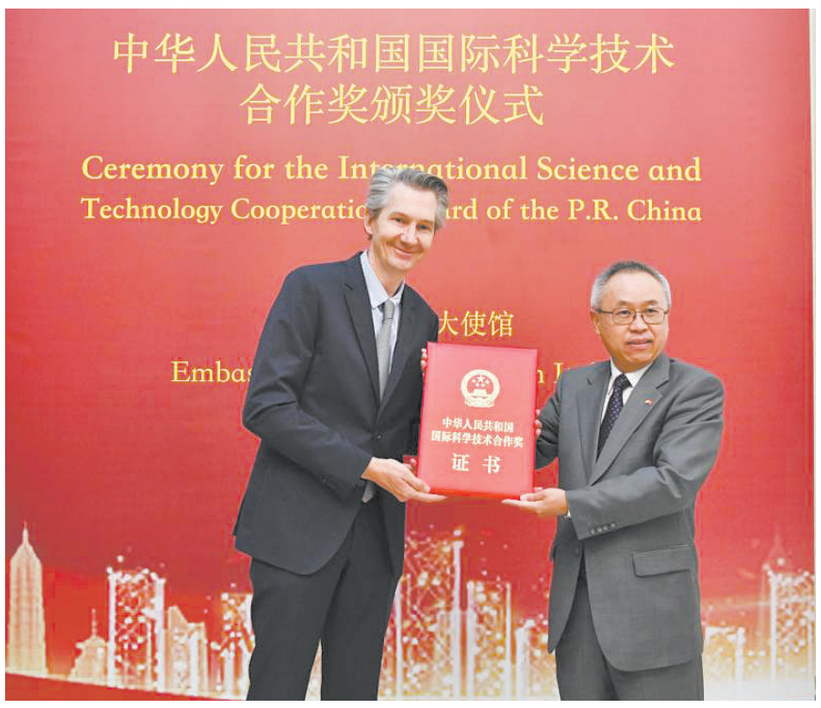
China, CIAT Keep Fruitful Cooperation

Overseas Echoes

By LIU Jianzhou

Juan Lucas Restrepo, director-general of the Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT) in Rome, said that he is "extremely proud" of the accomplishments gained in numerous cooperative projects with Chinese partners, such as CATAS and other organizations. According to Restrepo, these projects have been implemented in diverse regions and have addressed a variety of study fields.

On May 31, the Chinese Embassy in Italy presented CIAT with the 2020 International Science and Technology Cooperation Award, the only organization to receive the award that year. According to Restrepo, this award will motivate them "To further strengthen our partnerships in the region, and will [motivate us to] push for greater technological and knowledge sharing amongst our institutions and contribute to global development goals. "



Chinese Ambassador to Italy Li Junhua (R) presents the certificate to Juan Lucas Restrepo, director general of the Alliance of Bioversity International and International Center for Tropical Agriculture (CIAT), at the Chinese Embassy in Rome, on May 31, 2022. (PHOTO: The Chinese Embassy in Italy)

The Alliance of Bioversity International and CIAT have expanded their partnership with China to include South-South collaboration, such as establishing the Alliance Asia Pacific Center and promoting cassava cultivation in Southeast Asia and Africa. "Collaborating with China and with other South-South regional fora has allowed us to promote and sustain agricultural development in China and elsewhere," he said, adding that efforts toward further cooperation are progressing. Moreover, Restrepo said that President Xi Jinping's proposal for the Global Development Initiative in 2021 could, "Facilitate closer relationships with Chinese partners for an increase in knowledge and technology transfer in China and the region." Restrepo stressed that they are willing to be part of the practice for building a community with a shared future for mankind. "We are ready to be part of such a community, because it's the only way to address challenges. We really need to come together, and sometimes leave aside politics, ideology, etc., commit to very specific outcomes and targets that really allow us to face this enormous pressure the food system is getting," he said.

Nowadays, the majority of tropical agricultural countries are located in less developed regions. According to the World Bank, agricultural GDP growth is two to four times more effective in reducing poverty than growth in other sectors. He lauded China's accomplishment in utilizing agricultural science and technology for poverty reduction, adding that, "It can be an example to many countries that are taking a value chain approach to promote food system resilience and improve livelihoods for farmers."

In addition, he believes that, "Chinese research on tropical agriculture will prove to be instrumental in the future, as doubling investments in technology and innovation is the key to the transformation and development of food systems."

Established by China's State Council in 1994, the International Science and Technology Cooperation Award is a state-level annual award presented to foreign experts or organizations that have made significant contributions to the development of science and technology in China. In 2020, eight foreign experts and one international organization were recognized for their active engagement with Chinese scientists.

