



Zhanjiang launches monthlong events on modern marine ranching on June 6. LANG SHUCHEN / FOR CHINA DAILY

# Zhanjiang at full sail to marine success

Sector sees strong growth from efforts to improve aquatic products and ranches

By YUAN SHENGGAO

Zhanjiang in South China's Guangdong province is making efforts to develop itself into a demonstration city for modern marine ranching and aims to build an aquaculture industry cluster worth 100 billion yuan (\$13.82 billion) by 2028.

The coastal city is known for abundant aquatic products including golden pomfrets, prawns and groupers.

In 2022, its aquatic products amounted to 1.26 million metric tons, up 3.66 percent year-on-year.

The combined output value reached 27.46 billion yuan, ranking first among cities in Guangdong province.

In terms of cage farming, the city currently has 3,500 gravity-type deep-water fish cages. Its annual production accounts for about 60 percent of the national total.

Zhanjiang is also one of the country's major seafood exporters. From January to March, the city saw a year-on-year increase of 2.3 percent in exports of aquatic products.

During a seminar on modern



The China International Aquaculture Products Expo, held from June 18 to 20 in Zhanjiang, draws visitors and exhibitors.

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marine ranching held in May, Liu Hongbing, Party secretary of Zhanjiang, emphasized that municipal authorities need to formulate a development plan with high standards and expand the industry.

Efforts should be made in scientific research to improve aquaculture facilities and advance the application of digital technologies, Liu said.

He added that Zhanjiang will cultivate more marine science talents and create a high-quality talent pool to boost modern marine ranching.

During the marine ranching-themed events month, the coastal city held an array of activities, showcasing its remarkable achievements in



## Region's fishery output ranks high

Zhanjiang has developed five deep-water net cage aquaculture zones, namely Zhanjiang Bay, Donghai Island, Xilian, Liusha and Caotan.

It has a total of 3,532 net cages, accounting for about 70 percent of Guangdong province's total. There are also two truss farming platforms in the city.

Zhanjiang has developed nearshore shellfish farming focusing on the oyster, covering an area of 20,000 hectares, with annual production of various shellfish reaching 450,000 metric tons.

In 2022, the total fishery output of Zhanjiang amounted to more than 1.25 million tons, worth 27.4 billion

yuan (\$3.79 billion). Its fishery production and output value have ranked high in Guangdong for more than 20 consecutive years, with a significant proportion contributed by marine ranches.

In 2022, Zhanjiang bred 162.2 billion aquatic seedlings, supplying them to coastal regions throughout China, and exporting to countries such as those in Southeast Asia. It has also mastered and applied artificial breeding techniques for 66 commonly-used aquatic species, greatly enriching the aquaculture structure.

The city's sales network for aquatic products extends to more than 40 countries and regions.

developing modern marine ranching.

At a cold chain logistics summit held on June 18, guests including officials, corporate representatives and experts discussed how to promote the high-quality development of Zhanjiang's cold chain logistics.

They also shared their insights into the opportunities and challenges brought by the Regional Comprehensive Economic Partnership which came into force in 2022.

On June 20, Guangdong's largest offshore intelligent aquaculture platform Hawwii 2 was launched in Leizhou, a city under the administration of Zhanjiang.

It is a truss eco-friendly aqua-

culture platform which can support a fish farm of 30,000 cubic meters and is capable of good performance in withstanding strong winds and waves.

From June 18 to 20, Zhanjiang hosted the 2023 China International Aquaculture Products Expo, attracting more than 300 aquaculture enterprises from about 10 countries and regions around the world.

The Longwang Bay park of Zhanjiang Bay Laboratory in the city's Haidong New Area began operations on June 29. It features a batch of research centers for marine life, big science facilities, ocean labs and other marine innovation platforms.

Meanwhile, the lab's fishery big data center was put into use, which is designed to implement the digital management of deep-sea aquaculture industries.

By 2028, Zhanjiang aims to make 6,000 gravity-type fish cages and build more than 20 truss aquaculture platforms and workboats, according to local officials.

In addition, the city will set up an international aquatic product trading center and construct three aquaculture bases for breeding, processing and equipment and feed production, local officials said.

Seven modern marine ranching zones will be established, involving multiple locations in the city such as the Jizhao Bay, Beibu Bay and Liusha Bay.



The Longwang Bay park of Zhanjiang Bay Laboratory wants to build a platform for marine scientific and technological innovation.

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## Scientific farming boosts aquaculture development

By YUAN SHENGGAO

A large intelligent marine farming platform called Hawwii 2 was launched in Guangdong province on June 20, joining Hawwii 1, a truss fishery platform launched in April 2022, to augment Zhanjiang's industrial chain of deep-sea aquaculture technology.

Built with a total investment of 30 million yuan (\$4.15 million), Hawwii 2 can resist strong wind and waves and merely requires a crew of three or four operators. It adopts an intelligent management system and boasts smart equipment involving automatic feeding and monitoring, which can trim labor costs by 60 percent.

The platform, expected to have an annual output value of 70 million yuan, will provide a breeding ground for premium and rare sea

fish and function as an advanced farm for larger species.

