



POLICY BOOSTING PRIVATE ECONOMY

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CHINA'S GRAIN HARVEST PROVIDES GLOBAL STABILITY

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Science and Technology Daily

VOL.3-NO.104

THURSDAY, AUGUST 3, 2023

WEEKLY EDITION

China Sees Stable Rural Growth in H 1

By WANG Xiaoxia

China's agriculture and rural economy achieved stable progress in the first half of this year, despite the extreme weather conditions, said the Ministry of Agriculture and Rural Affairs (MARA) at a recent press conference.

According to the National Bureau of Statistics (NBS), this year's summer grain output of 146 million tons was the second highest in history, a slight decline of 0.9 percent year-on-year.

The role of technology has been highlighted in pushing forward China's agricultural modernization and green transformation. China built about 2.44 million hectares of high-standard farmland and about 560,000 hectares of water-saving irrigation areas in the first half of this year, said Zeng Yande, director general of the development and planning department at MARA

Meanwhile, more advanced machines are being developed including 320 - horsepower tractors and electric - drive precise planters, along with acceleration of the development of special machines for hills and mountains, added Zeng.

Apart from agriculture production, rural industries continued to grow, providing more opportunities for farmers to increase their employment and income.

While the agricultural product processing industry developed steadily, new industries and new forms of business made rapid progress. By the first half of 2023, China had built 50 national modern agricultural industrial parks, 40 rural industrial clusters and 200 towns with strong agricultural industries, thus more farmers can find jobs around their hometowns, said Zeng.

NBS data shows that the per capita disposable income of rural residents reached 10,551 RMB (about 1,469 USD) in the first half of this year, up 7.2 percent in real terms, which is 2.5 percentage points higher than that of urban residents.

Another notable performance attributes to China's imports and exports of farm produce, which totaled 171.76 billion USD, rising 6.4 percent year-on-year in the first half of this year, official data shows.

Moreover, with deepening reform of rural governance and the construction of infrastructure projects, rural residents are benefitting from an improved environment and welfare, said Zeng.

WEEKLY REVIEW

Magnetar FRB and Pulsar Phase Mechanisms Revealed

Using the Five -hundred -meter Aperture Spherical radio Telescope (FAST), an international research team reported in the July 28 issue of the journal *Science Advances* that fast radio bursts (FRB) and pulses originate from different locations within the magnetar magnetosphere, suggesting possibly different emission mechanisms between bursts and pulses.

10,000 China-Europe Freight Train Trips

The China-Europe freight trains made the 10,000th trip this year on July 29. China State Railway Group said the milestone was achieved 22 days earlier than last year. More than 1.08 million TEUs of goods were transported, a 27 percent increase year on year.

Major PV Product Output Rises by over 60%

According to China Photovoltaic (PV) Industry Association, the major PV products witnessed a year-on-year growth of over 60 percent in H1. More than 600,000 tons of polysilicon, 250 GW of silicon wafers and 220 GW of battery wafers were produced.

Key Gene of Rice Related to Yield Increase Found

A research team led by a Chinese scientist discovered a key gene called GY3 in rice. By adjusting cytokinin synthesis, GY3 increased the grain yield of rice by seven to 15 percent in the test zone. The research results were recently published in *Nature Genetics* online.



An athlete interacts with a Sichuan opera performer at the gala held during the Chengdu Universiade. (PHOTO: XINHUA)

International Cooperation

TT-1's Operation Augurs Well for Sino-Thai Collaboration

By LIN Yuchen

Thailand Tokamak 1 (TT-1), jointly developed by the Institute of Plasma Physics, Chinese Academy of Sciences (abbreviated as ASIPP) and Thailand Institute of Nuclear Technology (TINT), began to operate on July 25, after being transported to Thailand in January as a donation from ASIPP and beginning its trial operation in May this year.

Tokamak refers to a device and related technology designed to utilize magnetic confinement to achieve controlled nuclear fusion, and is a key direction in the international exploration of obtaining clean energy from nuclear fusion.

TT-1 is Thailand's first experimental tokamak device, as well as the first of its kind for the Association of Southeast Asian Nations (ASEAN). It is expected to drive the field of nuclear fusion applications in Thailand and help the country establish a center for tokamak research and development in the ASEAN region.

The tokamak device is based on the fully upgraded and modified version of the second-generation tokamak HT-6M developed by ASIPP in 1984.

China is at an advanced level of nuclear fusion research. The Experimental Advanced Superconducting Tokamak based in Hefei set a world record this April by realizing 403 seconds of plasma

operation in long - pulse, high - confinement mode, breaking its previous record of 101 seconds set in May 2021.

