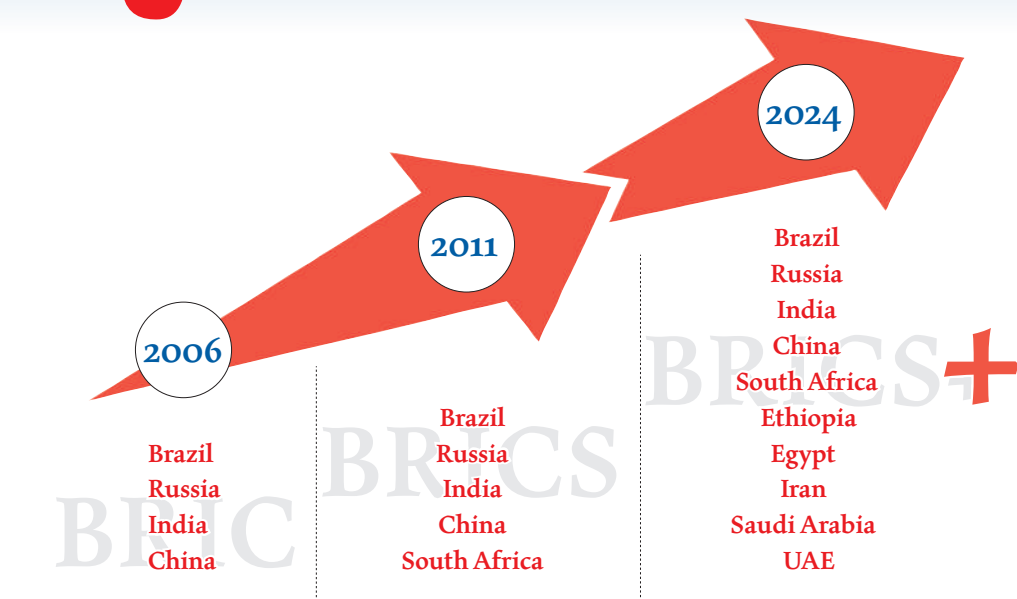


2-3

Sci-tech Elevates BRICS Cooperation to New Heights



Editor's Note:

From BRIC in 2006 to BRICS in 2011, and now with 10 member countries in 2024, BRICS has become an important platform for emerging markets and developing countries to strengthen solidarity and cooperation and safeguard common interests.

In 2013, China proposed the Belt and Road Initiative (BRI) to connect Asia with Africa and Europe via land and maritime, and five years later, the initiative was extended to South America. Some BRICS members have participated in BRI projects and their global competitiveness has been enhanced. In 2015, BRICS established the New Development Bank (NDB) to mobilize resources for infrastructure and sustainable development projects in emerging markets and developing countries.

The BRICS countries have launched numerous joint research projects across various cutting-edge fields, including information technology, biotechnology, green energy, and new materials R&D. Their open and inclusive approach to collaboration enables each country to leverage

its strength and accelerates the transformation of scientific and technological achievements into practical applications and productive outcomes. In tackling global issues like climate change and achieving sustainable development goals, they have shown a high degree of consistency and responsibility, working together to address challenges effectively.

Today, the world has become a community with a shared future in which we all have a huge stake for survival. As one of BRICS' founding members, China is willing to deepen solidarity and cooperation with other countries to push for a more just and equitable world. The first summit of BRICS countries after the expansion will be held in Kazan, Russia, from October 22nd to 24th. The main focus will be on strengthening political and security cooperation, enhancing economic and financial ties, and deepening cultural and people-to-people exchanges. In this section we review China's friendly cooperation with fellow BRICS countries both bilaterally and under the BRICS framework.

China and Russia

Benchmark for Partnerships

China and Russia set a model for a new type of international relations and relations between neighboring major countries.

Russian experts noted that the overall bilateral trade has shown steady growth, indicating a stable driving force behind the economic and trade cooperation between the two countries.

