

Law-based Wetland Protection Milestone

By ZHONG Jianli

Wetlands, known as "Earth's kidneys," are important natural resources with unique ecological functions such as flood regulation, water purification, carbon storage and fixation, and climate regulation. In many cases, wetlands are the habitats of wild animals and plants, thus forming a rich gene pool of species.

To strengthen efforts in conservation of wetlands, China's first *Wetland Protection Law* came into force on June 1, 2022. The law stipulates the top-level design of wetland protection and management work, marking a new stage of law-based wetland protection in the country.

"The enactment and implementation of the law is an important result we achieved under the guidance of President Xi Jinping's Thought on Ecological Civilization, and is a strategic measure to safeguard ecological security and biodiversity," said Guan Zhiou, director general of the National Forestry and Grassland Administration (NFGA).

In the past decades, China has made progress in wetland protection and established a general wetland protection and management system. There are now 64 internationally important wetlands, 29 nationally important wetlands, more than 600 wetland nature reserves, and 1,600 wetland parks, with the protection rate of wetlands increasing to about 50 percent.



Desert wetlands in Korla, northwest China's Xinjiang Uygur Autonomous Region. (PHOTO: VCG)

In 2019, China won the bid to host the 14th Conference of the Parties to the Convention on Wetlands, which is scheduled to be held in November 2022 in Wuhan, central China's Hubei province.

"The implementation of the law will play an important role in China's efforts to fully implement the Convention, participate in and lead international wetland protection, and demonstrate China's commitment to building a community with a shared future for mankind," said Bao Daming, deputy director

of NFGA's Wetland Management Department.

According to the law, China is expected to exercise the conservation of wetlands at different levels, and wetlands will be categorized into different classes for protection. Rivers and lakes, coastal wetlands, urban wetlands, mangrove wetlands, and swamp wetlands will be subject to different restoration requirements.

In addition, the wetland investigation and evaluation system, wetland total area control system, and wetland dynamic

monitoring system are also incorporated into the law.

Another highlight of the law is that it intensifies penalties for wetland damage, including reclamation of wetlands, overharvesting of wild plants and fishes, and mining or collecting soil from wetlands without authorization.

It is expected that the protection rate of wetlands in China will increase to 55 percent by the end of 2025, and one million mu (1 mu = 666.67 m²) of wetlands will be restored, according to Bao.

Pumped Storage Power Greens GBA's Grid

By LI Linxu

With a total installed capacity of 2.4 million kilowatts, two new power stations bring the total installed capacity of pumped storage power stations (PSPS) in Guangdong- Hong Kong- Macao Greater Bay Area (GBA) to nearly 10 million kilowatts, making GBA a world-class bay area power grid with the largest installed pumped storage, the strongest grid adjustment capacity, and the highest proportion of clean energy consumption, according to China Southern Power Grid (CSPG).

As a key player in creating a clean, flexible, and reliable energy grid, pumped storage hydropower acts similarly to a giant battery. It works by pumping water from the lower reservoir to the upper reservoir during the off-peak period at night, and releasing the water to generate electricity in the daytime to meet the demand for power consumption.

The two PSPS, located in Meizhou and Yangjiang in Guangdong province and constructed by CSPG, were put into operation on May 28.

At Yangjiang PSPS, the height difference between the upper and lower reservoirs reaches 700 meters.

The peak demand of GBA during the daytime is about 100 million kilowatts, while the lowest nighttime off-peak demand is about 30 million kilowatts, indicating a great peak-valley difference of power demand, said Li Hua, an official from CSPG, adding that the pumped storage stations will significantly enhance the power grid adjustment capacity of GBA and thus more clean electricity such as wind power and hydropower can be absorbed at night.

The two stations are expected to optimize the peak regulation power of 3.4 billion kWh per year, equivalent to a reduction of carbon dioxide emissions of 2.8 million tons.

The gross investment in the two stations reached about 15 billion RMB, said Liu Guogang, an official from CSPG, adding that the construction and operation of these two stations not only brings substantial power adjustment benefits, but also drives 30 billion RMB investment in the upstream and downstream industrial chain.

A number of key technologies in the design and construction of the stations has been solved, including a world-class reinforced concrete lining for hydropower tunnels.

Beijing to Stimulate Vitality of Its Digital Economy

By CHEN Chunyou

In recent years, Beijing has witnessed rapid development in its digital economy. To further stimulate the vitality of the digital economy, an action plan for the development of the whole industrial chain of this industry was rolled out by the Beijing Municipal Bureau of Economy and Information Technology on May 30.

In the first quarter of 2022, the added value of Beijing's digital economy reached 387.36 billion RMB, up 7.2 percent year-on-year, accounting for 41.2 percent of the city's GDP, according to the data from the bureau.

The plan clarifies the measures to improve the supply capacity of digital technology, including focusing on breakthroughs in high-end chips, artificial intelligence, key software, blockchain, privacy computing and urban space operating systems, while encouraging open-source projects and institutions both at

home and abroad to settle in Beijing. This will form a diversified digital technology innovation ecology, featuring public platforms, underlying technology and leading enterprises.

