



Qingdao, one of China's most beautiful coastal cities, on the southeastern part of the Shandong Peninsula.

PHOTOS PROVIDED TO CHINA DAILY

Qingdao leads the nation in marine developments

Editor's note:

Qingdao has an environment comparable to Silicon Valley's, in California, or India's Bangalore, and is known for its marine resources. It has taken the lead in marine science research and has many industries in related areas.

When the Shandong peninsula's "blue economic zone" was made a part of the nation's development strategy in January this year, the Qingdao government came up with a plan to turn itself into a Blue Silicon Valley and a New Economic Zone on West Jiaozhou Bay.

This is expected to make Qingdao the center of international marine science and technological development, and a national demonstration site, and a force behind the peninsula's blue economic zone.



By LIU MINGJUN

Qingdao provides major support for Shandong Peninsula's "blue economic zone", thanks to its marine resources, and a solid foundation for its marine economy. And steps are being taken to turn Qingdao into a leader in the marine economy field.

The city has a 711-kilome-

ter coastline, 69 islands, and 49 natural harbors and is just across the Yellow Sea from Japan and South Korea.

Its offshore areas are full of a rich variety of marine life, which contributes to marine industrial development and it held the Olympic Sailing Competition in 2008, which added greatly to its coastal tourism.

The city has 28 marine research institutes, or just over a third of China's total and 20 key laboratories at the ministerial level. It has 19 academics from the Chinese Academy of Sciences and Chinese Academy of Engineering; leading scientists working on 14 of the country's 17 key marine science programs, live in Qingdao.

It is also building major

sites for marine innovation, such as the national deep-sea base and national laboratory for marine science and technologies. Since the 11th Five-Year Plan (2006-2010), work on 46 percent of the National High-Tech R&D Program's marine studies has been done at Qingdao universities.

Qingdao has had some breakthroughs in artificial breeding technology for kelp, edible seaweed, prawn and scallop production.

It also has emerging industries — beyond the traditional fields such as fisheries, harbor logistics, shipbuilding, and tourism — in marine life and biomedicines that are doing well.

In 2010, Qingdao's marine-related industries had an output value of 168.3 billion yuan (\$26.5 billion), an increase of 17.43 percent year-on-year, and 35 billion yuan in marine equipment manufacturing.

Qingdao has become one of the largest ship manufacturers and maritime project developers in Asia, as well as a unique research base for marine biomedicines and chemical products, for

China.

Qingdao's port has been ranked 7th in the world, in cargo handling capacity, and 8th, in container handling. The Sino-US, East-Asia, and Asian-Pacific submarine cables all reach Qingdao, which has increased its status as China's communication center.

Its infrastructures, such as the Jiaozhou Bay Bridge, one of the world's longest cross-sea bridge, and the under-sea tunnel, have added to its image. A subway is now under construction and it handles a total of 108 domestic and international airlines.

Aiming to be the best

Qingdao is also stepping up efforts in emerging or cutting-edge marine industries and hopes to take the lead in developing a marine economy. It would like to have added value output of 115 billion yuan for its marine industries, by 2015, and 220 billion yuan, by 2020, with annual growth of 14 percent.

The development pattern of the "blue economy" has been described as "one bay, five zones, and multiple support areas" and an economic

cluster area for harbor logistics, modern fisheries, seaside tourism, and marine life, has taken shape around Jiaozhou Bay.

Special attention has been given to five areas — the Dongjiakou Port industrial zone; an economic zone on the west side of Jiaozhou Bay; a high-tech zone on its northern side; a modern service zone on its eastern side; and the Aoshan demonstration zone for marine scientific and technological innovations.

A number of support areas will be added, to make full use of the peninsula's advantages and inject some life into the blue economic zone's development.

To make certain that this happens the local government has its focus on developing the more advantageous sectors. First of all, its primary industry, fisheries, will be emphasized to make the city a modern breeding and processing base for aquatic products.

This primary industry is expected to be worth 7 billion yuan in added value output by 2015, and 9 billion yuan, by 2020. It is expected to have 100 oceangoing fishing boats,

with an annual fishing capacity of 30,000 tons, by 2015

Qingdao is also looking for a breakthrough in its secondary industries, such as marine biomedicines, shipping equipment, instruments, new marine resources, and marine engineering.

But it is placing equal importance on seawater desalination. Added value output of these secondary industries is expected to reach 46 billion yuan, by 2015, and 88 billion yuan, by 2020.

