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## China Remains Bright Spot in Global Openness

By LIANG Yilian & ZHANG Jiaxin

At the ongoing 7th China International Import Expo (CIIE) in Shanghai, China has reaffirmed its commitment to high-level economic opening up and inclusivity.

The *World Openness Report 2024* released on November 5 at the 7th Hongqiao International Economic Forum, a central event of the expo, found things to be optimistic, especially with China's performance, despite the current negative trends in the world economy.

However, it also sounded a note of warning. It said the World Openness Index, assessing the openness levels of 129 economies from 2008 to 2023, showed that the worldwide landscape of openness had declined by 0.12 percent in 2023, indicating mounting challenges to openness worldwide.

In 2023, the world openness policy index rose by 0.7 percent, but the world openness performance index fell by one percent, underscoring a cooling global environment for open cooperation. This decline, accompanied by increased obstacles, highlights the critical need for renewed collaboration and policy innovation.

However, China remained a bright exception, showing significant progress in its opening up. From 2008 to 2023, China's openness index rose from 0.6789 to 0.7596, an increase of 11.89 percent, placing it among the top economies globally in terms of growth rate.

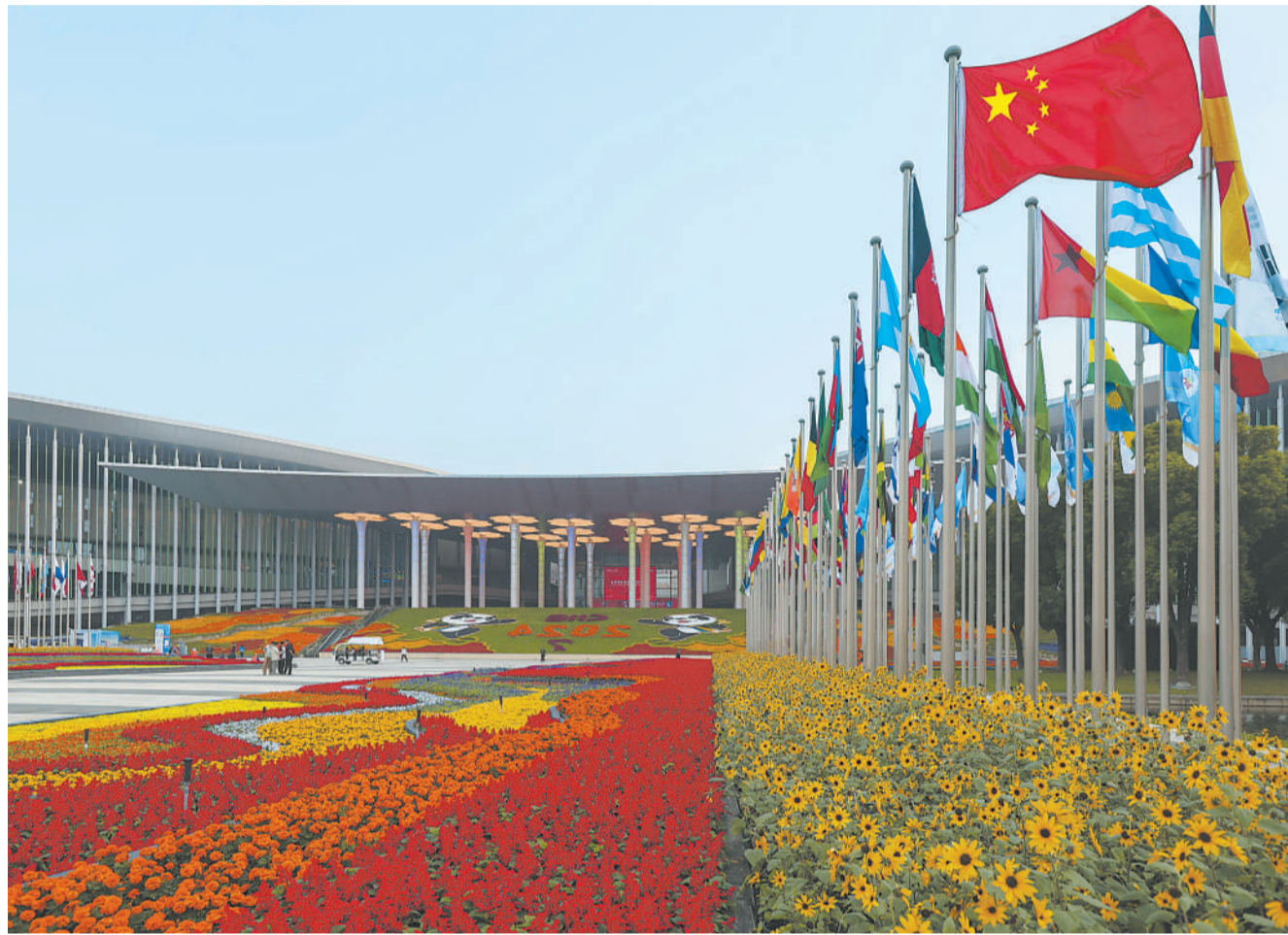
"China's opening up is a model for mutually beneficial engagement. In the current complex and ever-changing international landscape, events like the CIIE have become shining symbols of China's commitment to opening up," Qu Weixi, director of the Research Center for the Hongqiao International Economic Forum, said.