The data openness and sharing will be further strengthened, said the plan, noting that data-sharing space in such fields as autonomous driving, digital medical care and digital finance will be open to industry organizations or third-party institutions.

The targeted supporting measures for application scenarios in the industries, including sci-tech R&D and knowledge production, industrial Internet, digital medical treatment and intelligent cities are also covered in this plan. For example, it supports new R&D institutions in building common platforms, promotes the integrated development of blockchain and the industrial Internet, and encourages the sharing of business data among financial institutions through blockchains and privacy computing.

Carrying Forward Scientist Spirit

By LI Linxu

As part of events to celebrate the sixth National Science and Technology Workers' Day, the first batch of Scientist Spirit Educational Bases was released on May 30.

A total of 140 bases, ranging from sci-tech museums, science parks, memorial halls and research institutes, were selected across the country to provide a one-stop experience of scientist spirit for the public.

Featuring patriotism, innovation,

truth-seeking, dedication, coordination and educating, scientist spirit is highlighted in these bases.

The bases cover various sci-tech fields including aerospace, physics, mathematics, medical science, agriculture, transportation and nuclear industries.

Of particular note is that a number of educational bases were named after well-known scientists such as Li Siguang Memorial Hall in Beijing, Qian Weichang Library of Shanghai University in Shanghai, and Qian Xuesen's Former Residence in Zhejiang.

Yuan Longping Hybrid Rice Science Park in Chengdu is also among the list. Yuan Longping, known as "the father of hybrid rice," devoted his life to developing strains of hybrid high-yield rice that helped alleviate famine and poverty around the world.

Shouldering missions and taking responsibility are the key characteristics of scientist spirit and should be inherited and promoted, according to Du Xiangwan, an academician of the Chinese Academy of Engineering.

Themed "Striving for Innovation

Excellence, Achieving Self-reliance and Self-strength," this year's National Science and Technology Workers' Day held a series of featured online and offline activities.

The day showcased the country's latest sci-tech achievements as well as the workers who made them possible.

The country's sci-tech communities will continue to uphold scientist spirit, improve innovation capabilities, and expand international cooperation, said Wan Gang, president of the China Association for Science and Technology.

Comprehensive Policies Safeguard Grain Production

By CHEN Chunyou

Of all things, eating matters most, and food is the most basic necessity of people, says an ancient Chinese proverb.

As the most populous country in the world, China not only has enough food for its people, but also offers them a wide range of choices. Over the years, people's nutrition and quality of life have continued to improve.

In May, the country entered this year's summer harvest period, which continues until late June. Summer harvest, which accounts for more than a quarter of the annual output, with wheat accounting for more than 90 percent, is vital to ensuring China's food security and social stability.

Since the country has less than one-third of the world's arable land per capita, food security is always one of the top priorities for Chinese policymakers. The "No. 1 Central Document" for 2022, unveiled in late February, is to promote rural vitalization. It underscores the importance of safeguarding grain security, noting that efforts should be made to ensure grain output remains over 1.3 trillion jin (650 million tons) this year.

In order to achieve this target, the Ministry of Agricultural and Rural Affairs (MOA) and the Ministry of Finance jointly introduced a series of measures in March to boost grain production, call-

ing on local governments to do their utmost to ensure a bumper summer harvest of wheat, expand the planting of soybeans and oilseeds, keep the prices and supply of agricultural means of production stable, and prevent and mitigate disasters in agriculture.

Also in March, the guideline on ensuring the spring sowing was released by the National Development and Reform Commission (NDRC) and 10 other departments. It requires local governments and related state-owned enterprises to enhance chemical fertilizer produc-

tion and supply capacity and improve the efficiency of chemical fertilizer circulation. According to NDRC, more than three million tons of fertilizer have been put into the market for spring sowing in March, which consolidates the foundation for the summer harvest.

In April, the People's Bank of China and the State Administration of Foreign Exchange released the Notice on Strengthening Financial Services for COVID-19 Containment and Socio-Economic Development, which emphasized that differentiated credit policies should

be developed to support all stages of grain production from spring sowing to grain purchase, storage, and processing.

To better support the summer harvest, the State Council stressed ensuring farmers' grain profits in a circular issued on May 31, which details a package of policies to stabilize the country's economy. In response to the high prices of the agricultural means of production, the circular said China will issue a second round of agricultural subsidies worth 10 billion RMB, on the basis of 20 billion RMB granted in March, to make up for the decline of grain income caused by the rising costs.

In addition, China would work out an implementation plan for crops' minimum purchase prices, and raise the minimum purchase prices of rice and wheat to encourage farmers' enthusiasm for growing grain, according to the circular.

Currently, harvesting machines are working in China's grain-producing areas. To ensure smooth grain production during the COVID-19 period, MOA has cooperated with the health and transportation departments. More than 2,600 green channels have been opened for transporting agricultural machinery, and more than 5,400 special harvesting teams were established for any emergency such as rainy weather, said Tang Renjian, minister of agriculture and rural affairs.



Wheat harvest progresses in full swing in Kunshan city, Jiangsu province. (PHOTO: VCG)