Liu Ding, chairman of Guangdong Hawwii Aquaculture, said the successful operation of Hawwii 1 indicates deep-sea farming is safer and more stable, and that intelligent farming platforms will play a great role in fishery breeding. Liu noted that in the event of a typhoon, Hawwii 1 can sink up to 8 meters to reduce the effects on fish in net cages, while Hawwii 2 can sink up to 12.5 meters.

Zhanjiang's promotion of equipment transformation and upgrades in other areas has accelerated development of intelligent apparatus to promote the upgrading of its aquaculture industry. With an industrial foundation rooted in marine farm equipment and aiming to modernize deep-sea devices, Zhanjiang supports the technical upgrading of

fishery equipment manufacturers.

Relying on scientific research institutions such as Zhanjiang Bay Laboratory and Guangdong Ocean University, the city has established a modern marine ranch research institute and cooperated with domestic organizations like China Agricultural University and Huawei to carry out key technology research in smart fishing. Advanced technologies such as photo-thermal farming and precision feeding are also being explored.

On June 29, the Longwang Bay park of Zhanjiang Bay Laboratory was completed and the lab's big data center on fishery opened. Located in Haidong New Area, the park wants to build a platform for marine scientific and technological innovation, while the center is committed to the unified management of deep-sea aquaculture systems by helping to collect, store and integrate fishing data.

Zhanjiang Bay Laboratory will also develop systems to provide intelligent aquaculture decision support involving operation, control and early warning programs.

Mai Kangsen, a member of the Chinese Academy of Engineering, said it is hoped that Zhanjiang Bay Laboratory will seize the spotlight brought by nationwide construction and help Zhanjiang become a demonstration city of modern marine farms.

Zeng Jinze, mayor of Zhanjiang, said he hopes the lab will draw more innovative projects and promote the commercialization of scientific and technological achievements.

Zeng said the city government fully supports the construction and development of Zhanjiang Bay Laboratory and will provide quality services for innovative projects while building the lab into an area that retains science and technology professionals and promotes high-quality development of the marine economy.

## City makes great strides as seed industry center

By HAO NAN

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Zhanjiang, a coastal city in Guangdong province, has been revving up efforts in recent years to improve seed selection, breeding and promotion of fine aquatic species.

It has also accelerated the industrialization of the seed industry, which serves as the foundation for the development of modern fisheries, local officials said.

With the help of the Zhanjiang Bay Laboratory and Guangdong Ocean University, the city has developed several leading seed bases of aquatic products in South China, and also established a number of related research institutions over the past few years.

The university took the lead in the establishment of a modern Pacific white shrimp seed industrial park, the first of its kind in China with a provincial-level status.

Official data showed that Zhanjiang cultivated a total of 162.2 billion aquatic seedlings in 2022. It

has so far built 480 seedling farms, including two State-level shrimp breeding farms, one Pacific white shrimp genetic breeding center and 16 provincial-level aquaculture breeding farms, which account for 28 percent of the total in Guangdong.

The city is also home to China's largest mariculture base of Pacific white shrimp seed production and broodstock breeding. It is under a national high-tech development plan known as the 863 Program. The new species of Pacific white shrimp cultivated by the base have filled an industrial blank of China's shrimp seeds of the sector.

The base has now become a comprehensive research and development platform integrating seedling, aquatic feed, aquaculture and illness prevention, diagnosis and treatment. It breeds 100,000 pairs of broodstock shrimps and 8 billion seedlings annually.

Moreover, many local companies have also taken initiatives to contribute to China's Pacific white shrimp seedlings.



A golden pompano farming area in Zhanjiang.

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Haimao Seed Technology Group, a leading aquatic seedling production company in Zhanjiang, for example, has cooperated with the South China Sea Institute of Oceanology at the Chinese Academy of Sciences, to tackle technological difficulties.

In 2010, they cultivated a new Pacific white shrimp species named Zhongke No 1 that features high disease resistance.

In 2022, Haimao developed another new species called Haimao No 1 and Zhanjiang Haixingnong Marine Biotechnology developed the Haixingnong No 3 shrimp species.

Also, the shrimp seed development center of Guangdong Hawwii Aquaculture and a foreign expert team have jointly constructed a high-yield and specific pathogen-free Pacific white shrimp breeding center in Zhanjiang. It has currently developed 203 breeding groups and formed a quality seed selection and breeding system of the shrimp.

The city has also achieved remarkable results in improving the seed quality of other aquatic species. For instance, it has conquered artificial breeding technological problems of 66 aquatic species, including 41 seafood species, and imported quality aquaculture products like Pacific white shrimps, yellow tail fish and a species of bay scallops introduced from the Atlantic coast of the United States.

In June 2022, major breakthroughs were made in the key technology of yellow tail fish breeding, solving the long-standing problem of its dependency on wild seedlings.

Zhanjiang has also greatly enhanced the infrastructure construction for fine seed selection and breeding. It now annually cultivates 76 million grouper seedlings, 121 million Golden Pomfret seedlings, 2.2 million cobia seedlings, 170 billion Pacific white shrimp seedlings, and more than 1.6 billion scallop and other shellfish seedlings.