The 2024 China-Russia (Shenyang) Economic and Trade Cooperation Conference held in Shenyang in northeast China in January discussed corridor construction, import and export, cold chain warehousing, and financial services. The conference focused on 55 projects, with the agreements signed totaling 13.6 billion RMB.

Artyom Yakovlev, deputy dean of the Moscow School of Economics at Moscow State University, said Russia-China trade cooperation has a solid foundation, largely due to the complementary nature of their economies. China has been a key trade partner of Russia for over a decade.

Under the framework of the *Belt and Road Science, Technology, and Innovation Cooperation Action Plan*, China and Russia are promoting deep integration of science, technology, and the humanities.

The Russian High-level Science and Technology Experts China Tour held in central China's Hubei Province in September saw colleges and universities in Hubei, along with innovation institutions, reach 20 cooperation intentions with the Russian delegation for joint talent training and construction of scientific research platforms. Eight agreements were signed.

In space cooperation, the China National Space Administration and Russia's space agency Roscosmos signed an agreement in 2022 to strengthen bilateral space cooperation from 2023 to 2027. In June, Russian President Vladimir Putin signed a law approving a cooperation agreement between Russia and China on the establishment of an international scientific research station on the moon.

According to a China-Russia joint statement in March, the two sides will deepen mutual cooperation in the field of sci-tech innovation, expand talent exchanges, and focus on frontier areas of science and technology and joint research on common issues of global development. They will also explore new cooperation models in AI, the Internet of Things, 5G, the digital economy and low-carbon economy.

First proposed by Russia, BRICS is preparing a digital payment platform called BRICS Bridge which will complement the existing international payment mechanisms and enhance member states' resilience to external economic sanctions.

Promoting economic globalization is not an easy task. Through the BRI and BRICS, China and Russia have shown that cooperation has a greater effect than acting alone.



China and Brazil

Flourishing Sci-tech Cooperation

As the proverb goes, "Friendship is like wine — the older, the better." This sentiment was echoed by Brazilian President Luiz Inácio Lula da Silva during his visit to China last year, as he praised the Sino-Brazilian relationship and the cooperation with the BRICS nations.

Since its inception, BRICS has seen flourishing development, providing momentum for Brazil's socio-economic and sci-tech growth.

As China and Brazil celebrated the 50th anniversary of their diplomatic relations this year, their long-standing partnership in science and technology has taken center stage. The two countries have jointly established inter-governmental cooperation mechanisms, such as the Subcommittee on Science, Technology, and Innovation under the China-Brazil High-level Coordination and Cooperation Committee (COSBAN), and the China-Brazil High-level Dialogue on Science, Technology and Innovation. These frameworks support collaboration in building joint research platforms, conducting cooperative studies and facilitating exchanges among researchers. The two countries have built 10 joint laboratories and research centers, focusing on areas like clean energy, nanotechnology, and rail transit. Moreover, they have seen fruitful cooperation in space technology, fundamental sciences, climate change, biotechnology, and public health, demonstrating a shared commitment to advancing knowledge and addressing global challenges through joint efforts.

Over the past 36 years, China-Brazil aerospace cooperation has flourished, significantly benefiting both nations. Their aerospace partnership began in 1988 with the China-Brazil Earth Resources Satellite (CBERS) program, recognized as a "milestone in South-South cooperation in high technology."

This initiative uses satellite technology for environmental monitoring, disaster management, and agricultural planning. Clezio Marcos De Nardin, director of the Brazilian Institute of Space Research, emphasized the benefits this cooperation has brought to their people. To date, six satellites have been developed, with CBERS-04 and CBERS-04A currently in operation.

These satellites play crucial roles in water resource management, urban planning, and disaster monitoring, and during the severe flooding in Rio Grande do Sul this year, notably aided the government's rebuilding efforts. The program also supports the protection of the Amazon rainforests, called the "lungs of the earth."

The agricultural trade between the two nations has also expanded, and cooperation in agricultural technology has deepened.

In Brazil's northeastern town of Apodi, modern agricultural machinery is transforming small farms, thanks to the China-Brazil Agricultural Mechanization Cooperation Demonstration Project launched in February. The project focuses on precision sowing, fertilization, and drone-based pest control.

