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WEEKLY EDITION

## International Cooperation

### China, Vietnam See New Chapter of Relations

By Staff Reporters

In the first 11 months of this year, the total import and export value of Sino-Vietnam trade in goods was 1.45 trillion RMB, an increase of 3.6 percent. The import and export value in November was 162 billion RMB, a year-on-year increase of 12.5 percent, according to data released by China's General Administration of Customs on December 12.

This year marks the 15th anniversary of the Sino-Vietnamese comprehensive strategic cooperative partnership, and the bilateral trade continues to maintain a positive trend.

#### Bilateral trade soars

For many years, China has been Vietnam's largest trading partner and import market. The Association of South East Asian Nations (ASEAN) is now China's largest trading partner and Vietnam is China's largest trading partner in ASEAN.

Specifically, the cooperation between China and Vietnam in the industrial chain and supply chain has become increasingly close. In the first 11 months of this year, imports and exports of intermediate goods between China and Vietnam reached 1.01 trillion RMB, accounting for 69.8 percent of China-Vietnam trade. Among them, flat panel display modules, audio and video equipment, and lithium battery products increased by 12.3 percent, 17.1 percent and 10.8 percent respectively.

#### Complementary partnership

Cooperation between China and Vietnam in agriculture is continuously expanding. In the first 11 months of this year, China imported 44.6 billion RMB worth of Vietnamese agricultural products, up 20.3 percent. And in turn, Chinese vegetables and temperate fruits are also welcomed by the Vietnamese market. In the first 11 months, the total value of China's agricultural exports to Vietnam was 34.3 billion RMB, up 3.1 percent.

"Cooperation in traditional areas including agricultural products, infrastructure construction and raw materials reflects the highly complementary nature of economic and trade cooperation between China and Vietnam," Xu Liping, director of the Center for Southeast Asian Studies at the Chinese Academy of Social Sciences, told *Global Times*.

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With a length of 179.8 meters and a width of 32.8 meters, China's first domestically built drilling ship has been officially named "Mengxiang" (Dream). The "Mengxiang" starts her trial voyage on December 18, 2023. (PHOTO: XINHUA)

## Editor's Pick

### Southwestern Natural Frontier for Global Ecological Research

By LIN Yuchen

The currently established natural forest transect zone in China's southwestern forest region has been an effective area in biological research. According to the Chinese Academy of Forestry (CAF), the transect in this area now contains 44 sample plots of one hectare in size that cover 12 forest types and are inhabited by several key wildlife species under national protection, like Asian elephants and Yunnan snub-nosed monkeys. In addition, based on incomplete statistics, 969 species of woody plants, totaling 143,800, lie within this established transect.

The southwestern forest area is the largest natural forest area of China and also key to a functioning ecology. As part of the country's major ecological projects, the natural forest protection project and the systematic construction project for protective forests along the Yangtze

River Basin area operate here. Improving the quality of the forest ecological environment in the southwestern forest area serves an irreplaceable role in promoting the construction of an environmentally friendly China.

#### Rich in plant species

With a large altitude span that extends from 650 meters to 4,300 meters above sea level, the forest plant species of the southwestern transect are well represented. It includes more than 10 types of forest such as tropical rain forest, monsoon evergreen broad-leaved forest, cold-temperate coniferous forest, and dry-heat sparse-tree shrubs and grasses.

"Here, the tropical rainforest includes three types such as Shorea wangi forest, Terminalia myriocarpa, and Pometia pinnata forest; the broad-leaved evergreen forest includes five types, and the coniferous forest includes seven types of forests," said Li Shuaifeng, researcher of the Institute of Highland

Forest Science at CAF.

Li also added that there are also mixed evergreen and deciduous broad-leaf forests dominated by Fagus, cold-temperate scrub dominated by Rhododendron pingianum, and dry-heat rare-tree shrubs and grasses such as Terminalia franchetii.

#### Various survey objects

It is understood that the researchers investigated plant richness, functional, phylogenetic and soil microbial diversity before deciding to construct the southwestern transect.

"We obtained a total of 5,550 soil samples and 969 species of plant functional trait indicators, along with 88 soil profiles in the southwestern transect. Thirteen ecosystem functional indicators of four types, including carbon storage, soil nutrients, decomposition and maximum water holding capacity, had been collected," said Li.

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## Tech for Better Life in China

### Xinjiang Powers Ahead with Renewables

By LI Linxu

With wind turbines and solar panels seen everywhere in its vast Gobi and deserts, Xinjiang Uygur Autonomous Region is making great strides in renewables, a boon to its green and low-carbon development.

Visiting the 50-megawatt solar power station in Hami, east Xinjiang, is like immersing oneself into a Hollywood sci-fi film set.

On a wide stretch of Gobi, more than 14,500 pentagonal mirror-like devices are installed in concentric circles. At the very center of the circles stands a 220-meter-high molten salt tower for heat absorption.