Chinese Vaccines' Major Role in Global Fight Against COVID-19

By Staff Reporters

Response to the continuing COVID-19 pandemic and equitable access to COVID-19 vaccines, were major issues for attendants from across the global at this year's World Health Assembly.

Being described as a global public good, COVID-19 vaccines play a crucial role in ending the pandemic. However, almost one billion people in lower-income countries remain unvaccinated as of May 22, compared to 80 percent in high-income countries who had received at least a single dose, according to WHO.

No one is safe until everyone is safe. To get vaccine protection is the way to keep everyone safe, Zheng Zhijie, chief representative of the Bill & Melinda Gates Foundation to China, said during an online seminar held on June 10.

Official data shows that China has provided two billion doses of COVID-19 vaccines to more than 120 countries and international organizations for the global COVID-19 response. To date, three kinds of Chinese COVID-19 vaccines have got emergency use approval from WHO.

Moreover, China pledged 100 million USD to help fund GAVI COVAX Advance Market Commitment, a financing mechanism that aims to provide donor-funded doses of COVID-19 vaccines to cover the population across low- and middle-income countries.

"This is the mechanism we use to supply doses for the 92 lower-income countries around the world that make up about half of global population," said Dr. Seth Berkley, CEO of the GAVI Alliance, adding that "It puts China the most significant funders of COVAX (the global vaccine programme run by GAVI and the WHO)."

According to Berkley, almost 220 million doses of Chinese COVID-19 vaccines have reached 50 countries, becoming particularly crucial in 2021 when global vaccine supply was particularly tight.

"Thanks to the support of donors like China, and manufactures including Sinovac and Sinopharm, COVAX has shipped now over 1.5 billion doses of COVID-19 vaccine to 146 countries and territories," said Berkley.

Though progresses have been made, the number of countries with vaccination coverage under 10 percent of the population has decreased from 34 in January to 18 today, COVAX has been calling on countries to urgently act on closing the global vaccine equity gap, by building a global procurement, shipment, and delivery system.

China can play a major role in this effort, continuingly contribute to financing, technical assistance, and help with vaccine supply, said Berkley.

Service Info

4th 'Tianjin in My Eyes' Photo Contest Open

By Staff Reporters

According to Tianjin Municipal Science and Technology Bureau (TMSTB), the fourth "Tianjin in My Eyes" photography contest themed "My experience in Tianjin, witnessing development, and the deepening of friendship" began on June 6. The competition invites expats working in Tianjin, or those concerned about Tianjin's development, to submit photos about the city's urban landscape.

Co-organized by TMSTB and *Science and Technology Daily*, the competition aims to reveal a real, three-dimensional and comprehensive Tianjin to the world, enhance foreigners' sense of integration and belonging, and build bridges to bolster friendship.

The photographs are divided into four categories, namely the Cityscape, Lifestyle, On-the-spot News and Technological Innovation. Cityscape mainly reflects Tianjin's natural scenery, urban style and development achievements. Lifestyle mainly reflects the daily work, life and spiritual outlook of citizens and expats in Tianjin. On-the-spot News encompasses major events and special activities from a documentary perspective, and Technological Innovation records Tianjin's achievements in various aspects of scientific and technological innovation.

Photographs (no less than 2M pixel) are required to be sent to skjjyzc@tj.gov.cn no later than July 10. The award-winning works will be exhibited both online and offline, and recommended for publishing in *Science and Technology Daily (Weekly Edition)* and on its website.

For further information please contact *skjjyzc@tj.gov.cn*.

Sichuan's New Policy on Foreign Experts

By TU Yulu & CHEN Ke

In order to further refine the criteria for identifying foreign high-level talent and provide more effective services and management, a new policy was recently released by Sichuan's provincial authority.

Foreigners working in China are divided into three categories: A, B and C, with high-level foreign talent falling into Category A.

According to Sichuan's new policy, known as Sichuan Foreign High-Level Talent Identification and Management Measures, Category A is further divided into A1, A2 and A3 based on individual achievements.

Specifically, A1 emphasizes national talent programs and government awards, as well as internationally recognized top-level achievements.

A2 covers provincial and ministerial talent programs, as well as internationally recognized talent with high levels of professional achievements and certain senior management positions.

A3 focuses on innovators, entrepreneurs and upcoming young talent, especially those with high-tech invention patents and entrepreneurial venture capital, young people with doctorates and post-doctors.

According to the Measures, foreign experts working in enterprises, institutions and social organizations, or founding enterprises in Sichuan province, and making positive contributions to local economic and social development, are all eligible to apply for recognition.

Foreigners being recognized as high-level experts in Sichuan province will be subject to dynamic management, and their designation will be valid for five years. The relevant departments will provide preferential policies and services for identified high-level foreign experts in various aspects, such as opening a green channel for their work permits, and providing advice and services for their innovation skills and entrepreneurship in terms of scientific research project application, legal services, business counseling, investment and financing.