As major agricultural countries emphasizing sustainable development, China and Brazil are engaged in deep dialogue on enhancing the resilience of agricultural supply chains and promoting climate-smart agriculture. In April, the two countries released a joint statement to expand cooperation in sustainable and low-carbon agriculture and digital agriculture.

China and South Africa

A Golden Age of Collaboration

South Africa's avocado has found a steady market in China thanks to an agreement signed between the two countries in August 2023. Today avocado farming is a flourishing industry in South Africa, creating much-needed jobs for local people.

In addition to avocado, other South African products such as wine, rooibos tea, and aloe vera gel have become celebrity products in China, bought and sold online. Meanwhile, a large number of Chinese enterprises have also expanded their footprint in South Africa. The "made in South Africa" Chinese cars and home appliances are a hot favorite with African consumers.

This year marks the 26th anniversary of the diplomatic relations between China and South Africa. South Africa has been China's largest trading partner in Africa for 13 consecutive years.

Also as members of BRICS, the two countries have remained close. South Africa was the first African country to sign a Belt and Road cooperation document with China, and their cooperation at both governmental and non-governmental levels has been substantial.

In August 2023, China and South Africa signed 25 cooperation agreements, ranging from energy investment and digital industrialization to space cooperation.

One area of significant collaboration is renewable energy. South Africa has abundant solar and wind energy resources and Chinese companies are supporting the country's energy transition by undertaking a series of green energy projects there.

A notable example is the De Aar wind power project in De Aar town, which was connected to the grid in 2017 with a total installed capacity of 244,500 kilowatts. This project has alleviated South Africa's power shortages, boosted the local economy and contributed to environmental sustainability.

In early September, just ahead of the 2024 Summit of the Forum on China-Africa Cooperation (FOCAC), China and South Africa announced the establishment of a comprehensive strategic cooperative partnership in the new era.

On September 2, a memorandum of understanding was signed between the China Association for Science and Technology and South Africa's Ministry of Science and Innovation to deepen collaboration in science and technology and promote engineering and mathematics education. It will also lead to mutual recognition of each other's engineers, and encourage greater participation of women in science and technology.

According to a FOCAC partnership initiative for rural revitalization and people's wellbeing, China will build 100,000 mu (about 6,670 hectares) of standardized agriculture demonstration areas in Africa, send 500 agricultural experts to African countries, and build a China-Africa agricultural science and technology innovation alliance.

These efforts will encourage businesses from both China and South Africa to invest and establish ventures across borders, consolidating the foundation for long-term cooperation and mutual growth and contributing to the development of the Global South.



China and Ethiopia

Booming Sci-tech Exchanges

The Ethiopian Space Science and Geospatial Institute launched a "Ground Station as a Service" initiative earlier this year, offering data reception services to organizations and countries in need of satellite data based on their usage requirements. The initiative signifies the East African country's strides to tap the global satellite data market.

Ethiopia's first ever earth observatory satellite, the ETRSS-1, was launched into space from China in 2019. Its command and control center is located on the 3,200-meter-high hill of Entoto, a mountainous area on the outskirts of capital city Addis Ababa.

In 2021, Ethiopia opened a 7.3 meters multi-satellite tracking and data receiving ground station at the Entoto Observatory and Research Center. The state-of-the-art ground station receives high-quality data with resolution up to 0.5 meters from Earth Observation (EO) satellites including the China-Brazil Earth Resources Satellite 4, China's high-definition EO Gaofen 1, Gaofen 3 and Gaofen 5 remote sensing satellites, and the SuperView-1.

This is a vivid example of the deepening cooperation in space technology as well as the flourishing sci-tech cooperation between China and Ethiopia in recent years.

At the third Ethio-China Joint Committee Meeting on Scientific and Technological Cooperation held in Addis Ababa in July, the two sides agreed to further strengthen cooperation in technology transfer, human resources development, and the establishment of scientific laboratories.