"When the sun rises, these mirrors will move like sunflowers," Wang Chao, deputy chief engineer of the station, told *Science and Technology Daily* (*S&T Daily*) recently. With its "light-heat-electricity"

power generation mode, the station can generate power 24/7, because it can store solar energy and provide stable electricity supply at nights.

"It is also zero-polluting," said Feng Xiaoheng, operational director of the station, adding that as Xinjiang's first solar thermal power generation demonstration project, the station can generate 198 million kWh annually, saving 61,900 metric tons of standard coal a year.

"Tapping its abundant solar and wind energy, Hami is advancing the high-quality development of renewables in light of local conditions," said Zhang Xiaoyi, director of the Hami Municipal Development and Reform Commission, during an interview with *S&T Daily*.

By the end of 2025, the prefecture-level city's installed capacity of renewable energy is expected to reach 40 million kilowatts, according to Zhang. Cur-

rently, the figure stands at 16 million kilowatts, ranking first in Xinjiang.

Hami epitomizes Xinjiang's green and low-carbon push, with a slew of large-scale renewable projects going at full throttle. Apart from Hami, Xinjiang is accelerating the construction of more 10-million-kilowatt renewable energy bases in areas such as Zhundong and Ruoqiang.

This year, Tulum, a prefecture-level city in Xinjiang, kicked off four solar-thermal-photovoltaic integrated projects, with a total installed capacity of four million kilowatts.

At present, the capacity of renewable energy projects under construction exceeds 70 million kilowatts in Xinjiang, according to the latest official statistics. With the construction of such projects at full steam, Xinjiang's low-carbon push has shifted into high gear, laying a solid foundation for its high-quality development.

### NEVs Help Shift to Low-carbon Future

By LIU Yin & ZHONG Jianli

The global sales of new energy vehicles (NEVs) reached 9.75 million in the first three quarters of 2023, with China accounting for 6.28 million. This data was presented by Wan Gang, president of the China Association for Science and Technology during the 2023 World New Energy Vehicle Congress held in early December in south China's Hainan province.

"Developing NEVs is crucial for the global automotive industry to achieve green, low-carbon and sustainable development," said Chen Jiachang, vice minister of science and technology.

Chen added that China has been consistently advancing R&D of key core technologies for NEVs and bolstering the two-way development of the NEV industrial and innovation chains. The continuous improvement in technological research and industrialization has been pivotal in propelling the comprehensive marketization of NEVs.

From January to October this year, China saw both production and sales of NEVs surpass seven million, with a market penetration rate exceeding 30 percent. Notably, Hainan, the first province in the nation to publicly announce a sales ban on fuel vehicles by 2030, has achieved a NEV market penetration rate of nearly 50 percent.

Feng Fei, secretary of the Hainan Provincial Party Committee, said the province is developing the entire NEV industrial chain, encompassing research, design, manufacturing and sales. It is also actively promoting the access and trial operation of intelligent connected vehicles (ICVs), aiming to establish a smart transportation system and an ICV networking application demonstration area.

The "Roadmap 1.0 for Green and Low-carbon Development of the Automotive Industry" was officially released during the congress. For the first time at industry level, it explicitly defined the carbon emissions accounting scope of the automotive industry and outlined the vision for green and low-carbon development.

"Automobiles are a significant source of carbon emissions in China. In 2022, the carbon emissions from vehicles accounted for approximately eight percent of the total emissions and 80 percent of the emissions in the transportation sector," said Li Jun, academician of the Chinese Academy of Engineering, adding that the country still anticipates an approximately 200 million increase in automobile ownership, with the domestic total vehicle sales expected to exceed 30 million by 2030, posing a challenge for achieving carbon peaking.

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## WEEKLY REVIEW

#### China's 5th Antarctic Research Station Coming up

The construction of the main structure of China's fifth and latest Antarctic science research station is advancing at full speed, after workers began to assemble the tallest steel columns on December 16. The station is being built along the coast of the Ross Sea.

#### Long March Rocket Sets New Height Record

China's Long March-5 Y6 rocket launched on December 15 has for the first time used an 18.5-meter-long fairing. Over six meters longer than that of previous Long March-5 rockets, it has set a new height benchmark for China's carrier rockets in commission.

#### FAST Builds Largest Neutral Hydrogen Catalog

Chinese researchers have constructed the world's largest high-quality catalog of neutral hydrogen sources beyond the galaxy, using the homegrown Five-hundred-meter Aperture Spherical Radio Telescope (FAST). The observational data is open to global researchers in relative fields.

#### Design to Treat CVD with Micro-robots in Blood

Researchers from the Shenzhen Institute of Advanced Technology and Hong Kong University of Science and Technology have proposed a design scheme in which untethered magnetic micro-robots can move upstream in blood vessels to treat cardiovascular diseases (CVD), according to a study published in the *IEEE Explore* journal.

## New Graphic



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