Cecilia Ugaz Estrada, managing director of the directorate of strategic planning programming and policy of United Nations Industrial Development Organization, said the *World Openness Report 2024* points to digitalization and energy transition as the two new driving forces of global economic growth.

"These megatrends present significant challenges, particularly for developing countries, but at the same time open new avenues for industrial development and international cooperation," she said.

The report identified digital opening up, environmental and climate governance, and the service sector as sectors where international collaboration has gained momentum in the face of rising protectionism. It said these sectors hold potential for global growth and cooperation.

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A view of the National Exhibition and Convention Center (Shanghai), the main venue of the 7th China International Import Expo in east China's Shanghai, November 4, 2024. (PHOTO: XINHUA)

## Editor's Pick

## Quantum Leap in Core Tech Heralds New Era

By LIN Yuchen

China's advancements in core technologies are leading the nation into a new chapter of high-tech innovation. From developing indigenous foundational software to producing the domestically manufactured C919 large passenger aircraft, China has made great strides in high-quality development across multiple industries.

### C919 sparks development

In October, 10 C919 aircraft were integrated into China's thriving aviation network, connecting major cities like Beijing, Shanghai, Chengdu, and Xi'an.

The C919, the first large commercial jet independently developed in China according to international airworthiness standards, marks a milestone for the na-

tion's aviation industry.

Zhao Kelian, deputy chief engineer of the C919, was highly emotional when boarding the aircraft on its inaugural flight, paying tribute to the dedication of multiple generations of Chinese engineers who turned this long-standing dream into reality.

The journey of developing a large commercial aircraft began in the 1970s and 1980s with the Y-10 aircraft. The dream gained momentum with the official launch of the C919 project in 2007, followed by the establishment of the Commercial Aircraft Corporation of China (COMAC) in 2008.

The C919's development process faced immense technical and logistical challenges. Over 1,000 companies and more than 300,000 individuals from

over 20 provinces in China contributed to the project. From its assembly line debut in 2015, to its successful test flight in 2017, and finally to its commercial certification and deployment in 2023, the C919 is a testament to Chinese engineering resilience and the power of national collaboration.

### HarmonyOS leading the Internet of everything

Huawei recently released its native operating system HarmonyOS NEXT, marking a pivotal moment in China's software industry. With over 1.1 billion ecosystem devices and more than 10 million native applications, HarmonyOS is now the second-largest operating system in China's smart terminal market, surpassing iOS in share.

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## Sustainable Agriculture Across the Pacific Blossoms

### International Cooperation

By QI Liming

In recent years, China and Brazil have strengthened cooperation on sustainable agriculture, including planting "zero deforestation and zero vegetation destruction" soybeans, which means that soybean fields do not cause any deforestation or vegetation destruction in the production process.

To help curb deforestation in Brazil's soybean production, China has helped Brazil conduct land monitoring on some farms, draw risk maps and establish a "soybean traceability system" based on information provided by suppliers. Local farmers have also been trained on how to plant "zero deforestation" soybeans.

Giselle is a partner of a local farm in Brazil that grows about 1,000 hectares of soybeans each year. Since 2014, Giselle's farm has been a supplier to China. "Sustainability is one of the ideas of our farm, and China matches our values, so we chose to cooperate with it," she said.