Traditional Eastern Wisdom

The Man Ignited the Dream to Space

The Statue of Wan Hu. (PHOTO: VCG)

In the 1970s, the International Astronomical Union (IAU) named a lunar crater after Ming Dynasty official Wan Hoo, (also known as Wan Hu), in recognition of his daring attempt at space travel. This historical figure may have led us to imagine that space exploration began far earlier than we believe.

Although the date of his exploration is uncertain (many accounts place him in the 16th century), the majority of sources agreed on his mode of flight. Wan Hu decided to take advantage of China's advanced power and fireworks technology to launch himself into outer space. He had a chair built with 47 "flame rockets" attached. On the day of launching, Wan Hu climbed into his rocket chair and held one massive kite-style parachute, to allow him to fly safely once successfully reaching the heavens. Despite the fact that this seems extremely perilous, Wan Hu would not be discouraged from his goal. Given that there was no aviation technology at the time, his design was remarkably innovative and reasonable. Today the experiment technique seems obvious to modern people, and his quest for sci-tech innovation lives on.

Nobody knows with certainty what happened to Wan Hu and whether or not he actually succeeded, but his tale, and rather risky attempt to launch himself into space, has motivated many to pursue what was once thought of as unattainable. As humanity progresses upwards and outwards into the cosmos, Wan Hu's desire of fulfilling his dream has been realized by numerous people many years later.

The legend of Wan Hu was widely disseminated in the book *Rockets and Jets* by American author Herbert S. Zim in 1945.

Tracing Chinese Civilization via Sci–tech

From page 1

Other hi-tech approaches and facilities used in general archaeological work include carbon-14 dating, synchrotron light source and drones with LIDAR mapping system.

The importance of sci-tech approaches in archaeological work was further emphasized in a plan for archaeological work in the 14th Five-Year Plan period (2021-2025), released by the National Cultural Heritage Administration this April.

According to the plan, the key tasks in archaeological work are to reinforce the R&D of new technologies and the improvement and upgrade of equipment, while also organizing specific R&D projects in key technologies, like archaeology via aerial remote sensing, and prepare for reference materials for inorganic cultural relic analysis, in order to effectively expand the range and depth of archaeological work with the latest sci-tech approaches.

Protecting relics via new technologies

New technologies are playing important roles in protection of cultural relics.

Instant protection for historical remains is crucial when they are first dug out of the earth, as they are delicate due to the long-time burial. The weather, including temperature and humidity, may also cause damage.

During the work at Sanxingdui Ruins site in southwest China's Sichuan province, archaeologists used 3D printing to protect the newly discovered bronzeware. They first printed a model of the bronzeware, then covered the model with congealed silica gel. A protection case was formed when the gel dried. The actual bronzeware was then placed in this protective case.

"To my knowledge, it is the first time that 3D printing is used to protect newly unearthed bronzeware, which could effectively avoid possible damage to the bronzeware. This innovative approach deserves approval," said Wang Wei, director with Academic Division of History under the Chinese Academy of Social Sciences.

Preventive measures are also taken to protect relics. Internet of Things (IoT) is used by Dunhuang Academy to conduct preventive protection for caves. IoT monitoring equipment has been installed both inside and outside the renowned Mogao Grottoes in Dunhuang, northwest China's Gansu province, which can monitor in real time the temperature, relative humidity and carbon dioxide in the cave and the weather outside the cave.

When the number of visitors and the carbon dioxide index peak, warning lights will be turned on, alerting staff to take measures to bring the indexes back to normal.

Presentation and transmission of the legacies

Not everyone has the opportunity to personally experience legendary cultural heritage sites. However, now sci-tech enables the borderless transmission of the legacy of such sites.

A project called Digital Dunhuang was initiated to realize the permanent storage of relics at the Dunhuang caves with the help of information technology, more than 30 years ago.

In May 2022, researchers completed the digital acquisition of murals in 260 caves and more than 500 movable relics, the 3D reconstruction of seven large sites and over 40 painted sculptures, and the production of panorama programs of more than 140 caves of the Mogao Grottoes.

The Digital Dunhuang website now provides high definition images of 30 entire caves in Dunhuang, with descriptions both in Chinese and English, and has had more than 15 million views from 55 countries.

Science and technology have played an important role in the entire process of discovering, protecting and spreading knowledge of cultural relics. Further strengthening of sci-tech innovation in archaeological work will increase contributions to the tracing and transmitting of Chinese and global civilizations as a whole.

Photo News

A tea production system in Anxi, east China's Fujian province was listed among the Globally Important Agricultural Heritage Systems by the Food and Agriculture Organization of the United Nations on May 20. The photo shows a tea plantation in Anxi, Fujian province. (PHOTO: XINHUA)