

# Stepping up Prevention of Invasive Alien Species

## Policy

By LI Linxu

As part of efforts to safeguard ecological security and biodiversity, China has launched a special campaign to prevent the entry of invasive alien species.

The special campaign will last three years, according to the General Administration of Customs of China (GACC), vowing to crack down on illegal actions.

Illegal introduction, carrying, delivery and smuggling of exotic species will be punished in accordance with the law, said GACC.

The monitoring and early warning system on biosecurity across national borders will be continuously improved, as per GACC, through speeding up the application of advanced technologies and smart equipment, and stepping up relevant risk analysis and quarantine inspection procedures.

With increasingly frequent international trade and movement of people across borders, the risk of invasive alien

species through border ports is on the rise.

In recent years, China has made great efforts to guard against and respond to invasive alien species, such as improving relevant rules and regulations, and strengthening inter-ministerial coordination mechanisms.

China passed its first biosecurity law in 2020 and issued its first biodiversity white paper the following year, vowing to prevent invasive alien species and protect biodiversity.

Last year, China released a new list of key invasive alien species, totaling 59 species from eight groups.

In the first half of this year, 1,405 live animal and plant species that were banned from entering the country were intercepted, and a number of criminal gangs that illegally imported exotic pets were dismantled, said an official from GACC.

Among the intercepted species, there are 599 animal and plant species that are not naturally distributed in China, such as *Scelopendra galapagoensis*, *Messor barbarous* and *Triturus marmoratus*.

If the invasive alien species have no natural enemies, they will negatively impact native biodiversity and ecological security, said Li Chunding, professor of China Agricultural University.

Some alien animal or plant species are inherently toxic, and can grow and reproduce rapidly, causing major disturbance to the agricultural industry. Thus,

prevention and control measures should be taken from the point of entry, added Li.

The special campaign is a follow-up to implementing the spirit of the 20th National Congress of CPC, which vowed to strengthen biosafety and biosecurity management, and make efforts to prevent and treat the harm caused by invasions of alien species.



The General Administration of Customs of the People's Republic of China. (PHOTO: VCG)

## Case Study

# 5G Revolutionizes Life in Rural Areas

By CHEN Chunyou

The advent of 5G technology has brought higher interconnectedness, and allowed people to gain new experiences, ultimately making their lives smarter and easier.

Huayuan, a village in east China's Jiangsu province, is renowned for its textile industry's distinctive yarn-dyeing process. Now thanks to 5G services, it can get more international business.

The 5G New Calling service ensures a reliable communication signal and even offers real-time language translation during video calls. This has facilitated communication, leading to increased foreign business deals and incomes for the locals.

Access to healthcare has been revolutionized. "Villagers no longer need to take multiple transports and travel long distances to urban areas to see a doctor," Wu Yuzhou, party secretary of Shuangwan village in Suzhou city, told *S&T Daily*. The village achieved 5G coverage in 2019. Patients can now receive remote diagnostics services and health advice at the village clinic itself.

The clinic staff help them to make appointments and connect them online with doctors in urban hospitals. Digitalized health records and data analytics help doctors deliver more personalized care. This has improved medical efficiency and resulted in better control of chronic diseases among villagers.

5G has also brought benefits to crab breeders as it enables a faster transmission speed of water quality conditions of a crab pond onto an online platform. The breeders can monitor all these data on this platform through an application.

Shao Wenming, a crab breeder in Xiadong village, Kunshan city, leased a crab pond of about 670 m<sup>2</sup> from other farmers this year. He uses the app to manage his pond, monitoring key parameters such as the water temperature, quality and oxygen content. "If the oxygen content is low, the app will send a reminder to my phone, I can raise the level remotely. With sophisticated technology, the quality of the crab meat has also improved," said Shao.

In the past, due to a shortage of manpower, Shao hardly left the pond as it required meticulous attention. But technology has given him more free time. Shao and other breeders do not have to be near their ponds for constant monitoring, enjoying greater convenience in the breeding process.

At the Port of Zhenjiang in Jiangsu province, ships enjoy signals even when they are in the middle of the river because of the row of 5G stations along the bank. This has enhanced communication between the crews and the land, leading to quicker response during emergencies and greater safety.

Previously, workers had to inspect equipment and record operation data manually in the equipment room of their vessels, where the temperature could rise to 44 °C. "Now, all data is transmitted by the 5G network and workers can remotely monitor the data on a computer screen. This has made daily equipment checks more efficient and improved working conditions," said Ji Peng, manager of the equipment service department at a branch company affiliated with the Zhenjiang Port Group.



An air pump works to provide the crab pond with oxygen in Xiadong village, which is especially vital in hot weather for crabs' health. (PHOTO: S&T Daily)

# New Standards Released for ICV Sector

By ZHONG Jianli

China's Ministry of Industry and Information Technology (MIIT) and the Standardization Administration have released a new set of national standards for intelligent connected vehicles (ICVs), aimed at providing a more complete framework for development of the sector.

ICVs are made possible through a convergence of many technologies in-

cluding AI, 5G and connectivity solutions, which facilitate highly effective, safe, comfortable and energy-efficient driving.

In general, the renewed standard system is more in line with the practical needs of the development of China's ICV industry. Compared with the 2018 version, the new version added technical standards for such areas as smart cockpits, data security and automotive

chips.

It is proposed that by 2030, China should have a fully developed ICV standard system and revised more than 140 relevant standards to improve single car intelligence and vehicle connectivity.

The MIIT said that in the next phase, it will guide relevant departments in formulating more standards in key aspects such as functional safety, network security, and operating systems, and ac-

tively participating in the coordination and formulation of international standards and regulations.

