening up, form greater synergy on opening up, contribute to building an open world economy, and promote building a community with a shared future for humankind," he said.

The forum, themed "High-Standard

Opening up for Universally Beneficial and Inclusive Economic Globalization", has 19 sub-forums under four modules: Opening up and Development, Opening up and Collaboration, Opening up and Innovation, and Opening up and Sharing.

The forum topics include climate

change, the Global South, the 30th anniversary of the World Trade Organization, artificial intelligence, new-energy vehicles, and consumption upgrades.

Both the CIIE and the forum opened on November 5 and will conclude on November 10.

Quantum Leap in Core Tech Heralds New Era

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For Huawei, HarmonyOS symbolizes a significant leap toward technological independence. Initially launched in 2019, the system evolved from a Linux-based framework into a fully self-developed ecosystem by 2023.

Unlike previous versions, the latest HarmonyOS is free from Android's underlying architecture, featuring an independently developed kernel and programming framework that empower Huawei devices.

HarmonyOS's microkernel architecture enables seamless integration across multiple devices, from smartphones and wearables to smart homes and automobiles. The operating system

enhances cross-platform collaboration, making it adaptable to a range of smart devices.

In addition to improving user experience, HarmonyOS has brought AI deeply into its core systems. Enhanced with Huawei's Pangu AI model, HarmonyOS offers advanced capabilities, such as real-time AI-enhanced image processing and intelligent document summarization.

These features exemplify a new level of intelligent, interconnected experience for users.

Huawei's HarmonyOS has already garnered substantial support from partners like Ant Group, which developed a HarmonyOS-native version of Alipay.

In response to widespread demand, more companies are adopting HarmonyOS to meet the needs of corporate clients, highlighting its growth potential.

Enabling secure industrial development

As industries worldwide undergo a transformation toward the Internet of Things (IoT), operating systems play a critical role in enabling secure development. HarmonyOS positions itself as a key player in this new era, supported by China's comprehensive industrial ecosystem and expertise in fields like AI, IoT, and 5G.

Huawei's achievement is the result of a collective effort that reflects

a nationwide commitment to scientific advancement. The success of HarmonyOS reinforces China's capacity to shape the future of global technology and offers a blueprint for building an ecosystem capable of independent innovation and secure, high-quality development.

As Yu Chengdong, a Huawei executive, stated at the HarmonyOS release event, "HarmonyOS represents a new era of independence and collaboration." With its thriving ecosystem and cutting-edge capabilities, HarmonyOS is poised to be a cornerstone in the interconnected world of tomorrow, lighting the way for future Chinese innovations.

Gansu Promotes Ecological and Industrial Development

By WANG Jing & XIE Manbin

Gansu province in northwest China has transitioned from a resource-intensive province to an industrial hub, employing advanced technologies to protect the ecology, upgrade agriculture, and promote green transformation of industries.

Protecting China's mother river

In Lanzhou city, the provincial capital, a water monitoring station uses state-of-the-art devices to monitor key indicators such as dissolved oxygen, ammonia nitrogen and phosphorus in real time. Zhang Wei, head of the Lanzhou environmental monitoring station, said these devices also enhance the accuracy and timeliness of data.

In Gannan Xizang autonomous prefecture in southwest Gansu, remote sensing and drones are used to monitor the wetlands and grasslands of the Yellow River, Luo Yongcheng, director of the ecological environment bureau of the prefecture, said.

Maqu, which means "the Yellow River" in the Tibetan language, is a county boasting extensive grasslands and wetlands. To restore degraded grassland, a variety of measures such as planting grass, fencing and irrigation were adopted to increase the vegetation coverage and improve the ecological environment. Today, Maqu's lush green grasslands are a beautiful sight along the upper reaches of the Yellow River.

Enabling orchid cultivation

Thanks to smart technologies, orchids, a typical southern flower, now grow on a large scale in northwest inland Gansu, and promote local economic development.

In the orchid industrial park of Jikou town, there are six high-standard smart greenhouses equipped with a 5G

IoT automatic control system.

"When the temperature deviates from the normal, the light in the greenhouse will flash and automatically turn on the corresponding settings," said Zhang Jingping, technical director of the orchid industrial park. Zhang added that through sensor monitoring and computer data analysis, the intelligent control system helps ensure the best growing environment for orchids in the greenhouse in all seasons and weathers.

This park has achieved a full industrial chain from breeding to sales of orchids, especially butterfly orchids. It produces 2 million pots of orchids annually, with a combined output value of around 40 million RMB and has created jobs for more than 100 locals.

Fostering clean energy

Gansu is vigorously developing clean energy such as wind and photovoltaic power, promoting the green development of industries.

"Our wind turbine assembly capacity is of advanced international level, and all core large components are domestically developed and produced," said Wang Jun, deputy director of the Jiuquan Economic and Technological Development Zone Management Committee.

Through technological innovation and industrial upgrading, the zone has formed a complete wind power equipment manufacturing industrial chain, with products sold both at home and abroad. Many products are exported to central Asian countries such as Uzbekistan.

Today, the Jiuquan Economic and Technological Development Zone has become the largest onshore wind power equipment manufacturing base in China, with a complete onshore wind power industry chain.