At the 6th China International Import Expo in 2023, COFCO International and Modern Farming Co., Ltd. reached a cooperation agreement on the procurement of "zero deforestation" Brazilian soybeans. The World Economic Forum (WEF) Tropical Forest Alliance, which facilitated the partnership, said the soybean order was a milestone.

"The Chinese market plays an important role in the global agricultural trade and can strongly promote the green transformation of the global agricultural value chain," Jack Hurd, executive director for the Tropical Forest Alliance of the WEF, said.

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## WEEKLY REVIEW

### China's 'Artificial Sun' Starts New Experiments

China's new-generation "artificial sun" Huanliu-3 tokamak has launched a new round of physical experiments, incorporating for the first time a digital twin system independently developed by the China National Nuclear Corporation.

### Breakthrough in Thyroid Cancer Imaging

Chinese researchers have developed an imaging technique for accurately locating metastatic lesions in medullary thyroid carcinoma (MTC), using a new class of radiopharmaceuticals called covalent targeted radioligands (CTR). This approach could improve diagnosis and treatment precision for MTC.

### China Launches Largest Carbon-Fiber Ferry

On November 4, China launched the "New Pearl 3," a 500-seat carbon-fiber high-speed ferry in Guangzhou. Built with lithium batteries and solar panels, the vessel can run at a speed of up to 33 knots, saves fuel and has reduced emissions.

### New Molecule Synthesis Breaks Century-Old Chemistry Rule

According to *Live Science*, scientists have synthesized a type of molecule previously deemed too unstable, breaking the century-old Bredt's Rule, which prohibits double bonds at bridgehead positions in certain molecules, paving the way for new drug development.

### Ancient Maya City Found in Mexico Using Lidar

Researchers have uncovered a large, ancient Maya city called "Balamkú" on Mexico's Yucatan Peninsula using light detection and ranging (Lidar) technology. The site, includes pyramidal temples, dating back over 1,500 years to the Classic Period of Maya civilization.

### WHO Lists Top Pathogens Needing New Vaccines

On November 5, a new World Health Organization study identified 17 pathogens that regularly cause diseases in communities as top priorities for new vaccine development. This is the first global effort to systematically prioritize endemic pathogens based on criteria that included regional disease burden, antimicrobial resistance risk, and socioeconomic impact.

## New Graphic

### China's IoT Connections Expected to Exceed

3 Billion in 2024

By the end of July 2024

The total number of mobile communication base stations

11.93 million

By the end of August 2024

The number of IoT end users

2.565 billion

Source: White Paper on the Intelligently Interconnected Digital Economy  
Designed by YAO Yilu / Science and Technology Daily

WECHAT ACCOUNT



E-PAPER



## Shenzhou XVIII's Samples to Reveal Mysteries of Life Sciences

By Staff Reporters

In the early hours of November 4, the seventh batch of space science experiment samples from the Tiangong space station was successfully returned to Earth aboard the Shenzhou XVIII spacecraft.

The cargo included 55 kinds of scientific samples, representing 28 scientific research projects spanning several fields, including space life science, space material science, and microgravity combustion science. The total weight of the samples was approximately 34.6 kg.

Upon arrival, the life science experiment samples were transferred to the Technology and Engineering Center for Space Utilization at the Chinese Academy

of Sciences. The center will first assess the condition of the samples before distributing them to researchers for further study.

Among the life science specimens are methane-generating archaea, radiation-resistant microbes, and microorganisms that inhabit rocks. These samples will undergo extensive analysis, including metagenomic sequencing, phenotypic genetic analysis, and proteome and transcriptome studies.

Researchers aim to explore several important areas, including the material circulation mechanisms of aquatic ecosystems in space, with the goal of supporting the development of complex ecosystems capable of stable, long-term operation in space.

In addition, part of the returned

samples are high-temperature resistant alloys, fiber optics and optical coatings. Researchers will examine the structure, chemical composition, and distribution of these materials, studying the effects of microgravity on material growth, component segregation, and solidification defects. This research is crucial for advancing material manufacturing and its application in various high-tech fields, including the development of next-generation aero-turbine blades, space-based fiber lasers, and precision medicine repairs.

On October 30, China launched the Shenzhou XIX crewed spaceship, sending three astronauts, Cai Xuzhe, Song Lingdong and Wang Haoze, to its space station for another six-month mission.