At the same time, there will be continuous upgrades on tertiary industries, with the focus on harbor logistics, seaside tourism, marine science and education, marine culture and sports, and finance.

Qingdao is looking for added value output for these industries of 62 billion yuan, by 2015, and 123 billion, by 2020. Here, the focus will be on major projects, such as Dongjiakou Harbor and the second phase of Qianwan Bonded Port.

But water sports will not be left out, so that the coastal area can be turned into an international holiday resort.

While making an effort to develop the new economic

A GLIMPSE OF THE CITY

Location: southeastern tip of Shandong Peninsula
Area: 10,654 square kilometers
Population: 8.5 million
Economic position: One of the top 10 cities on the mainland

zone on west Jiaozhou Bay, the city needs to develop modern service industries on the eastern part and increase the blue economic zone's influence.

And it needs to find concrete ways to protect the environment and improve sewage treatment to protect the bay's ecology.

The city also needs to attract more talented people in marine science to come to the blue "Silicon Valley".

These are key factors in the development of a blue economy.

The author is director general of Qingdao's Development and Reform Commission

Coastal city sees 'blue Silicon Valley' and new economic zone in its future

Qingdao has its sights on being China's "blue Silicon Valley" — an international center for marine science and technology, a national area for marine scientific and technological innovative development, and a power behind the growth of Shandong Peninsula's "Blue Economic Zone".

This is obviously an ambitious goal, so the city needs to be innovative in some key sectors, with greater creativity in marine science and

technology, attracting talented people, and improving its industries and institutions.

It wants to make the blue Silicon Valley a cluster of research institutes, technological incubation centers, and offices that promote research findings.

The local government plans to speed up work on building a marine technological innovation area and is throwing its support behind national marine sci-

ence and technology laboratory and national deep-sea base. It also wants a national biological research and industrial center and national new marine materials base.

It has made an effort to develop a strategic alliance in industrial innovations, with emphasis on marine breeding and instruments and equipment. It hopes to forge them into its national pilot program, so support will be given to technological research and development in emerging marine industries, to increase Qingdao's competitiveness.

It is also planning a service center for trade in marine technologies to help translate theoretical developments into economic profits. It will have favorable policies for risk investment and marketing, to ensure the transition from technological advances to industrial ones.

Building a new zone

The purpose of the New Economic Zone on West Jiaozhou Bay is to build an economic zone at the national level that is a door that opens to the upper reaches of the Yellow River, and is a national shipping and aviation hub, a cluster of international, marine-related industries, and a modern, international city.

It wants to be a new pole of the economy that extends to Beijing, Tianjin and Hebei to the north, the

Yangtzi River delta to the south, and the Yellow River delta to the west. This will make Qingdao a capital of the ocean, and more open and livable. The new economic zone's GDP is expected to reach 500 billion yuan (\$78.7 billion), by 2015, and more than 1 trillion yuan, by 2020.

There will also be plans to support the Jiaozhou Bay industrial equipment zone, Dongjiakou heavy industrial and chemical zone, the Qianwan seaside economic zone, and an ecologically smart city.

An additional effort will be made to develop marine engineering equipment, petrochemicals, marine biomedicine, and modern services. All the above efforts will help make the west coast of Jiaozhou Bay the most vibrant part of Qingdao and an international navigation hub and trade center for the Northeast.

This particular economic zone was first delineated in the *Development Plan for the Blue Economic Zone of Shandong Peninsula*, which was approved by the State Council in January 2011.

It has a planned area of 2,096 square kilometers. The developers want to introduce newer global industries and technologies and upgrade the industrial chain. A key marine base will be built for biomedicine, marine energy, and deep-sea equipment.



A national deep-sea base being built in Qingdao will provide support for China's manned deep-sea submarine, the *Jiaolong*, and be a public service site for deep-sea scientific research, ocean resources exploration, and facilities development.



Busy container terminal at Qingdao Port, the world's seventh largest port. It also ranks eighth in container handling capacity, and last year it handled a total of 350 million tons of cargo, an increase of 11 percent, year-on-year.



Artist's rendering of the National Laboratory for Marine Science and Technologies in Qingdao, which covers 20 hectares of land and is to be completed next month. This will be China's unique marine science and research laboratory and is expected to rank seventh among all the world's marine research institutes.



Overall plan of the Qingdao 'blue Silicon Valley', an engine behind the city's marine-related industrial development.