In addition, it is expected that the integrated development of new energy vehicles with information communication, intelligent transportation and smart cities, will be accelerated through adopting related standards, promoting the high-quality development of China's ICV industry.

# 20 Measures to Stimulate Consumption

By CHEN Chunyou

"Boosting consumption is not meant to drain people's wallets. Instead, it should create a favorable consumption environment for people, and allow them to buy affordable but good quality goods, along with services that best cater to their current needs," said Li Chunlin, vice chairman of the National Development and Reform Commission at a news briefing on July 31, the same day that a document detailing 20 measures to restore and expand consumption was

released.

The document covers a wide range of sectors, such as automobiles, real estate, electronic products, and the service industry, all of which are closely related to people's daily life and have the potential to stimulate consumption.

Consumption of big-ticket items, such as automobile sales, is encouraged in the document. More policy support will be in place for people to purchase new energy vehicles, along with increasing the number of public charging facilities in residential areas. In addition, dif-

ferent pricing policies will be implemented for charging in peak and off-peak hours, aiming at reducing the cost of new energy vehicle users.

Digital consumption infrastructure, such as 5G networks and gigabit optical networks, is to be built with a wide coverage, so as to enrich their application scenarios in business, says the document. Meanwhile, digital technology enterprises will be supported in building digital platforms for daily life services, to create new digital consumption modes and intelligent immersive service experiences.

The green and low-carbon consumption market is also targeted for development. Consumers are encouraged to replace outdated and malfunctioning goods with eco-friendly and high-quality durable products, in order to develop a simple, moderate, green and low-carbon lifestyle and consumption model.

Notably, the document also called for cultivating emerging industries, particularly in the prepared food product market. The construction of prepared dish facilities is to be accelerated, to serve consumers safe products.

its fuel consumption is about 30 percent lower than that of traditional tractors.

"Our company has made a technological breakthrough on the intelligent tractor, filling a gap in China's agricultural machinery industry," said Tian Dayong, strategic director of Weichai Lovol. The company now does business in more than 120 countries and regions.

Shandong is also promoting energy-saving technology in its shipping industry.

In the factory of China Merchants Jinling Shipyard in Weihai city, 15 ships under construction will adopt dual-fuel power technology, using liquefied natural gas or diesel. This will reduce carbon emissions by about 22 percent. The emission of nitrogen oxides, sulfur oxides and particulate matters will also be slashed by 92 percent, 98-100 percent and 98 percent respectively.

Two other ships are powered by methanol, achieving 100 percent life-cycle carbon reduction.

"The primary driving force for high-quality development is sci-tech innovation," said Sun Haisheng, director-general of the Department of Science & Technology of Shandong province, adding that the number of small and medium-sized sci-tech enterprises in Shandong reached over 35,000 in 2022, ranking fourth in the country.

# Shandong's Green, Low-carbon Transition

## High-quality Growth

By Staff Reporters

Zibo, a city in eastern coastal province Shandong, is regarded as a pioneer in hydrogen energy core technology and industrialization. Its main advantage includes manufacturing the core component of high-performance hydrogen cells,

an important tool for industrial transformation and low-carbon development.

"It takes only three to five minutes for the hydrogen fuel cell vehicle to refuel," said Wang Zhenhua, deputy general manager of Shandong Dongyue Future Hydrogen Energy Materials, referring to a hydrogen cell vehicle kept at the company's center for demonstration, adding that "The vehicle can then travel 600 to 800 kilometers, even in a low temperature environment of minus 30 degrees

Celsius."

Wang noted that the company spent more than a decade to develop the core component of hydrogen fuel cells, a proton exchange membrane, and now has a lot of cooperation projects with leading downstream companies at home and abroad.

Zibo is one example of promoting green, low-carbon and high-quality development in Shandong as the province encourages high-quality development through innovation, especially in highly efficient and low-carbon technologies.

Xu Wen, deputy secretary-general of the Shandong Provincial Government, has figures to back the initiative. In the first half of 2023, new and renewable energy generation increased by 18.2 percent, accounting for 25.4 percent of the province's total power generation.

In the demonstration base of Weichai Lovol Intelligent Agricultural Company located in Weifang city, a tractor with continuously variable speed was undergoing tests. The driverless tractor could function at 340 horsepower, and



A hydrogen fuel cell vehicle is displayed in the Dongyue Future Hydrogen Technology Demonstration Center in Zibo city, east China's Shandong province. (PHOTO: LU Chengkuan/S&T Daily)

# Smart Chengdu Universiade Embraces High-tech

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"The robot can help players improve their observation and anticipation skills for the opponent's serving actions. They can repeatedly practice a specific type of serve, making their training more targeted and effective," Li Pengfei, a trainer from a table tennis association in Chengdu, told *Xinhua*.

**Immersive Interaction**

In the area of AR interactive experiences, visitors can engage in playing with a giant panda by holding a "piece of bamboo." The panda will react to their actions, allowing them to capture memorable group photos.

This remarkable product incorporates volumetric video technology and special effects shooting techniques to create an authentic and intimate encoun-

ter with the panda. By utilizing a 360-degree shooting matrix comprising professional cameras, the technology captures the giant panda's activities and combines it with special effects shooting to deliver an immersive experience, according to *China Youth Daily*.

Although the Chengdu Universiade has ended, its long-lasting impact will continue beyond the event. The venues of the Games will continue to promote sports far into the future. These state-of-the-art facilities will serve as a hub for athletic activities, encouraging the local community to engage in various sports and stay active. By nurturing a culture of sports and technical innovation, Chengdu is laying the groundwork for a bright and promising future on the international stage.