In August 2017, ASIPP and TINT signed a cooperation agreement, deciding to deliver the HT-6M device to TINT and provide all-round assistance to TINT, including device adjustments and fusion expertise training. The device was later shipped to Thailand last December.

The completion of the TT-1 device and its official launching into experimental operation is a fruitful outcome of Sino-Thai fusion cooperation in recent years and one of the highlights of Sino-Thai cooperation in science and technology.

Editor's Pick

Innovative Tech Builds New Harbor in Stormy Water

By HU Dingkun, YU Ziyue & LIANG Yilian

Ashdod, a vital port city on the eastern coast of the Mediterranean Sea in southern Israel, has seen a monumental upgrade of its infrastructure, with the construction of the epic Ashdod New Port project. Initiated in September 2014, and built by Pan Mediterranean Engineering Company (PMEC), a subsidiary company of China Harbor Engineering Company Ltd (CHEC), the port was delivered to the Israeli government ahead of schedule in May 2021. This ambitious infrastructure undertaking, backed by a 900 million USD investment, spans 2,363 meters of shoreline, including a 1,243-meter-long container terminal, and boasts an annual container throughput of two million TEUs.

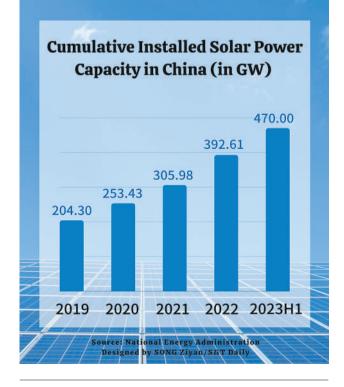
The completion of this port significantly enhanced Israel's maritime capabilities, earning praise from Israeli Prime Minister Benjamin Netanyahu and former Transport Minister Yisrael Katz, who hailed it as one of the nation's "seven wonders."

The super platform conquers turbulent seas

Constructing the Ashdod New Port was not a small feat, as the region's sea conditions proved to be among the most challenging encountered by PMEC, which collaborated on this large-scale infrastructure project between China and Israel. The area's complex "long-period wave effect" and powerful surge waves closer to the coast presented severe obstacles, causing ships to experience drastic see-sawing, sometimes even reaching zero gravity. These factors significantly disrupted offshore construction, necessitating sheltering in the harbor during winter storms when wave heights could exceed 10 meters.

To tackle this challenge, the construction team focused on building a breakwater to protect the port. The soft seabed required reinforcement to support the weight of the breakwater, however, traditional methods like excavation and embankments were impractical due to poor efficiency and safety. Innovatively, PMEC developed the world's first "super top lifting platform" designed for constructing "submarine gravel piles." This groundbreaking platform, supported by four adjustable legs that could withstand turbulent waves, injected gravel into the seabed to create thousands of densely spaced piles, providing a solid foundation for the breakwater. See page 2

New Graphic



WECHAT ACCOUNT

E-PAPER





China-Africa STI Cooperation Deepened

By Staff Reporters

Just before the 11th BRICS Science, Technology and Innovation Ministerial Meeting, You Wenze, the Chinese Consul General in Cape Town, South Africa, published an article on *Cape Time*, in which he introduced the achievements China has made in science, technology and innovation (STI), summarized the fruits of sci - tech cooperation between China and Africa, and expressed China's confidence in continuing strengthening the sci - tech cooperation with African countries, including South Africa.

You said in the article that China is not only an important participant in international frontier innovation, but also an important contributor to solving global problems and challenges.

China has established sci-tech cooperation relations with more than 160 countries and regions, and signed 116 intergovernmental agreements on sci-tech

cooperation.

Last year, 48 intergovernmental S&T cooperation meetings were held, 25 new and renewed S&T cooperation documents were signed, and pragmatic cooperations were carried out with many countries, including South Africa and other countries on the continent, in fields such as pandemic control, biodiversity, climate change and clean energy.

With sci-tech support, more countries and their people benefited from poverty alleviation, business start-ups, technology transfer and spatial information services.

China has taken an active part in global governance and made its own proposals and contributions to the common challenges of humankind, including the launch of a BRICS vaccine R&D center, as well as leading the Green Powered Future Mission.

Meanwhile, Chinese scientists have participated in international scientific

programs and projects such as the International Thermonuclear Experimental Reactor and the Square Kilometer Array radio telescope.

China has been continuously deepening China-Africa cooperation in STI, shared sci-tech achievements and experience in innovative development with African countries, and promoted the economic and social development of African countries.

China will work with African countries to further strengthen strategic guidance, build consensus on innovation cooperation, consolidate people-topeople exchanges, expand the circle of China-Africa friends in science and technology, build cooperation platforms, upgrade scientific research cooperation, focus on common development, accelerate the implementation of innovation results, and strive to build a high-level China-Africa community with a shared future.