China has been a reliable partner as Ethiopia seeks to create a knowledge-based economy by promoting science, technology and innovation, said Bayissa Bedada, Ethiopia's State Minister of Innovation and Technology, adding that China has also been supporting Ethiopia in establishing research institutions, industrial and technology parks as well as incubation centers.

The two parties recently signed a series of bilateral cooperation documents on the Belt and Road Initiative cooperation, economic and trade cooperation, space technology, and Earth science. The documents also cover green and low-carbon development, rural development, and people's livelihoods, injecting new momentum into their all-weather strategic partnership.



China and Egypt

A Model of Mutual Trust

China and Egypt celebrate the 10th anniversary of their comprehensive strategic partnership this year, and it is also Egypt's first year as a BRICS member. Over the past decade, China-Egypt relations have become a vivid example of China's cooperation with Arab, African, Islamic and developing countries for mutual benefit and win-win results.

When China proposed the BRI in 2013, Egypt was one of the first countries to join it. Pragmatic economic cooperation between China and Egypt has yielded mutual benefits.

Egypt's first electrified light rail transit system, jointly built by Chinese and Egyptian companies, is a BRI success story, reflecting the vitality of the initiative and the potential of Chinese railway technology exports to Africa.

The Exadia 500kV substation project in Suez province in Egypt has been running for more than a year, ensuring the stability and reliability of the power grid and easing shortages in the region's electricity consumption.

A new large container terminal at the Ain Sokhna Port on the Red Sea, developed by an international consortium led by China's Hutchison Ports, will be operational by 2025. The terminal, 2,600 meters long and with a total area of 1.6 million square meters, will be Egypt's largest container terminal, making an important contribution to the development of the Suez Canal corridor.

China launched Egypt's remote sensing satellite MisrSat-2 aboard its Long March-2C carrier rocket in 2023. The Earth observation satellite is being used by Egypt to improve its land and resource management, water conservation, agricultural productivity and coastal change monitoring.

China sees Egypt as an important investment destination. Chinese investors are present in the free industrial zones being built in the country, such as New Alamein City and the Suez Canal Economic Zone. China is one of Egypt's largest trading partners and Chinese exports to Egypt have grown at an average annual rate of more than 14 percent over the past 25 years. Egypt's exports to China have grown at an average annual rate of nearly 18 percent over the same period.

Egypt's membership in BRICS officially came into effect this January. It is expected to give momentum to the development of Egypt and bring in benefits for the country.

Egypt's trade exchanges with BRICS members, including founding and new members, amount to 46.673 billion USD — more than a third of its total external trade, according to official data.

Egypt's accession to BRICS will boost investment, provide new export opportunities, and increase foreign investments, as well as deepen economic cooperation and bilateral relations.

China and Saudi Arabia

Joint Efforts for Vision 2030

Situated along the coast of the Red Sea in Saudi Arabia, the 28,000-square-kilometer Red Sea project is a "regenerative tourism destination" poised to be fully powered by 100 percent renewable energy. As one of the highlights of Saudi Arabia's Vision 2030, the project will comprise 50 hotels and up to 1,000 residences by 2030 as Saudi Arabia aims to diversify its economy away from oil dependence and improve local environment.

Chinese companies are contributing to the initiative. For example, China Harbour Engineering Company has undertaken several construction projects including environmental improvement, piling construction for a hotel, and access channel dredging. Huawei is in charge of constructing a photovoltaic storage micro-grid, which will be the largest station in the world, featuring a 400MW solar PV system and a 1.3GWh energy storage system.

Since China and Saudi Arabia established a comprehensive strategic partnership in 2016, they have strengthened their energy cooperation and promoted the development of renewable energy.

China is Saudi Arabia's most important crude oil export market and its largest trading partner. Stable cooperation in oil trade not only ensures a steady supply of petroleum for China but also promotes economic growth in Saudi Arabia.

The Yanbu Aramco Sinopec Refining Company (YASREF) Ltd., the first overseas joint venture between China's largest oil refiner Sinopec and Saudi Arabia's oil giant Aramco, is a world-class, full-conversion refinery in the Yanbu Industrial City in western Saudi Arabia.

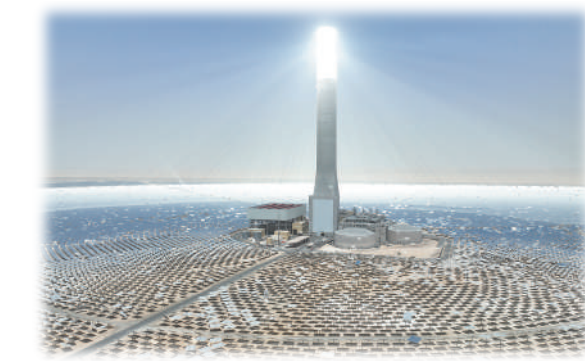
According to Sinopec, since its operation in 2016, YASREF has not only generated substantial economic benefits for Saudi Arabia, but also nurtured skilled technicians and management professionals and created multiple jobs.

In 2022, China and Saudi Arabia signed an agreement to synergize the BRI with Vision 2030 to deepen cooperation in such fields as economy, trade, transportation, infrastructure and energy. In January 2024, Saudi Arabia along with Egypt, Ethiopia, Iran and the United Arab Emirates officially joined BRICS as full members, making a historic, new starting point for cooperation.

At a press conference ahead of the International Conference on Combating Sand and Dust Storms in 2023, Ali Salajegheh, then Iran's vice president and head of the department of environment, highlighted the "good capacity" for environmental cooperation between Iran and China, especially in combating sand and dust storms.

He praised China's experience and efforts in desert greening, and said there are regular exchanges between climate experts of the two countries, particularly in fighting sand and dust storms.

During a BRICS sideline meeting in September, Ali Ahmadian, secretary of Iran's Supreme National Security Council, underscored the new Iranian government's willingness to work with China to implement the Iran-China comprehensive cooperation plan and enhance overall practical collaboration in economic and trade investment, digital technology, cultural tourism, and other areas.



China and UAE

New Partner in BRICS

The United Arab Emirates (UAE) has always participated in BRICS cooperation.

In September 2021, the UAE, together with Uruguay and Bangladesh, became the first batch of new NDB members after the expansion of the bank.

Six years ago, when China proposed the "BRICS+" cooperation model, the UAE was the first to respond and participate, demonstrating its support for BRICS cooperation with practical actions.

This year marks the 40th anniversary of the establishment of diplomatic relations between China and the UAE.

In recent years, they have become more closely connected, with frequent cooperation in energy infrastructure, engineering contracting, scientific and technological innovation, aerospace and bio-medicine.

According to the Dubai Chamber of Commerce and Industry, by the first half of 2024, it had about 5,400 Chinese companies registered as active members, showing the strong interest of the Chinese business community in Dubai.

From 2003 to 2023, UAE investment flows to China amounted to 11.9 billion USD in total, covering sectors such as telecommunications, renewable energy, transport and storage, hotels and tourism, and rubber. Chinese investment flows to the UAE totaled 7.7 billion USD during the same period.

The two countries have more than 148 bilateral agreements and MoUs in various fields.

The UAE joined the BRI in 2018 and its commitment to economic development and international cooperation is highlighted by its participation in the initiative's ninth summit in Hong Kong in September, themed "Building a Connected, Innovative and Green Belt and Road." Omar Sultan Al Olama, the UAE minister of state for AI, digital economy and remote work applications in the UAE, said the UAE and China are models of economic and trade cooperation and cultural exchanges. More and more companies from all over the world have chosen the UAE and are going global from the UAE. "We look forward to more Chinese companies using the UAE as a platform to achieve greater development," he said.

Written by ZHONG Jianli, CHEN Chunyuo, BI Weizi, LI Limax, LIN Yuchen, GONG Qian, TANG Zhenxiao, CEN Yingjie, LONG Yun, YU Haoyuan
 Edited by YU Haoyuan, LONG Yun, SONG Ziyao
 Planned by WANG Junming, HE Yi, FANG Linlin